



# **cIM-25/600L**

---

IP-Enabled M&C  
Installation and Operation Manual  
Part Number CD/CIM25600L.IOM  
Rev. 2





# Errata A

## *Comtech EF Data Documentation Update*

**Subject:** Revise Paragraph 2.3.1 Powering the CiM-25

**Date:** July 9, 2004

**Part Number:** CD/CIM25600L.IOM

**Related Document:** CiM-25/600L, IP-Enabled M&C, Installation and Operation Manual, Part Number CD/CIM25600L.IOM, Rev. 2

**Collating Instructions:** Attach to Page 4

### **Comments:**

This information will be incorporated into the next revision.

### **Change Specifics:**

#### **2.3.1 Powering the CiM-25**

An AC/DC adapter is supplied to provide the CiM-26F power via the power-jack connector. There is no ON/OFF switch for the CiM-25.





# cIM-25/600L

---

Comtech EF Data is an ISO 9001  
Registered Company.



IP Enabled M&C  
Installation and Operation Manual  
Part Number CD/CIM25600L.IOM  
REV. 2  
June 25, 2004

## **CUSTOMER SUPPORT**

Contact the Comtech EF Data Customer Support Department for:

- ▶ Product support or training
- ▶ Information on upgrading or returning a product
- ▶ Reporting comments or suggestions concerning manuals

A Customer Support representative may be reached at:

Comtech EF Data  
Attention: Customer Support Department  
2114 West 7th Street  
Tempe, Arizona 85281 USA

480.333.2200 (Main Comtech EF Data Number)  
480.333.4357 (Customer Support Desk)  
480.333.2161 FAX

or, E-Mail can be sent to the Customer Support Department at:

[cdmipsupport@comtechefdata.com](mailto:cdmipsupport@comtechefdata.com)

Contact us via the web at [www.comtechefdata.com](http://www.comtechefdata.com).

1. To return a Comtech EF Data product (in-warranty and out-of-warranty) for repair or replacement:
2. Request a Return Material Authorization (RMA) number from the Comtech EF Data Customer Support Department.
3. Be prepared to supply the Customer Support representative with the model number, serial number, and a description of the problem.
4. To ensure that the product is not damaged during shipping, pack the product in its original shipping carton/packaging.
5. Ship the product back to Comtech EF Data. (Shipping charges should be prepaid.)

For more information regarding the warranty policies, see Warranty Policy, p. xiii.

# Table of Contents

<b>Customer Support.....</b>	<b>ii</b>
<b>FIGURES .....</b>	<b>IX</b>
<b>About this Manual .....</b>	<b>x</b>
<b>Conventions and References .....</b>	<b>x</b>
<b>Metric Conversion .....</b>	<b>x</b>
<b>Recommended Standard Designations .....</b>	<b>x</b>
<b>Trademarks .....</b>	<b>x</b>
<b>EMC Compliance.....</b>	<b>xi</b>
<b>Federal Communications Commission (FCC) .....</b>	<b>xi</b>
<b>Safety Compliance .....</b>	<b>xii</b>
<b>EN 60950 .....</b>	<b>xii</b>
<b>Warranty Policy .....</b>	<b>xiii</b>
<b>CHAPTER 1. INTRODUCTION.....</b>	<b>1</b>
<b>    1.1    Introduction.....</b>	<b>1</b>
<b>    1.2    Specifications .....</b>	<b>2</b>
<b>CHAPTER 2. INSTALLATION.....</b>	<b>3</b>
<b>    2.1    Unpacking and Inspection.....</b>	<b>3</b>
<b>    2.2    Configuration .....</b>	<b>3</b>
<b>    2.3    Connecting CiM-25 To Equipment.....</b>	<b>4</b>
2.3.1    Powering the CiM-25.....	4
2.3.2    CiM-25 Connectors.....	4

<b>CHAPTER 3. OPERATION.....</b>	<b>7</b>
<b>3.1 Overview.....</b>	<b>7</b>
<b>3.2 Administration and Security.....</b>	<b>7</b>
3.2.1 Security Tools .....	8
3.2.2 Network Administration .....	9
<b>3.3 HTTP Interface .....</b>	<b>10</b>
3.3.1 Local LAN Configuration.....	10
3.3.2 Home Page .....	13
3.3.3 Logoff Page.....	14
3.3.4 Support Page (Common).....	15
3.3.5 Administration Page (Common) .....	16
3.3.6 Modem Configuration Page (Rx/Tx) .....	19
3.3.7 Status Page .....	20
3.3.8 Interface Parameters Page (Tx/Rx).....	21
3.3.9 Utilities Page.....	22
3.3.10 Stored Faults/Alarms .....	23
3.3.11 External Control.....	24
<b>3.4 SNMP Interface.....</b>	<b>25</b>
<b>3.5 Telnet Interface .....</b>	<b>27</b>
3.5.1 Telnet Administrative Functions.....	28
3.5.2 Using Telnet with Equipment Remote Control Protocol .....	34
<b>3.6 Maintenance Interface.....</b>	<b>35</b>
3.6.1 Resetting to Factory Defaults.....	36
3.6.2 Changing Network IP Address .....	36
3.6.3 Verifying Software Version.....	36
3.6.4 Changing MAC Address.....	36
3.6.5 Changing Serial Number.....	37
<b>APPENDIX A. CIM-25/600L SNMP INTERFACE .....</b>	<b>39</b>
<b>A.1 SNMP Interface.....</b>	<b>39</b>
<b>A.2 MIB-II .....</b>	<b>39</b>
<b>A.3 Private MIB Implementations .....</b>	<b>39</b>
<b>A.4 CiM-25 MIB Tree .....</b>	<b>40</b>
<b>A.5 CiM-25 MIB .....</b>	<b>42</b>
A.5.1 iso.....	42
A.5.2 org .....	42

A.5.3	dod.....	42
A.5.4	internet .....	42
A.5.5	private .....	43
A.5.6	enterprises .....	43
A.5.7	comtech .....	43
A.5.8	cim25.....	43
A.5.9	cim25Objects .....	44
A.5.10	ipAddress1 .....	44
A.5.11	ipAddress2 .....	44
A.5.12	ipAddress12Range .....	45
A.5.13	ipAddress3 .....	45
A.5.14	ipAddress4 .....	46
A.5.15	ipAddress34Range .....	46
A.5.16	ipAddress5 .....	47
A.5.17	ipAddress6 .....	47
A.5.18	ipAddress56Range .....	48
A.5.19	dnsIpAddressPrimary.....	48
A.5.20	dnsIpAddressSecondary.....	49
A.5.21	cim25IpAddress .....	49
A.5.22	cim25IpGateway .....	50
A.5.23	cim25IpMask .....	50
A.5.24	readonlyPassword .....	51
A.5.25	readwritePassword .....	51
A.5.26	administratorPassword.....	52
A.5.27	trapIpAddress.....	52
A.5.28	trapCommunity .....	53
A.5.29	administratorName.....	54
A.5.30	readonlyName .....	54
A.5.31	readwriteName .....	55
A.5.32	macAddress.....	55
A.5.33	submitconfig .....	56
<b>A.6</b>	<b>CDM-600L MIB Tree:.....</b>	<b>57</b>
<b>A.7</b>	<b>CDM-600L MIB .....</b>	<b>62</b>
A.7.1	iso.....	62
A.7.2	org .....	62
A.7.3	dod.....	62
A.7.4	internet .....	62
A.7.5	private .....	62
A.7.6	enterprises .....	63
A.7.7	comtech .....	63
A.7.8	cdm600l.....	63
A.7.9	cdm600lObjects .....	64
A.7.10	systemInfo.....	64
A.7.11	equipmentID .....	65

A.7.12	unitSerialNumber.....	65
A.7.13	softwareRevision.....	66
A.7.14	deviceTime.....	66
A.7.15	deviceDate.....	67
A.7.16	circuitID .....	67
A.7.17	localRemoteState .....	68
A.7.18	deviceTemperature.....	68
A.7.19	txParameters.....	69
A.7.20	txFrequency.....	69
A.7.21	txDataRate.....	70
A.7.22	txModType.....	70
A.7.23	txFECType .....	71
A.7.24	txFECCodeRate .....	72
A.7.25	txSpecInv .....	72
A.7.26	txScrambler .....	73
A.7.27	txRSEncoding .....	73
A.7.28	txPowerLevel .....	74
A.7.29	txCarrierState .....	74
A.7.30	txDataInv.....	75
A.7.31	rxParameters .....	75
A.7.32	rxFrequency .....	76
A.7.33	rxDataRate .....	76
A.7.34	rxDemodType .....	77
A.7.35	rxFECType .....	78
A.7.36	rxFECCodeRate .....	79
A.7.37	rxSpecInv .....	79
A.7.38	rxDescrambler .....	80
A.7.39	rxRSDecoding .....	80
A.7.40	rxDataInv .....	81
A.7.41	rxAcqSweepRange.....	81
A.7.42	rxEbnoAlarmPoint .....	82
A.7.43	interfaceParameters.....	82
A.7.44	txInterfaceType .....	83
A.7.45	rxInterfaceType .....	84
A.7.46	txFramingMode .....	85
A.7.47	rxFramingMode .....	86
A.7.48	txClockSource .....	87
A.7.49	rxClockSource .....	87
A.7.50	rxBufferSize .....	88
A.7.51	externalClock .....	88
A.7.52	modemReferenceClock .....	89
A.7.53	txTernaryCode .....	90
A.7.54	rxTernaryCode .....	90
A.7.55	idrTxESCType .....	91
A.7.56	idrRxESCType .....	91

A.7.57	txAudioVolume.....	92
A.7.58	rxAudioVolume .....	92
A.7.59	dropAndInsert .....	93
A.7.60	txTerrestrialAlarmMask.....	94
A.7.61	rxTerrestrialAlarmEnable .....	94
A.7.62	recenterBuffer .....	95
A.7.63	utilityParameters .....	95
A.7.64	edmacFramingMode .....	96
A.7.65	edmacAddress .....	96
A.7.66	unitTestMode .....	97
A.7.67	unitAlarmMask .....	98
A.7.68	txBackwardAlarmEnable.....	98
A.7.69	rxBackwardAlarmEnable.....	99
A.7.70	unitConfigStore.....	99
A.7.71	unitConfigLoad .....	100
A.7.72	oduCommEnable.....	100
A.7.73	lnbPower .....	101
A.7.74	lnbVoltage.....	101
A.7.75	lnbRefEnable.....	102
A.7.76	lnbThresholdLow .....	102
A.7.77	lnbThresholdHigh .....	103
A.7.78	rxLOFrequency .....	103
A.7.79	oduPower .....	104
A.7.80	oduRefEnable.....	104
A.7.81	oduThresholdLow .....	105
A.7.82	oduThresholdHigh .....	105
A.7.83	oduOutputPower .....	106
A.7.84	oduPowerLeveling .....	106
A.7.85	oduCarrierOutputDelay.....	107
A.7.86	txLOFrequency .....	107
A.7.87	oduAddress .....	108
A.7.88	aupcParameters .....	108
A.7.89	aupcEnable .....	109
A.7.90	aupcControlParameters .....	109
A.7.91	remoteEbno .....	110
A.7.92	txPowerLevelIncrease.....	110
A.7.93	statusParameters.....	111
A.7.94	rxEbno .....	111
A.7.95	rxSignalLevel.....	112
A.7.96	rxFrequencyOffset .....	112
A.7.97	bufferFillState .....	113
A.7.98	rxBER .....	113
A.7.99	redundancyState .....	114
A.7.100	unitFaults.....	114
A.7.101	oduCurrent .....	116

A.7.102	oduVoltage.....	117
A.7.103	oduPhaseLockLoop.....	117
A.7.104	oduOutputPowerLevel.....	118
A.7.105	oduTemperature .....	118
A.7.106	oduSoftwareVersion .....	119
A.7.107	oduPowerClass.....	119
A.7.108	oduTargetPower.....	120
A.7.109	logs.....	120
A.7.110	clearEventsLog .....	121
A.7.111	numberUnreadEvents.....	121
A.7.112	retrieveNext5Events.....	122
A.7.113	setStatisticInterval.....	122
A.7.114	clearStatisticsLog .....	123
A.7.115	numberUnreadStatistics .....	123
A.7.116	retrieveNext5Statistics .....	124
A.7.117	trapNotifications .....	124
A.7.118	trapNotificationsPrefix.....	124
A.7.119	unitFaultTraps .....	125
<b>INDEX .....</b>	<b>39</b>	

## Figures

Figure 1. Null Cable Diagram..... 35

## ABOUT THIS MANUAL

This manual provides installation and operation information for the Comtech EF Data CiM-25/600L IP Enabled M&C. This is a technical document intended for earth station engineers, technicians, and operators responsible for the operation and maintenance of the CiM-25/600L IP Enabled M&C.

## CONVENTIONS AND REFERENCES

### CAUTIONS AND WARNINGS



Indicates information critical for proper equipment function.



Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury. CAUTION may also be used to indicate other unsafe practices or risks of property damage.



Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

## METRIC CONVERSION

Metric conversion information is located on the inside back cover of this manual. This information is provided to assist the operator in cross-referencing English to Metric conversions.

## RECOMMENDED STANDARD DESIGNATIONS

Recommended Standard (RS) Designations have been superseded by the new designation of the Electronic Industries Association (EIA). References to the old designations are shown only when depicting actual text displayed on the screen of the unit (RS-232, RS-485, etc.). All other references in the manual will be shown with the EIA designations (EIA-232, EIA-485, etc.) only.

## TRADEMARKS

All product names mentioned in this manual may be trademarks or registered trademarks of their respective companies and are hereby acknowledged.

## **REPORTING COMMENTS OR SUGGESTIONS CONCERNING THIS MANUAL**

Comments and suggestions regarding the content and design of this manual will be appreciated. To submit comments, please contact the Comtech EF Data Customer Support Department.

## **EMC COMPLIANCE**

This is a Class A product. In a domestic environment, it may cause radio interference that requires the user to take adequate protection measures.

### **EN55022 COMPLIANCE**

This equipment meets the radio disturbance characteristic specifications for information technology equipment as defined in EN55022.

### **EN50082-1 COMPLIANCE**

This equipment meets the electromagnetic compatibility/generic immunity standard as defined in EN50082-1.

## **FEDERAL COMMUNICATIONS COMMISSION (FCC)**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference; in which case, users are required to correct the interference at their own expense.

**Note:** To ensure compliance, properly shielded cables for DATA I/O shall be used. More specifically, these cables shall be shielded from end to end, ensuring a continuous shield.

## SAFETY COMPLIANCE

### EN 60950

Applicable testing is routinely performed as a condition of manufacturing on all units to ensure compliance with safety requirements of EN60950.

This equipment meets the Safety of Information Technology Equipment specification as defined in EN60950.

### LOW VOLTAGE DIRECTIVE (LVD)

The following information is applicable for the European Low Voltage Directive (EN60950):

<HAR>	Type of power cord required for use in the European Community.
	CAUTION: Double-pole/Neutral Fusing. ACHTUNG: Zweipolare bzw. Neutralleiter-Sicherung.

International Symbols:

Symbol	Definition
	Alternating Current.
	Fuse.

Symbol	Definition
	Protective Earth.
	Chassis Ground.

**Note:** For additional symbols, refer to "Cautions" listed earlier in this preface.

## **WARRANTY POLICY**

This Comtech EF Data product is warranted against defects in material and workmanship for a period of two years from the date of shipment. During the warranty period, Comtech EF Data will, at its option, repair or replace products that prove to be defective.

For equipment under warranty, the customer is responsible for freight to Comtech EF Data and all related custom, taxes, tariffs, insurance, etc. Comtech EF Data is responsible for the freight charges **only** for return of the equipment from the factory to the customer. Comtech EF Data will return the equipment by the same method (i.e., Air, Express, Surface) as the equipment was sent to Comtech EF Data.

## **LIMITATIONS OF WARRANTY**

The foregoing warranty shall not apply to defects resulting from improper installation or maintenance, abuse, unauthorized modification, or operation outside of environmental specifications for the product, or, for damages that occur due to improper repackaging of equipment for return to Comtech EF Data.

*No other warranty is expressed or implied. Comtech EF Data specifically disclaims the implied warranties of merchantability and fitness for particular purpose.*

## **EXCLUSIVE REMEDIES**

The remedies provided herein are the buyer's sole and exclusive remedies. Comtech EF Data shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

## **DISCLAIMER**

Comtech EF Data has reviewed this manual thoroughly in order that it will be an easy-to-use guide to your equipment. All statements, technical information, and recommendations in this manual and in any guides or related documents are believed reliable, but the accuracy and completeness thereof are not guaranteed or warranted, and they are not intended to be, nor should they be understood to be, representations or warranties concerning the products described. Further, Comtech EF Data reserves the right to make changes in the specifications of the products described in this manual at any time without notice and without obligation to notify any person of such changes.

If you have any questions regarding the equipment or the information in this manual, please contact the Comtech EF Data Customer Support Department.

## NOTES

# Chapter 1. INTRODUCTION

**CiM-25**  
**IP-Enabled**  
**M&C Interface**



## 1.1 INTRODUCTION

The CiM-25 is a low-cost solution for providing an Internet Protocol (IP) Monitor and Control (M&C) interface for existing Comtech EF Data satellite modems, RF frequency converters and solid-state power amplifiers. The CiM-25 provides a custom proxy interface between the IP world and the equipment's existing serial remote control interface.

The CiM-25 provides powerful equipment management tools via the uses of HTTP protocol, SNMP v2c Protocol, and Telnet Protocol. Wrapped around these industry standard protocols is a system of account access and IP security control features to safeguard equipment from unwanted intrusions. The CiM-25 brings customer support to a new level by providing SMTP Protocol to facilitate automated, direct E-mail to Comtech EF Data's Customer Support Center.

The CiM-25 is packaged in a very compact 4.3" x 1.7" x 0.8". The unit can be powered directly by the attached equipment or via an external AC/DC adapter. The CiM-25 requires less than 1 of watt power.

The CiM-25 uses flash technology providing support for a wide variety of products from a single hardware platform. The CiM-25 either currently or will in the near future support the following Comtech EF Data equipment:

► Modems

SDM-300L1*	SDM-8000*	CDM-600L*
SDM-300L2*	SDM-300A/SLM-3650*	SDM-2020D*
SDM-300L3	CDM-550T	SDM-9000*
SDM-2020M*	CDM-600*	

► Frequency Converter

UT4500 series 1 kHz and 125 kHz step size Up Converters*
DT4500 series 1 kHz and 125 kHz step size Down Converters*

\*Requires an external 5 Vdc Power Supply (universal AC input). See section 2.3.1, Powering the CiM-25.

## 1.2 SPECIFICATIONS

SYSTEM SPECIFICATIONS	
Ethernet Interface	10base T (RJ-45)
Equipment Interface	DB9 Female on CiM-25F
	DB9 Male on CiM-25M
ENVIRONMENTAL AND PHYSICAL	
Temperature	Operating: 0 to 50° C
	Storage: -25 to 70° C
Power Supply	4.75 to 5.25 Vdc
Power Consumption	0.9 W typical, 1.5 W maximum
Physical Dimensions	L=110, W=43, H=20 (mm)
	L=4.3, W=1.7, H=0.8 (inches)
Weight	< 1 lbs
CE Approvals	EN55022 Class B (Emissions)
	EN50082-1 Part 1 (Immunity)
	EN60950 (Safety)
FCC Approval	FCC Part 15 Class B

# Chapter 2. INSTALLATION

Unpacking and Inspection.....	3
Configuration.....	3
Connecting CiM-25 To Equipment.....	4

## 2.1 UNPACKING AND INSPECTION

Inspect shipping containers for damage. If shipping containers are damaged, keep them until the contents of the shipment have been carefully inspected and checked for normal operation.

Remove the packing list from the outside of the shipping carton. Open the carton and remove the contents, checking the contents against the packing list. Verify completeness of the shipment and that the unit functions correctly. If damage is evident, contact the carrier and Comtech EF Data immediately and submit a damage report. Keep all shipping materials for the carrier's inspection.

If the unit needs to be returned to Comtech EF Data, please use the original shipping container.

## 2.2 CONFIGURATION

There are no internal jumpers to configure, no interface cards to install, and no other options to install. All configuration is carried out entirely in software. The unit should first be configured locally, using the RJ-45 Ethernet interface. The unit will ship with a default IP address of 10.6.30.1, Gateway 0.0.0.0, and Mask 255.255.0.0. The default Administrator Name and Password are **admin** and **1234** respectively. See the operations section for details regarding configuring and administrating the CiM-25.

## 2.3 CONNECTING CiM-25 TO EQUIPMENT

The CiM-25 is designed to connect directly (no cabling) to supported Comtech EF Data Modems, Frequency Converters, or Solid State Power Amplifiers using the equipment's 9-pin remote control interface port. The CiM-25 interfaces to this equipment via a RS-232 interface at a baud rate of 19200 bps and a data format of 8-N-1. Therefore, it is necessary to first select the RS-232 interface type on the interfacing equipment prior to connecting the CiM-25 to said equipment. Some equipment automatically selects a unit address of **0** when RS232 is chosen while other equipment require the user to configure the unit remote control address to **1**. In addition, on equipment that supports multiple data formats the user must select **8-N-1** format.

### 2.3.1 POWERING THE CiM-25

The CiM-25F can accept power either on pin 4 of the DB9 interface to the equipment or via the power jack located next to the RJ-45 connector. An optional AC/DC adapter can be purchased to provide the CiM-25F power via the power-jack connector.

The CiM-25M accepts power via the power jack located next to the RJ-45 connector. An AC/DC adapter must be purchased to provide power to the CiM-25M.

All CDM-550, CDM-600, and CDM-600L modems shipped from the factory after June 1, 2001 have been modified to supply the 5 Vdc signal on pin 4. All units shipped from the factory prior to this date DO NOT provide the 5 Vdc on pin 4. A field modification kit is available and can be purchased for CDM-550, CDM-600, and CDM-600L modems shipped prior to this date

There is no ON/OFF switch for the CiM-25.

### 2.3.2 CiM-25 CONNECTORS

There are three connectors located on each CiM-25. Each is defined below:

- ▶ RJ-45 - 10base T Ethernet interface.
- ▶ DB9 – RS-232 equipment interface (either male or female)
- ▶ 1.3mm – DC Power Jack

The pinout details for these connectors are provided below.

### RJ-45 Pin Out

Pin	Function
1	Tx+
2	Tx-
3	Rx+
4	No Connection
5	No Connection
6	Rx-
7	No Connection
8	No Connection

### DB(Female) (CiM-25F)

Pin	Function
1	Ground
2	<b>CiM-25 Rx</b>
3	<b>CiM-25 Tx</b>
4	+5 Vdc Input
5	Ground
6	No Connection
7	No Connection
8	No Connection
9	No Connection

### DB9 Male (CiM-25M)

Pin	Function
1	Ground
2	<b>CiM-25 Rx</b>
3	<b>CiM-25 Tx</b>
4	No Connection
5	Ground
6	+5 Vdc Input
7	No Connection
8	No Connection
9	No Connection

### 1.3mm – DC Power Jack

Pin	Function
Center Conductor	+5 Vdc Input
Outer Conductor	Ground

**NOTES:**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

# **Chapter 3. OPERATION**

Overview.....	7
Administration and Security.....	7
HTTP Interface .....	10
SNMP Interface .....	25
Telnet Interface.....	27
Maintenance Interface .....	35

## **3.1 OVERVIEW**

Each CiM-25 unit is programmed in the factory to provide a custom proxy interface to one of Comtech EF Data's previously defined equipments. This means that a CiM-25/600L that is loaded to interface a CDM-600L Modem to the IP world will not operate with any other piece of Comtech EF Data equipment, unless the personality is changed via a flash upload.

However every CiM-25, independent of personality, shares a large number of common features. For instance, all CiM-25 units provide the same degree of security features, network protocols, and administration features. The following sections will provide a detailed description of all the features available for a specific CiM-25 (i.e. CiM-25/600L with CDM-600L Modem). Those areas that are common to all CiM-25 units will be expounded upon and delineated. The areas that are specific to the individual personality (i.e. equipment parameter control) will only be briefly covered since these are already covered in detail in the individual equipment operator manuals.

## **3.2 ADMINISTRATION AND SECURITY**

The CiM-25 has been designed to provide a high degree of administrative flexibility to insure that each customer can configure the device (or network of devices) in a manner that meets his/her security needs. The primary tools provided are the Host Allow List, PING enable/disable, and three (3) level user login. Used as a group, these three tools provide the CiM-25 with a very high degree of security. Each of these tools is described in more detail below:

### 3.2.1 SECURITY TOOLS

#### 3.2.1.1 USER LOGIN

For the HTTP interfaces the CiM-25 provides three (3) levels of user login. The Telnet interface, provides the first two (2) of the following levels. The highest level is the **Administrator** login. This level allows 100% complete access to all controllable CiM-25 and equipment parameters. The next level of user login is the **Read/Write** level. This level allows access to all controllable equipment parameters but does not allow access to the administration parameters of the CiM-25 itself. The lowest level of login is the **Read Only** login. As the name implies, this level allows the user to view, but not change, the equipment parameters. Like the **Read/Write** level, this level does not allow access to the administration parameters of the CiM-25.

The Name and Password factory defaults for the three level defined above are:

- ▶ Administrator Level:
  - ▶ Name: **admin**
  - ▶ Password: **1234**
- ▶ Read/Write Level:
  - ▶ Name: **opcenter**
  - ▶ Password: **1234**
- ▶ Read Only Level:
  - ▶ Name: **monitor**
  - ▶ Password: **1234**

The SNMP interface uses all three (3) levels of user login utilizing the SNMP v2c (community string) method of security. The community string is the concatenation of the name and password, i.e. **admin1234**, default admin community string.

#### 3.2.1.2 HOST ALLOW LIST

The CiM-25 provides a high degree of security by allowing the Administrator to define a list of IP addresses to which the CiM-25 will accept/respond to IP datagrams. The Administrator can select up to six (6) individual allowable IP addresses or up to three (3) allowable IP address ranges or any combination of individual and ranges that can be defined by six fields (see HTTP interface below for further details). The host allow list is applied to all three CiM-25 interfaces (HTTP, SNMP, and Telnet).

#### 3.2.1.3 PING ENABLE/DISABLE

The final piece to the CiM-25 security design is the PING Enable/Disable feature. This feature allows the Administrator to disable PING on an individual CiM-25. This in effect conceals the CiM-25 from most hackers.

### **3.2.2 NETWORK ADMINISTRATION**

In addition to the three items described above under Security, the CiM-25 provides the following network administration facilities:

- ▶ Configure IP Address, IP Gateway, and IP Mask.
- ▶ Select Primary and Secondary DNS server IP addresses.
- ▶ Select SMTP domain Name and IP address.
- ▶ Select SNMP Trap IP address.

## 3.3 HTTP INTERFACE

This section of this document will explain the HTTP (Web Server) interface provided by the CiM-25/600L.

### 3.3.1 LOCAL LAN CONFIGURATION

The web page interface is best viewed at **1152 x 864** resolution using **IE 5.5** or higher and a 17" or larger monitor.

#### 3.3.1.1 HTTP 1.1

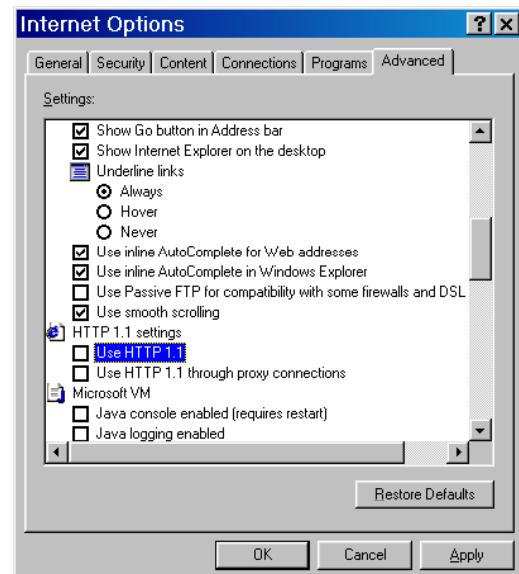


For best performance, HTTP 1.1 should be disabled. It can be changed as follows:

##### Step   Procedure

1. Click **Start, Settings, then Control Panel.**
2. Double-click the **Internet Options** icon in the Control Panel.
3. Under the **Advanced** tab, scroll down to **HTTP 1.1 settings**.
4. Uncheck the **Use HTTP 1.1** box and click **OK**.

##### Example



### 3.3.1.2 PROXY SERVER

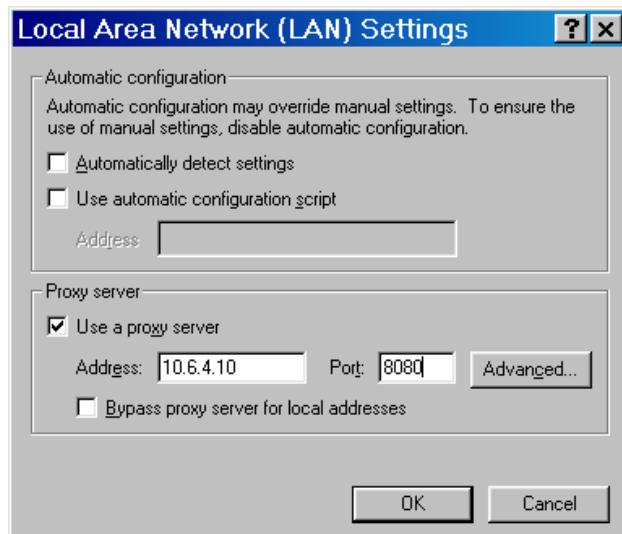
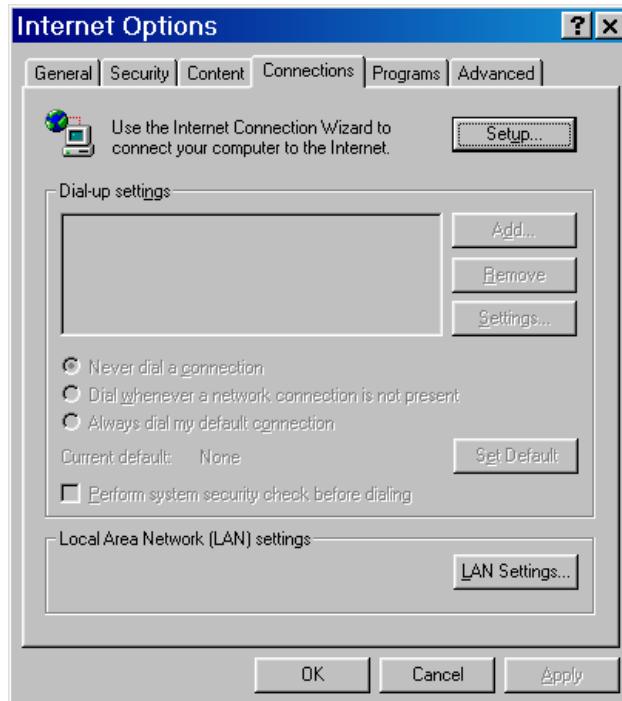


If your network uses a proxy server, it may be necessary to disable the use of it for the browser to work. It can be changed as follows:

#### Step   Procedure

1. Click **Start**, **Settings**, then **Control Panel**.
2. Double-click the **Internet Options** icon in the Control Panel.
3. Under the **Connections** tab, click the **LAN Settings** button.
4. At this point you must do one of the following:
  - a. Uncheck the **Use a proxy server** box and click **OK**.  
**or**
  - b. Click the **Advanced** button and go to the next step.

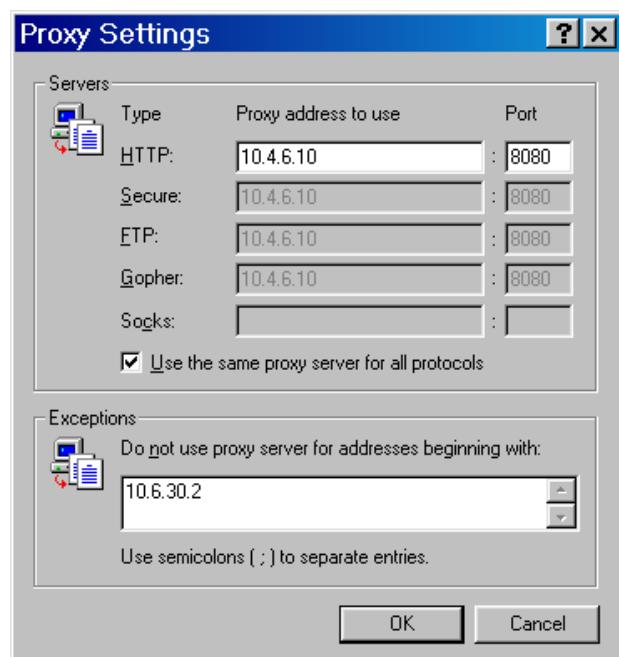
#### Example



**Step   Procedure**

5. In the **Exceptions** box, enter the IP address of the CiM module and click **OK**.

**Example**

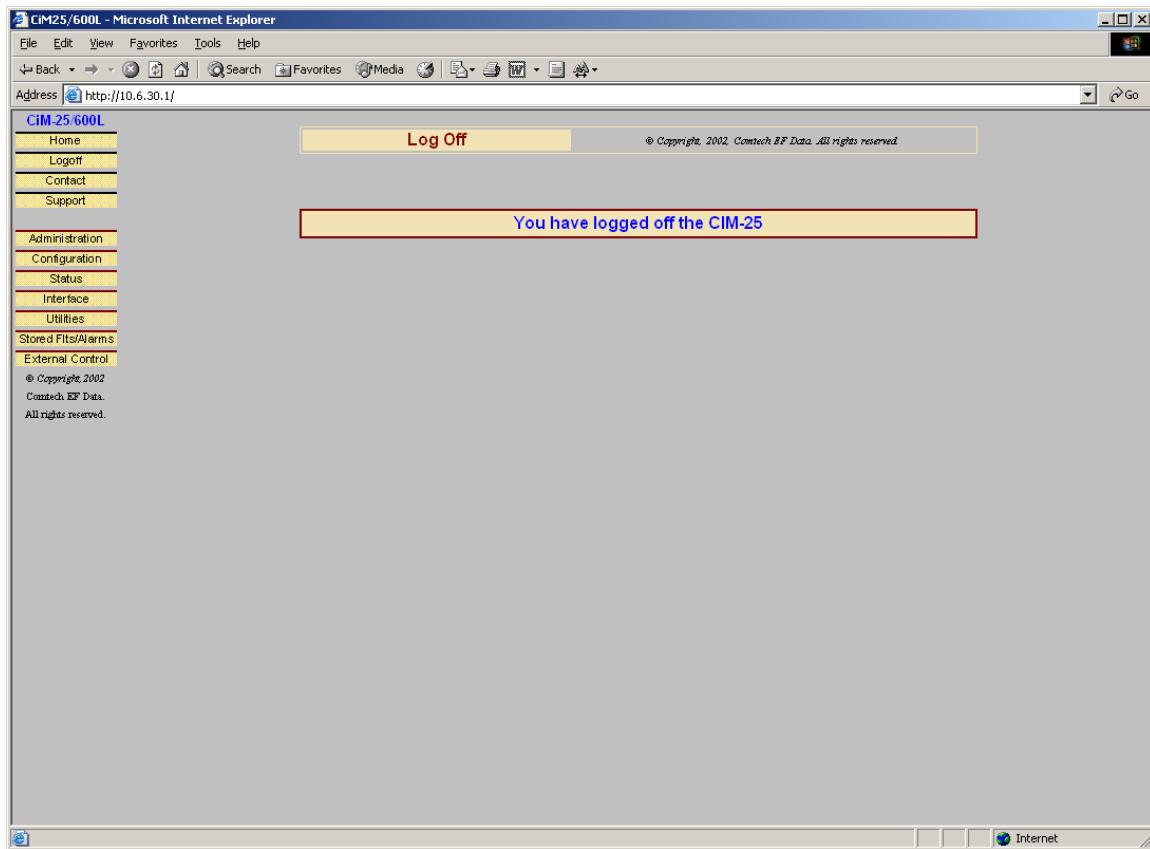


### 3.3.2 HOME PAGE



Welcome to the CiM-25/600L Web Interface. The following sections will give you a brief introduction to each web page available.

### 3.3.3 LOGOFF PAGE



The CiM-25 allows multiple connections to the Web Interface. The Web Interface and Telnet Interface cannot be used at the same time. You must logoff the Web Interface in order to log into the Telnet Interface and vice versa.

### 3.3.4 SUPPORT PAGE (COMMON)



In order to use the Support functions, the user must first assign SMTP a domain name and IP address. Refer to section 3.3.5.8, SMTP Domain Name and IP Address.

The screenshot shows a Microsoft Internet Explorer window displaying the 'CIM Support' page. The left sidebar contains a navigation menu with items like Home, Logoff, Contact, Support, Administration, Configuration, Status, Interface, Utilities, Stored Fts/Alarms, and External Control. The main content area has a yellow header 'CIM Support' and a note '© Copyright 2002 Comtech EF Data All rights reserved'. It features two main sections: 'Contact Information' and 'Problem Report'. The 'Contact Information' section includes four input fields: Name, Company, Telephone, and E-mail. Below these is a large text area for the 'Problem Report'. A note at the bottom of this area states: 'Note: By submitting this page, your Equipment Serial Number, Configuration, and Status is automatically attached to the message.' A 'Send Email' button is located at the bottom of the report area. The browser status bar at the bottom shows the URL 'http://10.6.30.1/m\_intrfc.htm'.

The Support page is accessible by ALL logged in users. This page allows the user to automatically E-mail Comtech EF Data's Customer Support center. The user MUST fill in the **Name**, **Company**, **E-mail Address**, and **Telephone** information boxes. In addition, the user must enter some description of the problem or question into the **Problem Report** field. The CiM-25 will automatically retrieve and attach pertinent information about the equipment (such as Equipment ID, Serial Number, Configuration, and Status) to the E-mail message. This will allow Comtech EF Data Customer Support personal to provide faster and more accurate responses to customer needs.

### 3.3.5 ADMINISTRATION PAGE (COMMON)

The screenshot shows the 'Administration' page of the CiM-25/600L web interface. The left sidebar contains navigation links: Home, Logoff, Contact, Support, Administration, Configuration, Status, Interface, Utilities, Stored Flts/Alarms, and External Control. The main content area is titled 'Administration'. It includes sections for 'System Account Information', 'Host Allow List - Enter IP Address of Authorized Host', and 'Network Maintenance'. In the 'System Account Information' section, fields include Administrator Name (admin), Administrator Password, Read/Write (opccenter), Read/Write Password, Read Only (monitor), Read Only Password, and SMTP Domain IP Address (000.000.000.000) and SMTP Domain Name. The 'Host Allow List' section lists IP ranges: IP 1 (000.000.000.000), IP 2 (255.255.255.255), IP 3 (000.000.000.000), IP 4 (000.000.000.000), IP 5 (000.000.000.000), IP 6 (000.000.000.000), IP 1/2 Range (Yes selected), IP 3/4 Range (No selected), and IP 5/6 Range (No selected). The 'Network Maintenance' section includes fields for Ping (Enabled selected), MAC Address (0006B000042C), IP Address (010.006.030.001), IP Gateway (000.000.000.000), IP Mask (255.255.000.000), DNS 1 (000.000.000.000), DNS 2 (000.000.000.000), Trap IP (000.000.000.000), Trap Community (public), and a 'Submit Admin & Reset' button.

The Administration Page is only available to users who have logged in using the Administrator Name and Password.

#### 3.3.5.1 ADMINISTRATOR NAME AND PASSWORD

The factory defaults for these parameters are **admin** and **1234** respectively. The Name field can be any alpha-numeric combination with a minimum length of 4 characters and a maximum length of 10 characters. The Password field can be any alpha-numeric combination with a minimum length of 4 characters and a maximum length of 10 characters.

#### 3.3.5.2 READ/WRITE NAME AND PASSWORD

The factory defaults for these parameters are **opccenter** and **1234** respectively. The Name field can be any alpha-numeric combination with a minimum length of 4 characters and a maximum length of 10 characters. The Password field can be any alpha-numeric combination with a minimum length of 4 characters and a maximum length of 10 characters.

### 3.3.5.3 READ ONLY NAME AND PASSWORD

The factory defaults for these parameters are **monitor** and **1234** respectively. The Name field can be any alpha-numeric combination with a minimum length of 4 characters and a maximum length of 10 characters. The Password field can be any alpha-numeric combination with a minimum length of 4 characters and a maximum length of 10 characters.

### 3.3.5.4 HOST ALLOW LIST

The Host Allow List can be configured as any of the following combinations:

- ▶ 1 to 6 individual IP addresses.
- ▶ 1 to 3 ranges of IP addresses.
- ▶ A combination of individual and range addresses.

The Administrator simply checks the **Range Yes** radio button next to the group of two IP addresses that constitute the beginning and ending of the range.

### 3.3.5.5 PING ENABLE / DISABLE

The factory defaults for this parameter is **Enabled**. The radio buttons allow the Administrator to choose between **Enabled** and **Disabled**.

### 3.3.5.6 CIM-25 IP ADDRESS, GATEWAY AND MASK

The factory defaults for these parameters are **10.6.30.1**, **0.0.0.0**, and **255.255.0.0** respectively. The Administrator can change these as required.

### 3.3.5.7 DNS SERVERS

The Administrator can assign both a primary and secondary DNS server IP address.

### 3.3.5.8 SMTP DOMAIN NAME AND IP ADDRESS

The Administrator can assign the SMTP Domain Name and Domain IP Address. This is required if the E-mail feature of the Support Page is to be used.

### 3.3.5.9 SNMP TRAP IP ADDRESS

The Administrator can assign a SNMP Trap IP address.

### 3.3.5.10 MAC ADDRESS

This is a READ ONLY parameter and can not be changed.

### 3.3.5.11 SNMP TRAP COMMUNITY

The Administrator can assign a SNMP Trap Community. The factory default for this parameter is public. The SNMP Trap Community field can be any combination of characters and a length of 0 - 20 characters.

### 3.3.6 MODEM CONFIGURATION PAGE (Rx/Tx)

The screenshot shows the 'Modem Configuration' page for the CiM-25/600L. The left sidebar contains navigation links: Home, Logoff, Contact, Support, Administration, Configuration, Status, Interface, Utilities, Stored Flts/Alarms, and External Control. A copyright notice at the bottom of the sidebar states: © Copyright 2002 Comtech EF Data. All rights reserved.

The main area is titled 'Modem Configuration' and includes a note: 'Modem Selected: (select from Home page)'. It has two radio button options: Local (selected) and Distant.

**Interface** settings include:

- Tx Interface Type: RS422
- Rx Interface Type: RS422
- Tx Framing Mode: EDMAC
- Rx Framing Mode: EDMAC

A 'Submit Interface' button is located below these settings.

A blue text note at the bottom of the interface section reads: 'Submit TX and RX Interface Type and Framing Mode BEFORE setting other configuration parameters.'

**Transmit** and **Receive** sections contain various configuration parameters:

- Transmit:**
  - TLC type: Viterbi
  - Modulation: QPSK
  - FEC Coding: Rate 3/4
  - Spectrum: Normal
  - Scrambler: On
  - Power Level: 40.0 dBm (minus sign assumed)
  - Reed-Solomon: Normal
  - Invert Tx Data: Normal
  - Carrier: On
- Receive:**
  - TLC type: Viterbi
  - Modulation: QPSK
  - FEC Coding: Rate 3/4
  - Spectrum: Normal
  - De-Scrambler: On
  - Sweep Width: 11 kHz (+/-)
  - Reed-Solomon: Normal
  - Invert Rx Data: Normal
  - Eb/No Alarm Pt: 00.1

A 'Submit Modem Configuration' button is located at the bottom of the main form.

This page can be viewed by all three levels of user login. However, only user with Administrative or Read/Write privileges can submit changes to this page. This page allows the user to configure the primary Transmit and Receive Parameters of a CDM-600L Modem.

**Note:** The Tx and Rx interface Type and Frame Module have higher priority than other parameters, and should be configured **before** setting other parameters.

### 3.3.7 STATUS PAGE

The screenshot shows the 'Modem Status' page of the CiM-25/600L web interface. The left sidebar contains links for Home, Logoff, Contact, Support, Administration, Configuration, Status, Interface, Utilities, Stored Bits/Alarms, and External Control. A copyright notice for Comtech EF Data is also present. The main content area is titled 'Modem Status' and includes a 'Modem Selected' dropdown and two radio buttons for 'Local' and 'Distant'. The 'General Information' section displays fields for Circuit ID, Serial Number, Software Revision, Local/Remote setting, Temperature, Events Log (unread lines), and Statistics Log (unread lines). The 'Alarms' section shows 'No Faults' for Unit, Tx, Rx, and Open Network. The 'RX Parameters' section includes BER, Eb/No, Freq Offset, Signal Level, Buffer Fill State, Redundancy, Remote Eb/No, and Tx Power Level Increase. The 'AUPC' section indicates 'AUPC Disabled'. The bottom of the page has a 'Done' button and standard Internet Explorer navigation buttons.

This page can be viewed by all three levels of user login. This is a Read Only Page and has no submit button. This page provides various status information for a CDM-600L Modem.

### 3.3.8 INTERFACE PARAMETERS PAGE (Tx/Rx)

The screenshot shows the 'Modem Interface' configuration page. On the left, a vertical menu lists: Home, Logoff, Contact, Support, Administration, Configuration, Status, Interface, Utilities, Stored Bits/Alarms, and External Control. The 'External Control' option is selected.

**Modem Selected:** (select from Home page)  Local  Distant

**Transmit** **Receive**

Ternary Code: B8ZS

IDR ESC Type: 64k Data Channel

Audio Volume 1: +0  2: +0    
 Audio Volume 1: +0  2: +0

**Drop** **Insert**

Drop Type: T1-D4  Tx Terrestrial Alarm Mask: Alarm Masked

Channel/Time 1 [1] 2 [2] 3 [3] 4 [4] 5 [5] 6 [6] 7 [7] 8 [8] 9 [9] 10 [A] 11 [B] 12 [C]  
Channel/Time 13 [D] 14 [E] 15 [F] 16 [G] 17 [H] 18 [I] 19 [J] 20 [K] 21 [L] 22 [M] 23 [N] 24 [O]

Insert Type: T1-D4  Rx Terrestrial Alarm: Disabled

Channel/Time 1 [1] 2 [2] 3 [3] 4 [4] 5 [5] 6 [6] 7 [7] 8 [8] 9 [9] 10 [A] 11 [B] 12 [C]  
Channel/Time 13 [D] 14 [E] 15 [F] 16 [G] 17 [H] 18 [I] 19 [J] 20 [K] 21 [L] 22 [M] 23 [N] 24 [O]

Drop and Insert Internal Loop: Off

This page can be viewed by all three levels of user login. However, only user with Administrative or Read/Write privileges can submit changes to this page. This page allows the user to configure the Transmit and Receive Interface Parameters and Drop & Insert parameters of a CDM-600L Modem.

### 3.3.9 UTILITIES PAGE

**Modem Utilities**

© Copyright, 2002, Comtech EF Data. All rights reserved.

**Modem Selected:** (select from Home page)  Local  Distant

**Unit**

Circuit ID: [ ]  
Test Mode: Normal   
ODU Comms: Enabled   
EDMAC Framing Mode: EDMAC\_ON (Slave)   
EDMAC Slave Address: 0021

**AUPC**

AUPC Enable: Disabled   
Target Eb/No for Remote Demod: 4.0 dB  
Maximum Increase in TX Power: 3\_dB

**Action On**

Maximum Power Reached: No\_Action

**Backward Alarms**

Tx1: OFF <input type="button" value="..."/>	Rx1: OFF <input type="button" value="..."/>
Tx2: OFF <input type="button" value="..."/>	Rx2: OFF <input type="button" value="..."/>
Tx3: OFF <input type="button" value="..."/>	Rx3: OFF <input type="button" value="..."/>
Tx4: OFF <input type="button" value="..."/>	Rx4: OFF <input type="button" value="..."/>

**Clocks**

Tx Clock Source: Internal   
Rx Clock Source: Rx Satellite   
Rx Buffer Size: 01158 bytes  
External Clock: 02048.000 kHz Unbalanced   
Modem Reference Clock: Internal

**Submit Clocks**

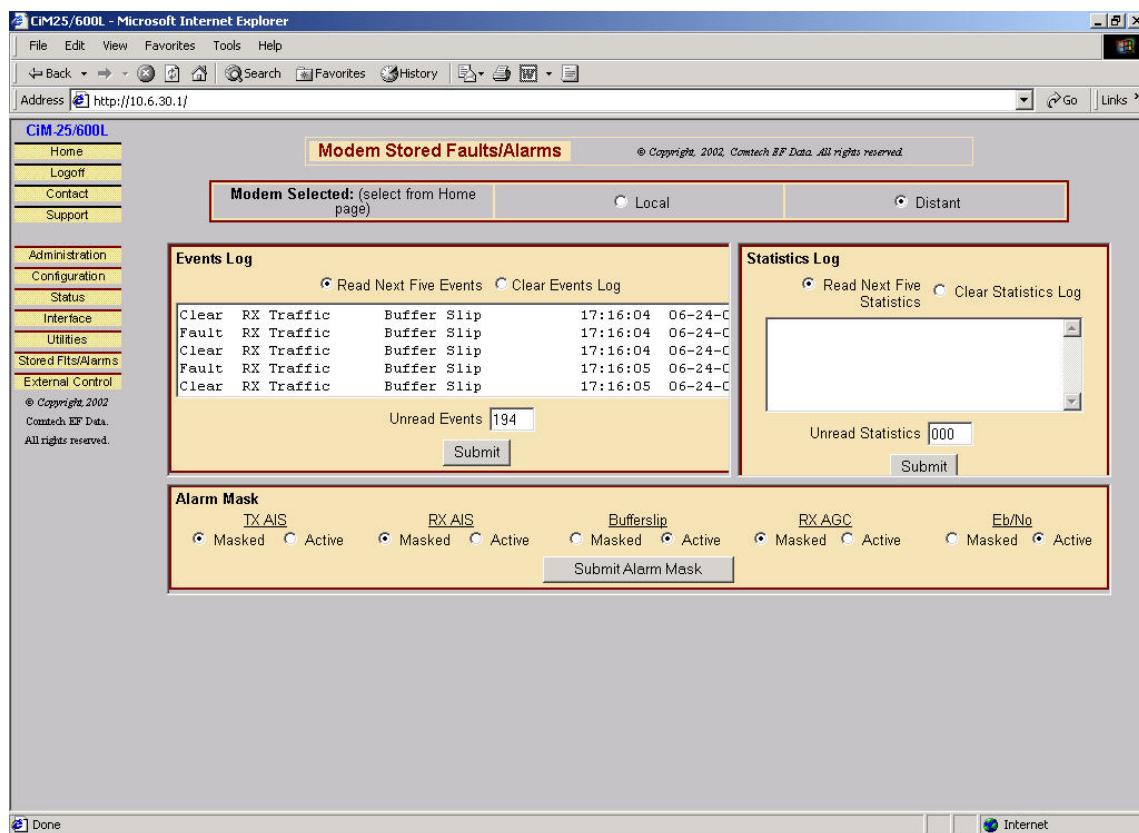
**Submit Backward Alarms**

Submit Time/Date: 10:06:48 Format is HH:MM:SS      25/06/04 Format is DD/MM/YY

Submit Store/Load **Store takes precedence over Load.** None  Store      None  Load

This page can be viewed by all three levels of user login. However, only user with Administrative or Read/Write privileges can submit changes to this page. This page allows the user to configure various utility functions on a CDM-600L Modem.

### 3.3.10 STORED FAULTS/ALARMS



This page can be viewed by all three levels of user login. This is a read/write page. This page allows the user to Read/Clear Events Log, Statistics Log, and configure Alarm Masks of the CDM-600L Modem.

### 3.3.11 EXTERNAL CONTROL

The screenshot shows the 'External Control' page of the CiM-25/600L interface. The left sidebar includes links for Home, Logoff, Contact, Support, Administration, Configuration, Status, Interface, Utilities, and External Control. The main area has tabs for 'Modem Selected' (selected from Home page), Local, and Distant. The 'External Control' tab is active.

**LNB Control:**

- LNB Power: ON
- LNB Voltage: 13
- LNB Ref Enable: OFF
- LNB Current Threshold Low: 000 mA (0 to 500)
- LNB Current Threshold High: 500 mA (0 to 500)
- RX LO Frequency: 00000 MHz [LOW (+)]

**ODU Control:**

- ODU Power: ON
- ODU Output Power: ON
- ODU Carrier Output Delay: 10:30 (mm:ss)
- ODU Address: 01 (1 to 15)
- ODU Current Threshold Low: 1000 mA (0 to 4000)
- ODU Power Leveling: OFF
- TX LO Frequency: 12800 MHz [LOW (+)]

**Expect delay on ODU Status update after Submit. Click on Menu "External Control" to refresh this page.**

**ODU Status:**

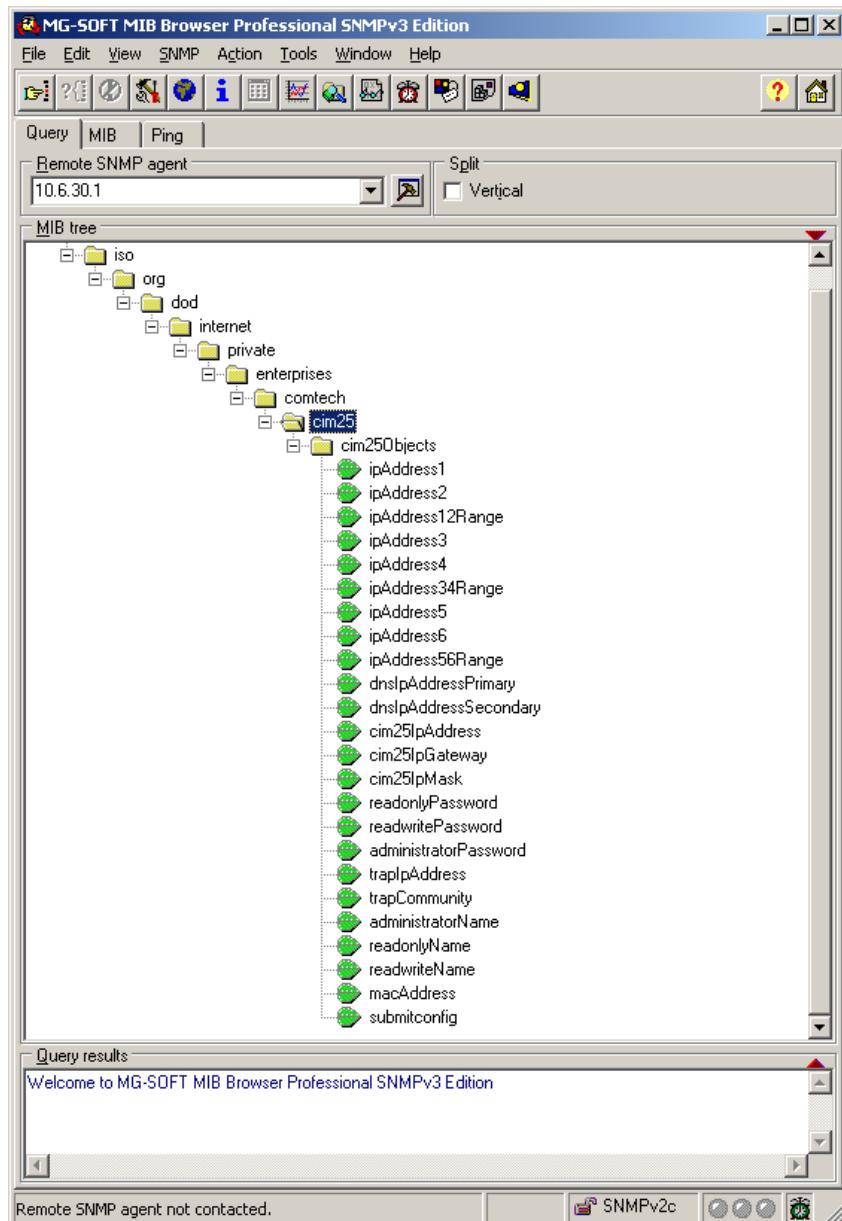
- ODU Current: 2639 mA
- ODU Voltage: 24.2 Volt
- ODU Output Power Level: 21.0 dBm
- ODU Phase Lock Loop: Locked
- ODU Temperature: +046 degrees C
- ODU Power Class: 04 Watt
- ODU Software Version: 02
- ODU Target Power: 00.0 dBm (minus sign)

This page can be viewed by all three levels of user login. This is a read/write page. This page allows the user to set the LNB and ODU control parameters and check the ODU status of the CDM-600L Modem.

**NOTE:** There is a 10 second delay in ODU Status update after submitting an ODU Control change. Click the "External Control" menu button to refresh this page.

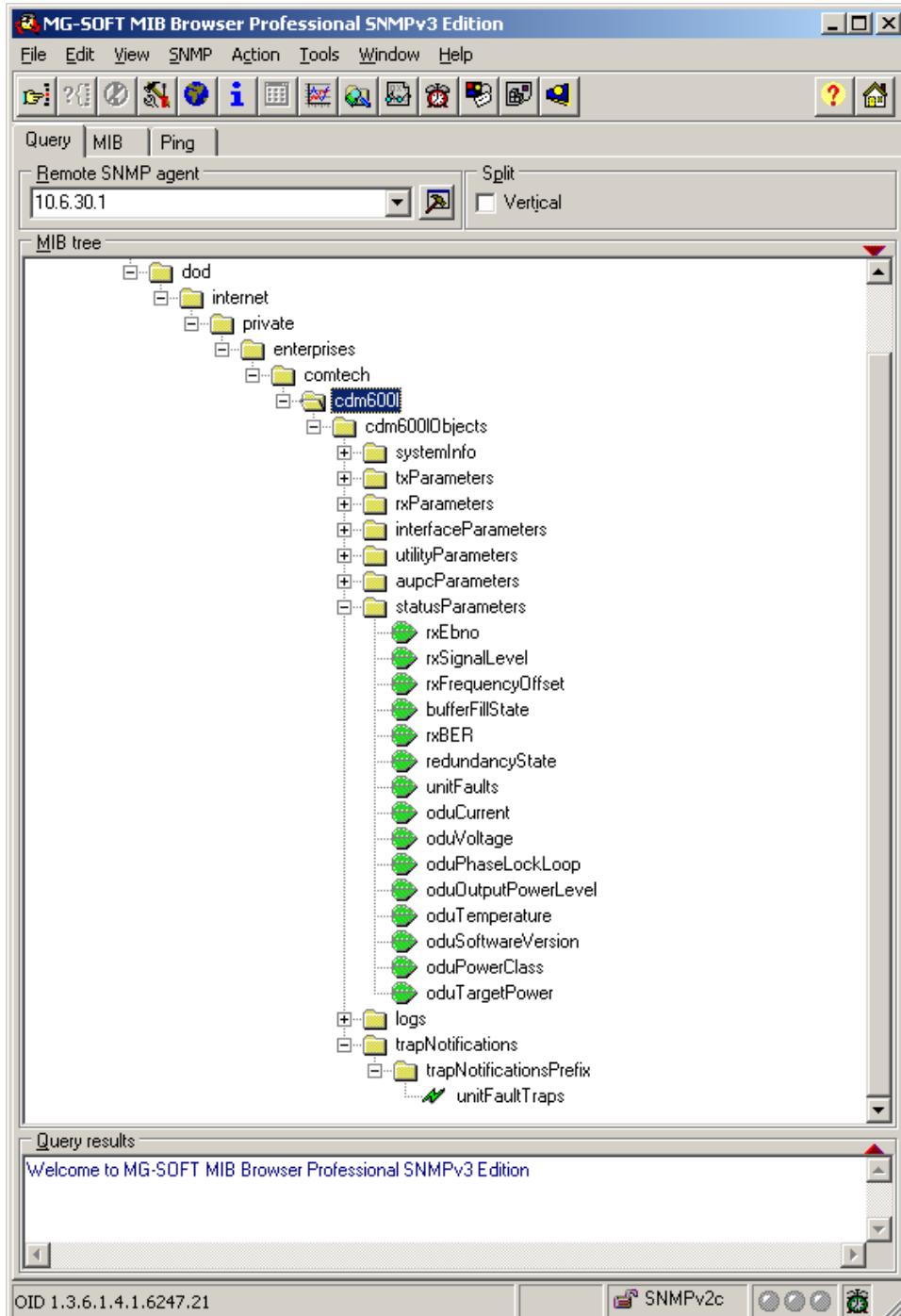
## 3.4 SNMP INTERFACE

The CiM-25 supports v2c version of the industry standard SNMP (Simple Network Management Protocol). The CiM-25 supports a complete private MIB for the attached equipment as well as a private MIB for the CiM-25 itself. The SNMP interface supports standard Get and Set as well as **Branch Walking**.



The image above is a screen dump of the CiM-25 MIB structure using a common MIB Browser. The important point here is that all administrative parameters of the CiM-25 are available in its private MIB.

The image below is a screen dump of the CDM-600L MIB using a common MIB Browser. The important point here is that all CDM-600L Controllable Parameters and Status Parameters, Events, and Statistics Log are available in its private CDM-600L MIB.



### 3.5 TELNET INTERFACE

The CiM-25 provides a Telnet interface for three primary functions:

- ▶ System Administration.
- ▶ Equipment M&C via the standard equipment Remote Control protocol.
- ▶ Equipment M&C via Comtech EF Data PC based Monitor and Control applications.

The Telnet interface uses two (2) levels of user login, **Administrator** and **Read/Write**.  
The screen dump below shows the login process.

```
C:\WINNT\System32\telnet.exe
COMTECH EF/DATA CIM-25 TELNET INTERFACE

Product: Satellite Modem
Product Address: 0000

You must have an account to use this interface.
Please see your administrator.

Enter name: admin
Enter password: 1234
Name and Password accepted. Please review your modem manual for command syntax.

<?=Menu Q=Quit> Telnet-->_
```

Once logged into the CiM-25 Telnet interface as the Administrator the user can use the built in menu function by typing a ? (question mark). This menu is only available to the Administrator. The screen dump below shows the functions available via this menu system. Entering any command without any data parameters will cause the CiM-25 to respond with a message that provides the proper formatting requirements for the individual command. Entering any command with a ? (question mark) as the parameter will cause the CiM-25 to respond with the current Set value. Each command will be explained in the following section.

```
C:\WINNT\System32\telnet.exe
COMTECH EF/DATA CIM-25 TELNET INTERFACE

Product: Satellite Modem
Product Address: 0000

You must have an account to use this interface.
Please see your administrator.

Enter name: admin
Enter password: 1234
Name and Password accepted. Please review your modem manual for command syntax.

<?=Menu Q=Quit> Telnet-->?

Menu

!IP      Change IP/Gateway/Mask          !PG      Ping Enable/Disable
!HA      Change Host Allow               !PT      Define HTTP Port
!AD      Change Admin Name              !PW      Change Admin Password
!RN      Change ReadOnly Name           !RP      Change ReadOnly Password
!WN      Change ReadWrite Name          !WP      Change ReadWrite Password
!DN      Change DNS Pri/Sec IP          !TP      Change Trap IP
!SN      Change SMTP Domain Name       !TC      Change Trap Community
!SD      Change SMTP Domain IP          !EE      Commit to EEPROM and RESET

<?=Menu Q=Quit> Telnet-->_
```

### 3.5.1 TELNET ADMINISTRATIVE FUNCTIONS

#### 3.5.1.1 CHANGE IP ADDRESS, GATEWAY AND MASK

Using the **!IP** command, the Administrator can change the IP Address, IP Gateway, and IP Mask. The command protocol for this command is as follows:

Format:           **!IP <ip> <gateway> <mask>**

Example:          **!IP 10.6.30.2 10.6.30.255 255.255.0.0**

Query Format:    **!IP ?**

Response:        **!IP 10.6.30.2 10.6.30.255 255.255.0.0**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.2 CHANGE HOST ALLOW LIST

Using the **!HA** command, the Administrator can modify the Host Allow List. The command protocol for this command is as follows:

Format:           **!HA <address index> <ip\_address> <ranged>**  
Where:           address index is 1 to 6, ranged is 0 if No and 1 if yes

Example:         **!HA 5 10.50.91.200 0**

This sets IP address #5 to 10.50.91.200 and indicates addresses #5 & #6 are NOT ranged.

Query Format:   **!HA ?**  
Response:        IP 1: 000.000.000.000   IP 2: 255.255.255.255   Range = yes  
                  IP 3: 000.000.000.000   IP 4: 000.000.000.000   Range = no  
                  IP 5: 000.000.000.000   IP 6: 000.000.000.000   Range = no

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.3 CHANGE ADMINISTRATOR NAME

Using the **!AD** command, the Administrator can change the Administrator login Name. The command protocol for this command is as follows:

Format:         **!AD <string>**  
Where:         <string> can be any alphanumeric string of length 4 to 10 characters

Query Format:   **!AD ?**  
Response:       **!AD <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.4 CHANGE ADMINISTRATOR PASSWORD

Using the **!PW** command, the Administrator can change the Administrator login Password. The command protocol for this command is as follows:

Format:         **!PW <string>**  
Where:         <string> can be any alphanumeric string of length 4 to 10 characters

Query Format:   **!PW ?**  
Response:       **!PW <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.5 CHANGE READ/WRITE NAME

Using the **!WN** command, the Administrator can change the Read/Write login Name. The command protocol for this command is as follows:

Format:           **!WN <string>**

Where:           <string> can be any alphanumeric string of length 4 to 10 characters

Query Format:   **!WN ?**

Response:       **!WN <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.6 CHANGE READ/WRITE PASSWORD

Using the **!WP** command, the Administrator can change the Read/Write login Password. The command protocol for this command is as follows:

Format:           **!WP <string>**

Where:           <string> can be any alphanumeric string of length 4 to 10 characters

Query Format:   **!WP ?**

Response:       **!WP <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.7 CHANGE READ ONLY NAME

Using the **!RN** command, the Administrator can change the Read Only login Name. The command protocol for this command is as follows:

Format:           **!RN <string>**

Where:           <string> can be any alphanumeric string of length 4 to 10 characters

Query Format:   **!RN ?**

Response:       **!RN <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.8 CHANGE READ ONLY PASSWORD

Using the **!RP** command, the Administrator can change the Read/Only login Password. The command protocol for this command is as follows:

Format:           **!RP <string>**  
Where:           <string> can be any alphanumeric string of length 4 to 10 characters

Query Format:   **!RP ?**  
Response:       **!RP <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.9 ENABLE OR DISABLE PING

Using the **!PG** command, the Administrator can either enable or disable PING. The command protocol for this command is as follows:

Format:           **!PG <state>**  
Where:           0 = Disabled, 1 = Enabled

Query Format:   **!PG ?**  
Response:       **!PG <state>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.10 COMMIT CHANGES TO EEPROM

Using the **!EE** command, the Administrator can commit any previously commanded changes to EEPROM. This will store the new operating parameters and automatically do a warm reboot of the CiM-25/600L. The command protocol for this command is as follows:

Format: **!EE**

### 3.5.1.11 CHANGE PRIMARY/SECONDARY DNS IP ADDRESSES

Using the **!DN** command, the Administrator can set the primary and secondary DNS IP Addresses. The command protocol for this command is as follows:

Format:           **!DN <primary DNS IP Address> <secondary DNS IP Address>**  
Response:         Command Successful

Query Format:   **!DN ?**  
Response:         **!DN <primary DNS IP Address> <secondary DNS IP Address>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.12 CHANGE SMTP DOMAIN NAME

Using the **!SN** command, the Administrator can set the SMTP domain name. The command protocol for this command is as follows:

Format:           **!SN <string>**  
Response:         **Command Successful**  
Where:           <string> can be any alphanumeric string with a length of 1 to 100 characters.

**Note:** **disabled** in the <string> field disables SMTP.

Query Format:   **!SN ?**  
Response:         **!SN <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.13 CHANGE SMTP DOMAIN IP ADDRESS

Using the **!SD** command, the Administrator can set the SMTP Domain IP Address. The command protocol for this command is as follows:

Format:           **!SD <ip\_address>**  
Response:         **Command Successful**

**Note:** An IP Address of **0.0.0.0** disables SMTP.

Query Format:   **!SD ?**  
Response:         **!SD <ip\_address>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.14 CHANGE HTTP PORT

Using the **!PT** command, the Administrator can set the HTTP Port. The command protocol for this command is as follows:

Format:           **!PT <value>**

Response:       **Command Successful**

Where <value> can be any number in the range of 0 to 65535

Query Format:   **!PT ?**

Response:       **!PT <value>**

- Notes:**
1. The default port is set to 80.
  2. Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.15 CHANGE SNMP TRAP ADDRESS

Using the **!TP** command, the Administrator can set the SNMP Trap Address. The command protocol for this command is as follows:

Format:           **!TP <ip\_address>**

Response:       **Command Successful**

**Note:** An IP Address of **0.0.0.0** disables the trap

Query Format:   **!TP ?**

Response:       **!TP <ip\_address>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.1.16 CHANGE SNMP TRAP COMMUNITY

Using the **!TC** command, the Administrator can set the SNMP Trap Community. The command protocol for this command is as follows:

Format:           **!TC <string>**

Response:       **Command Successful**

where <string> can be 0 - 20 characters

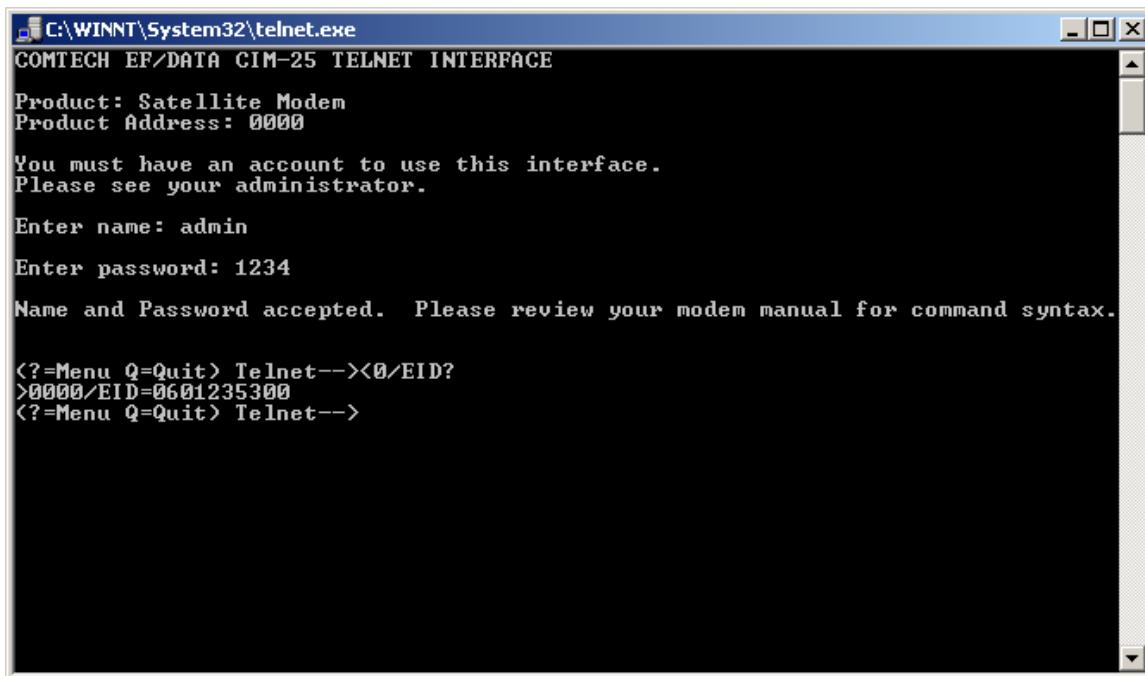
Query Format:   **!TC ?**

Response:       **!TC <string>**

**Note:** Changes made via this command do not become active until the user has sent a **!EE** command to commit the changes to EEPROM of the CiM-25.

### 3.5.2 USING TELNET WITH EQUIPMENT REMOTE CONTROL PROTOCOL

The CiM-25/600L Telnet interface will accept any command defined in the particular interfacing equipments Remote Control Specification. See the equipments Operation Manual for details regarding the available commands and the message protocol. The screen dump below show an example of how to directly use the equipments Remote Control Protocol to communicate to the equipment via the Telnet interface.



The screenshot shows a Windows Command Prompt window with the title bar 'C:\WINNT\System32\telnet.exe'. The window displays a telnet session to a COMTECH EF/DATA CIM-25 TELNET INTERFACE. The session starts with the product information: 'Product: Satellite Modem' and 'Product Address: 0000'. It then prompts the user with 'You must have an account to use this interface. Please see your administrator.' The user enters their credentials: 'Enter name: admin' and 'Enter password: 1234'. After successful authentication, the message 'Name and Password accepted. Please review your modem manual for command syntax.' is displayed. Finally, the prompt '<?=Menu Q=Quit> Telnet--><0/EID?' is shown, followed by the response '>0000/EID=0601235300' and the prompt again.

```
C:\WINNT\System32\telnet.exe
COMTECH EF/DATA CIM-25 TELNET INTERFACE

Product: Satellite Modem
Product Address: 0000

You must have an account to use this interface.
Please see your administrator.

Enter name: admin
Enter password: 1234
Name and Password accepted. Please review your modem manual for command syntax.

<?=Menu Q=Quit> Telnet--><0/EID?
>0000/EID=0601235300
<?=Menu Q=Quit> Telnet-->
```

## 3.6 MAINTENANCE INTERFACE

The default network configuration settings are:

- ▶ IP: **10.6.30.1**
- ▶ Admin Name: **admin**
- ▶ Admin Password: **1234**

The CiM-25 has been designed to support a means of allowing a customer to reset the unit back to the factory default settings, change the IP Address, and verify the software version. Use the following procedure to prepare for making these changes.

Perform the following steps:

- 1 Disconnect the CiM-25 from both the interfacing equipment and the Ethernet Network.
- 2 Connect the CiM-25 to the serial port of a PC using a cable defined below (null cable):

CiM-25 pin 2 to PC pin 3  
CiM-25 pin 3 to PC pin 2  
CiM-25 pin 5 to PC pin 5

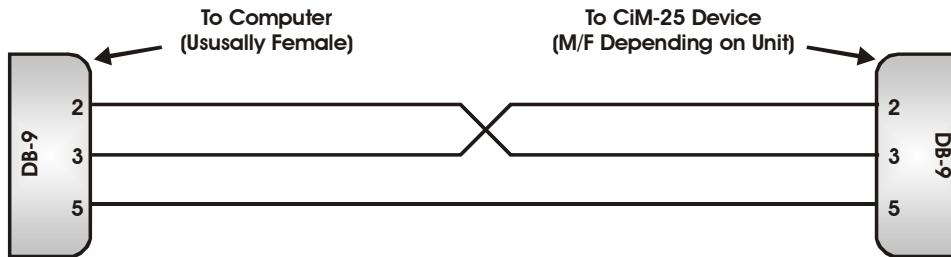


Figure 1. Null Cable Diagram

- 3 Power the CiM-25 using the Power Jack connector and a external 5 Vdc power supply.
- 4 Using a Serial Communication application such as Terminal, ProComm, etc., configure the PC's serial port to:

Baud: **19200**  
Data rate: **8-N-1**

Use the procedures in following sections to:

- ▶ Reset to factory network defaults.
- ▶ Change network IP Address
- ▶ Verify software version.
- ▶ Change MAC Address
- ▶ Change Serial Number

### 3.6.1 RESETTING TO FACTORY DEFAULTS

- 1 Enter the following command:

Command: <0/RST='cr'

Response: >0/RST=

### 3.6.2 CHANGING NETWORK IP ADDRESS

Perform the following steps.

- 1 Enter the following command:

Command: <0/IPA=xxx.xxx.xxx.xyy'cr'

Where x is the IP Address and y is the subnet mask.

Response: >0/IPA=

Example: <0/IPA=192.168.001.002/16'cr'

16 would be a subnet mask of 255.255.0.0

- 2 To query the IP address enter: <0/IPA?'cr'

### 3.6.3 VERIFYING SOFTWARE VERSION

Perform the following:

- 1 Enter the following command:

Command: <0/SWR?'cr'

Response: >0/SWR= 1.0.1'cr'

### 3.6.4 CHANGING MAC ADDRESS

Perform the following:

- 1 Enter the following command:

Command: <0/MAC=xxxxxxxx'cr'

Where x is the MAC Address as shown on the label of the CiM-25.

Response: >0/MAC=

Example: >0/MAC=006B0000000A'cr'

- 2 To query the MAC Address enter: >0/MAC?'cr'



1. The MAC Address is unique to this unit. Change only under the factory direction or if it does not match the label.
2. Changing the MAC Address to anything other than the factory default, may result in erratic operation.

### 3.6.5 CHANGING SERIAL NUMBER

Perform the following:

- 1 Enter the following command:

Command: <0/SNM=xxxxxxxx'cr'

Where x is the Serial Number as shown on the label of the CiM-25.

Response: >0/SNM=

Example: >0/SNM=022080125A'cr'

- 2 To query the Serial Number enter: >0/SNM?'cr'



**The Serial Number is unique to this unit. Change only under the factory direction or if it does not match the label.**

## NOTES

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

# Appendix A. CiM-25/600L SNMP Interface

SNMP Interface.....	39
MIB-II .....	39
Private MIB Implementations .....	39
CiM-25 MIB Tree.....	40
CiM-25 MIB .....	42
CDM-600L MIB Tree:.....	57
CDM-600L MIB.....	62

## A.1 SNMP INTERFACE

The *Simple Network Management Protocol* (SNMP) is an application-layer protocol designed to facilitate the exchange of management information between network devices. The CiM-25/600L SNMP agent supports SNMP v2c.

## A.2 MIB-II

The CiM-25/600L agent implements RFC 1213, Management Information Base for Network Management of TCP/IP-based Internets. This is known as “MIB-II support”. Please refer to RFC 1213 for this definition.

## A.3 PRIVATE MIB IMPLEMENTATIONS

The agent also implements two private MIBs for the CiM-25/600L. The CiM IP Controller MIB (CiM-25) holds all the security, feature selection, and IP related parameters and the CDM-600L modem MIB which contains all the modem specific parameters.

## A.4 CIM-25 MIB TREE

- 1 - 1 --- iso
- 2 - 1.3 --- org
- 3 - 1.3.6 --- dod
- 4 - 1.3.6.1 --- internet
- 5 - 1.3.6.1.4 --- private
- 6 - 1.3.6.1.4.1 --- enterprises
- 7 - 1.3.6.1.4.1.6247 --- comtech
- 8 - 1.3.6.1.4.1.6247.3 --- cim25
- 9 - 1.3.6.1.4.1.6247.3.1 --- cim25Objects
- 10 - 1.3.6.1.4.1.6247.3.1.1 --- ipAddress1 (IpAddress)
- 11 - 1.3.6.1.4.1.6247.3.1.2 --- ipAddress2 (IpAddress)
- 12 - 1.3.6.1.4.1.6247.3.1.3 --- ipAddress12Range (INTEGER)
- 13 - 1.3.6.1.4.1.6247.3.1.4 --- ipAddress3 (IpAddress)
- 14 - 1.3.6.1.4.1.6247.3.1.5 --- ipAddress4 (IpAddress)
- 15 - 1.3.6.1.4.1.6247.3.1.6 --- ipAddress34Range (INTEGER)
- 16 - 1.3.6.1.4.1.6247.3.1.7 --- ipAddress5 (IpAddress)
- 17 - 1.3.6.1.4.1.6247.3.1.8 --- ipAddress6 (IpAddress)
- 18 - 1.3.6.1.4.1.6247.3.1.9 --- ipAddress56Range (INTEGER)
- 19 - 1.3.6.1.4.1.6247.3.1.10 --- dnsIpAddressPrimary (IpAddress)
- 20 - 1.3.6.1.4.1.6247.3.1.11 --- dnsIpAddressSecondary (IpAddress)
- 21 - 1.3.6.1.4.1.6247.3.1.12 --- cim25IpAddress (IpAddress)
- 22 - 1.3.6.1.4.1.6247.3.1.13 --- cim25IpGateway (IpAddress)
- 23 - 1.3.6.1.4.1.6247.3.1.14 --- cim25IpMask (IpAddress)

- 24 - 1.3.6.1.4.1.6247.3.1.15 --- readonlyPassword (OCTET STRING)
- 25 - 1.3.6.1.4.1.6247.3.1.16 --- readwritePassword (OCTET STRING)
- 26 - 1.3.6.1.4.1.6247.3.1.17 --- administratorPassword (OCTET STRING)
- 27 - 1.3.6.1.4.1.6247.3.1.18 --- trapIpAddress1 (IpAddress)
- 27 - 1.3.6.1.4.1.6247.3.1.19 --- trapIpAddress2 (IpAddress)
- 28 - 1.3.6.1.4.1.6247.3.1.20 --- trapCommunity (OCTET STRING)
- 29 - 1.3.6.1.4.1.6247.3.1.21 --- administratorName (OCTET STRING)
- 30 - 1.3.6.1.4.1.6247.3.1.22 --- readonlyName (OCTET STRING)
- 31 - 1.3.6.1.4.1.6247.3.1.23 --- readwriteName (OCTET STRING)
- 32 - 1.3.6.1.4.1.6247.3.1.24 --- macAddress (OCTET STRING)
- 33 - 1.3.6.1.4.1.6247.3.1.25 --- submitconfig (INTEGER)

## A.5 CIM-25 MIB

### A.5.1 ISO

Name	iso
OID	1
Full path	iso(1)
Module	SNMPv2-SMI
Child	org
Type	OBJECT-IDENTIFIER

### A.5.2 ORG

Name	org
OID	1.3
Full path	iso(1).org(3)
Module	SNMPv2-SMI
Parent	iso
Child	dod
Type	OBJECT-IDENTIFIER

### A.5.3 DOD

Name	dod
OID	1.3.6
Full path	iso(1).org(3).dod(6)
Module	SNMPv2-SMI
Parent	org
Child	internet
Type	OBJECT-IDENTIFIER

### A.5.4 INTERNET

Name	internet
OID	1.3.6.1
Full path	iso(1).org(3).dod(6).internet(1)
Module	SNMPv2-SMI
Parent	dod
Child	private
Type	OBJECT-IDENTIFIER

### A.5.5 PRIVATE

<b>Name</b>	private
<b>OID</b>	1.3.6.1.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4)
<b>Module</b>	CIM25
<b>Parent</b>	internet
<b>Child</b>	enterprises
<b>Type</b>	OBJECT-IDENTIFIER

### A.5.6 ENTERPRISES

<b>Name</b>	enterprises
<b>OID</b>	1.3.6.1.4.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1)
<b>Module</b>	CIM25
<b>Parent</b>	private
<b>Child</b>	comtech
<b>Type</b>	OBJECT-IDENTIFIER

### A.5.7 COMTECH

<b>Name</b>	comtech
<b>OID</b>	1.3.6.1.4.1.6247
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247)
<b>Module</b>	CIM25
<b>Parent</b>	enterprises
<b>Child</b>	cim25
<b>Type</b>	OBJECT-IDENTIFIER

### A.5.8 CIM25

<b>Name</b>	cim25
<b>OID</b>	1.3.6.1.4.1.6247.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3)
<b>Module</b>	CIM25
<b>Parent</b>	comtech
<b>Child</b>	cim25Objects
<b>Type</b>	OBJECT-IDENTIFIER

### A.5.9 CIM25OBJECTS

<b>Name</b>	cim25Objects
<b>OID</b>	1.3.6.1.4.1.6247.3.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1)
<b>Module</b>	CIM25
<b>Parent</b>	cim25
<b>Child</b>	ipAddress1
<b>Type</b>	OBJECT-IDENTIFIER

### A.5.10 IPADDRESS1

<b>Name</b>	ipAddress1
<b>OID</b>	1.3.6.1.4.1.6247.3.1.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress1(1)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Next sibling</b>	ipAddress2
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	IP Address 1 or IP Address 1 Start Range.

### A.5.11 IPADDRESS2

<b>Name</b>	ipAddress2
<b>OID</b>	1.3.6.1.4.1.6247.3.1.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress2(2)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress1
<b>Next sibling</b>	ipAddress12Range
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	IP Address 2 or IP Address 1 End Range.

### A.5.12 IPADDRESS12RANGE

<b>Name</b>	ipAddress12Range
<b>OID</b>	1.3.6.1.4.1.6247.3.1.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress12Range(3)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress2
<b>Next sibling</b>	ipAddress3
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	no(0)
2	yes(1)
<b>Description</b>	Range or Individual for IP Address 1 and 2.

### A.5.13 IPADDRESS3

<b>Name</b>	ipAddress3
<b>OID</b>	1.3.6.1.4.1.6247.3.1.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress3(4)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress12Range
<b>Next sibling</b>	ipAddress4
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	IP Address 3 or IP Address 2 Start Range.

### A.5.14 IPADDRESS4

<b>Name</b>	ipAddress4
<b>OID</b>	1.3.6.1.4.1.6247.3.1.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress4(5)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress3
<b>Next sibling</b>	ipAddress34Range
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	IP Address 4 or IP Address 2 End Range.

### A.5.15 IPADDRESS34 RANGE

<b>Name</b>	ipAddress34Range
<b>OID</b>	1.3.6.1.4.1.6247.3.1.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress34Range(6)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress4
<b>Next sibling</b>	ipAddress5
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	no(0)
<b>2</b>	yes(1)
<b>Description</b>	Range or Individual for IP Address 3 and 4.

## A.5.16 IPADDRESS5

<b>Name</b>	ipAddress5
<b>OID</b>	1.3.6.1.4.1.6247.3.1.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress5(7)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress34Range
<b>Next sibling</b>	ipAddress6
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	IP Address 5 or IP Address 3 Start Range.

## A.5.17 IPADDRESS6

<b>Name</b>	ipAddress6
<b>OID</b>	1.3.6.1.4.1.6247.3.1.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress6(8)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress5
<b>Next sibling</b>	ipAddress56Range
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	IP Address 6 or IP Address 3 End Range.

### A.5.18 IPADDRESS56RANGE

<b>Name</b>	ipAddress56Range
<b>OID</b>	1.3.6.1.4.1.6247.3.1.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).ipAddress56Range(9)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress6
<b>Next sibling</b>	dnsIpAddressPrimary
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	no(0)
2	yes(1)
<b>Description</b>	Range or Individual for IP Address 5 and 6.

### A.5.19 DNSIPADDRESSPRIMARY

<b>Name</b>	dnsIpAddressPrimary
<b>OID</b>	1.3.6.1.4.1.6247.3.1.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).dnsIpAddressPrimary(10)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	ipAddress56Range
<b>Next sibling</b>	dnsIpAddressSecondary
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	Primary DNS IP Address.

### A.5.20 DNSIPADDRESSSECONDARY

<b>Name</b>	dnsIpAddressSecondary
<b>OID</b>	1.3.6.1.4.1.6247.3.1.11
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).dnsIpAddressSecondary(11)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	dnsIpAddressPrimary
<b>Next sibling</b>	cim25IpAddress
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	Secondary DNS IP Address.

### A.5.21 CIM25IPADDRESS

<b>Name</b>	cim25IpAddress
<b>OID</b>	1.3.6.1.4.1.6247.3.1.12
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).cim25IpAddress(12)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	dnsIpAddressSecondary
<b>Next sibling</b>	cim25IpGateway
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	CIM 25 IP Address.

### A.5.22 CIM25IPGATEWAY

<b>Name</b>	cim25IpGateway
<b>OID</b>	1.3.6.1.4.1.6247.3.1.13
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).cim25IpGateway(13)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	cim25IpAddress
<b>Next sibling</b>	cim25IpMask
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	CiM 25 IP Gateway

### A.5.23 CIM25IPMASK

<b>Name</b>	cim25IpMask
<b>OID</b>	1.3.6.1.4.1.6247.3.1.14
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).cim25IpMask(14)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	cim25IpGateway
<b>Next sibling</b>	readonlyPassword
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	CiM25 IP Mask.

### A.5.24 READONLYPASSWORD

<b>Name</b>	readonlyPassword
<b>OID</b>	1.3.6.1.4.1.6247.3.1.15
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).readonlyPassword(15)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	cim25IpMask
<b>Next sibling</b>	readwritePassword
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	4..10
<b>Description</b>	Read-Only Password.

### A.5.25 READWRITEPASSWORD

<b>Name</b>	readwritePassword
<b>OID</b>	1.3.6.1.4.1.6247.3.1.16
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).readwritePassword(16)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	readonlyPassword
<b>Next sibling</b>	administratorPassword
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	4..10
<b>Description</b>	Read-Write Password.

### A.5.26 ADMINISTRATORPASSWORD

<b>Name</b>	administratorPassword
<b>OID</b>	1.3.6.1.4.1.6247.3.1.17
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).administratorPassword(17)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	readwritePassword
<b>Next sibling</b>	trapIpAddress
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	4..10
<b>Description</b>	Administrator Password.

### A.5.27 TRAPIPADDRESS1

<b>Name</b>	TrapIpAddress1
<b>OID</b>	1.3.6.1.4.1.6247.3.1.18
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).trapIpAddress(18)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	administratorPassword
<b>Next sibling</b>	trapCommunity
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	Trap IP Address1.

### A.5.28 TRAPIPADDRESS2

<b>Name</b>	TrapIpAddress2
<b>OID</b>	1.3.6.1.4.1.6247.3.1.19
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).trapIpAddress(19)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	administratorPassword
<b>Next sibling</b>	trapCommunity
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_IPADDR
<b>Base syntax</b>	IpAddress
<b>Composed syntax</b>	IpAddress
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Description</b>	Trap IP Address2.

### A.5.29 TRAPCOMMUNITY

<b>Name</b>	trapCommunity
<b>OID</b>	1.3.6.1.4.1.6247.3.1.20
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).trapCommunity(20)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	trapIpAddress
<b>Next sibling</b>	administratorName
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..20
<b>Description</b>	Trap Community.

### A.5.30 ADMINISTRATORNAME

<b>Name</b>	administratorName
<b>OID</b>	1.3.6.1.4.1.6247.3.1.21
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).administratorName(21)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	trapCommunity
<b>Next sibling</b>	readonlyName
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	5..10
<b>Description</b>	Administrator User Name.

### A.5.31 READONLYNAME

<b>Name</b>	readonlyName
<b>OID</b>	1.3.6.1.4.1.6247.3.1.22
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).readonlyName(22)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	administratorName
<b>Next sibling</b>	readwriteName
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	5..10
<b>Description</b>	Read-Only User Name.

### A.5.32 READWRITENAME

<b>Name</b>	readwriteName
<b>OID</b>	1.3.6.1.4.1.6247.3.1.23
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).readwriteName(23)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	readonlyName
<b>Next sibling</b>	macAddress
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	5..10
<b>Description</b>	Read-Write User Name.

### A.5.33 MACADDRESS

<b>Name</b>	macAddress
<b>OID</b>	1.3.6.1.4.1.6247.3.1.24
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).macAddress(24)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	readwriteName
<b>Next sibling</b>	submitconfig
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	12
<b>Description</b>	MAC Address.

### A.5.34 SUBMITCONFIG

<b>Name</b>	submitconfig
<b>OID</b>	1.3.6.1.4.1.6247.3.1.25
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cim25(3).cim25Objects(1).submitconfig(25)
<b>Module</b>	CIM25
<b>Parent</b>	cim25Objects
<b>Prev sibling</b>	macAddress
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	submit(1)
<b>Description</b>	Submit changes in CiM 25 Configuration

## A.6 CDM-600L MIB TREE:

1 - 1 --- iso  
2 - 1.3 --- org  
3 - 1.3.6 --- dod  
4 - 1.3.6.1 --- internet  
5 - 1.3.6.1.4 --- private  
6 - 1.3.6.1.4.1 --- enterprises  
7 - 1.3.6.1.4.1.6247 --- comtech  
8 - 1.3.6.1.4.1.6247.21 --- cdm600l  
9 - 1.3.6.1.4.1.6247.21.1 --- cdm600lObjects  
10 - 1.3.6.1.4.1.6247.21.1.1 --- modemSelect (INTEGER)  
11 - 1.3.6.1.4.1.6247.21.1.2 --- systemInfo  
12 - 1.3.6.1.4.1.6247.21.1.2.1 --- equipmentID (OCTET STRING)  
13 - 1.3.6.1.4.1.6247.21.1.2.2 --- unitSerialNumber (OCTET STRING)  
14 - 1.3.6.1.4.1.6247.21.1.2.3 --- softwareRevision (OCTET STRING)  
15 - 1.3.6.1.4.1.6247.21.1.2.4 --- deviceTime (OCTET STRING)  
16 - 1.3.6.1.4.1.6247.21.1.2.5 --- deviceDate (OCTET STRING)  
17 - 1.3.6.1.4.1.6247.21.1.2.6 --- circuitID (OCTET STRING)  
18 - 1.3.6.1.4.1.6247.21.1.2.7 --- localRemoteState (INTEGER)  
19 - 1.3.6.1.4.1.6247.21.1.2.8 --- deviceTemperature (INTEGER)  
20 - 1.3.6.1.4.1.6247.21.1.3 --- txParameters  
21 - 1.3.6.1.4.1.6247.21.1.3.1 --- txFrequency (INTEGER)  
22 - 1.3.6.1.4.1.6247.21.1.3.2 --- txDataRate (INTEGER)

- 23 - 1.3.6.1.4.1.6247.21.1.3.3 --- txModType (INTEGER)
- 24 - 1.3.6.1.4.1.6247.21.1.3.4 --- txFECType (INTEGER)
- 25 - 1.3.6.1.4.1.6247.21.1.3.5 --- txFECCodeRate (INTEGER)
- 26 - 1.3.6.1.4.1.6247.21.1.3.6 --- txSpecInv (INTEGER)
- 27 - 1.3.6.1.4.1.6247.21.1.3.7 --- txScrambler (INTEGER)
- 28 - 1.3.6.1.4.1.6247.21.1.3.8 --- txRSEncoding (INTEGER)
- 29 - 1.3.6.1.4.1.6247.21.1.3.9 --- txPowerLevel (INTEGER)
- 30 - 1.3.6.1.4.1.6247.21.1.3.10 --- txCarrierState (INTEGER)
- 31 - 1.3.6.1.4.1.6247.21.1.3.11 --- txDataInv (INTEGER)
- 32 - 1.3.6.1.4.1.6247.21.1.4 --- rxParameters
- 33 - 1.3.6.1.4.1.6247.21.1.4.1 --- rxFrequency (INTEGER)
- 34 - 1.3.6.1.4.1.6247.21.1.4.2 --- rxDataRate (INTEGER)
- 35 - 1.3.6.1.4.1.6247.21.1.4.3 --- rxDemodType (INTEGER)
- 36 - 1.3.6.1.4.1.6247.21.1.4.4 --- rxFECType (INTEGER)
- 37 - 1.3.6.1.4.1.6247.21.1.4.5 --- rxFECCodeRate (INTEGER)
- 38 - 1.3.6.1.4.1.6247.21.1.4.6 --- rxSpecInv (INTEGER)
- 39 - 1.3.6.1.4.1.6247.21.1.4.7 --- rxDescrambler (INTEGER)
- 40 - 1.3.6.1.4.1.6247.21.1.4.8 --- rxRSDecoding (INTEGER)
- 41 - 1.3.6.1.4.1.6247.21.1.4.9 --- rxDataInv (INTEGER)
- 42 - 1.3.6.1.4.1.6247.21.1.4.10 --- rxAcqSweepRange (INTEGER)
- 43 - 1.3.6.1.4.1.6247.21.1.4.11 --- rxEbnoAlarmPoint (INTEGER)
- 44 - 1.3.6.1.4.1.6247.21.1.5 --- interfaceParameters
- 45 - 1.3.6.1.4.1.6247.21.1.5.1 --- txInterfaceType (INTEGER)
- 46 - 1.3.6.1.4.1.6247.21.1.5.2 --- rxInterfaceType (INTEGER)
- 47 - 1.3.6.1.4.1.6247.21.1.5.3 --- txFramingMode (INTEGER)

- 48 - 1.3.6.1.4.1.6247.21.1.5.4 --- rxFramingMode (INTEGER)
- 49 - 1.3.6.1.4.1.6247.21.1.5.5 --- txClockSource (INTEGER)
- 50 - 1.3.6.1.4.1.6247.21.1.5.6 --- rxClockSource (INTEGER)
- 51 - 1.3.6.1.4.1.6247.21.1.5.7 --- rxBufferSize (INTEGER)
- 52 - 1.3.6.1.4.1.6247.21.1.5.8 --- externalClock (OCTET STRING)
- 53 - 1.3.6.1.4.1.6247.21.1.5.9 --- modemReferenceClock (INTEGER)
- 54 - 1.3.6.1.4.1.6247.21.1.5.10 --- txTernaryCode (INTEGER)
- 55 - 1.3.6.1.4.1.6247.21.1.5.11 --- rxTernaryCode (INTEGER)
- 56 - 1.3.6.1.4.1.6247.21.1.5.12 --- idrTxESCType (INTEGER)
- 57 - 1.3.6.1.4.1.6247.21.1.5.13 --- idrRxESCType (INTEGER)
- 58 - 1.3.6.1.4.1.6247.21.1.5.14 --- txAudioVolume (OCTET STRING)
- 59 - 1.3.6.1.4.1.6247.21.1.5.15 --- rxAudioVolume (OCTET STRING)
- 60 - 1.3.6.1.4.1.6247.21.1.5.16 --- dropAndInsert (OCTET STRING)
- 61 - 1.3.6.1.4.1.6247.21.1.5.17 --- txTerrestrialAlarmMask (INTEGER)
- 62 - 1.3.6.1.4.1.6247.21.1.5.18 --- rxTerrestrialAlarmEnable (INTEGER)
- 63 - 1.3.6.1.4.1.6247.21.1.5.19 --- recenterBuffer (INTEGER)
- 64 - 1.3.6.1.4.1.6247.21.1.6 --- utilityParameters
- 65 - 1.3.6.1.4.1.6247.21.1.6.1 --- edmacFramingMode (INTEGER)
- 66 - 1.3.6.1.4.1.6247.21.1.6.2 --- edmacAddress (INTEGER)
- 67 - 1.3.6.1.4.1.6247.21.1.6.3 --- unitTestMode (INTEGER)
- 68 - 1.3.6.1.4.1.6247.21.1.6.4 --- unitAlarmMask (INTEGER)
- 69 - 1.3.6.1.4.1.6247.21.1.6.5 --- txBackwardAlarmEnable (INTEGER)
- 70 - 1.3.6.1.4.1.6247.21.1.6.6 --- rxBackwardAlarmEnable (INTEGER)
- 71 - 1.3.6.1.4.1.6247.21.1.6.7 --- unitConfigStore (INTEGER)
- 72 - 1.3.6.1.4.1.6247.21.1.6.8 --- unitConfigLoad (INTEGER)

- 73 - 1.3.6.1.4.1.6247.21.1.6.9 --- oduCommEnable (INTEGER)
- 74 - 1.3.6.1.4.1.6247.21.1.6.10 --- lnbPower (INTEGER)
- 75 - 1.3.6.1.4.1.6247.21.1.6.11 --- lnbVoltage (INTEGER)
- 76 - 1.3.6.1.4.1.6247.21.1.6.12 --- lnbRefEnable (INTEGER)
- 77 - 1.3.6.1.4.1.6247.21.1.6.13 --- lnbThresholdLow (INTEGER)
- 78 - 1.3.6.1.4.1.6247.21.1.6.14 --- lnbThresholdHigh (INTEGER)
- 79 - 1.3.6.1.4.1.6247.21.1.6.15 --- rxLOFrequency (OCTET STRING)
- 80 - 1.3.6.1.4.1.6247.21.1.6.16 --- oduPower (INTEGER)
- 81 - 1.3.6.1.4.1.6247.21.1.6.17 --- oduRefEnable (INTEGER)
- 82 - 1.3.6.1.4.1.6247.21.1.6.18 --- oduThresholdLow (INTEGER)
- 83 - 1.3.6.1.4.1.6247.21.1.6.19 --- oduThresholdHigh (INTEGER)
- 84 - 1.3.6.1.4.1.6247.21.1.6.20 --- oduOutputPower (INTEGER)
- 85 - 1.3.6.1.4.1.6247.21.1.6.21 --- oduPowerLeveling (INTEGER)
- 86 - 1.3.6.1.4.1.6247.21.1.6.22 --- oduCarrierOutputDelay (OCTET STRING)
- 87 - 1.3.6.1.4.1.6247.21.1.6.23 --- txLOFrequency (OCTET STRING)
- 88 - 1.3.6.1.4.1.6247.21.1.6.24 --- oduAddress (INTEGER)
- 89 - 1.3.6.1.4.1.6247.21.1.7 --- aupcParameters
- 90 - 1.3.6.1.4.1.6247.21.1.7.1 --- aupcEnable (INTEGER)
- 91 - 1.3.6.1.4.1.6247.21.1.7.2 --- aupcControlParameters (OCTET STRING)
- 92 - 1.3.6.1.4.1.6247.21.1.7.3 --- remoteEbno (INTEGER)
- 93 - 1.3.6.1.4.1.6247.21.1.7.4 --- txPowerLevelIncrease (INTEGER)
- 94 - 1.3.6.1.4.1.6247.21.1.8 --- statusParameters
- 95 - 1.3.6.1.4.1.6247.21.1.8.1 --- rxEbno (INTEGER)
- 96 - 1.3.6.1.4.1.6247.21.1.8.2 --- rxSignalLevel (OCTET STRING)
- 97 - 1.3.6.1.4.1.6247.21.1.8.3 --- rxFrequencyOffset (INTEGER)

- 98 - 1.3.6.1.4.1.6247.21.1.8.4 --- bufferFillState (INTEGER)
- 99 - 1.3.6.1.4.1.6247.21.1.8.5 --- rxBER (Unsigned32)
- 100 - 1.3.6.1.4.1.6247.21.1.8.6 --- redundancyState (INTEGER)
- 101 - 1.3.6.1.4.1.6247.21.1.8.7 --- unitFaults (INTEGER)
- 102 - 1.3.6.1.4.1.6247.21.1.8.8 --- oduCurrent (INTEGER)
- 103 - 1.3.6.1.4.1.6247.21.1.8.9 --- oduVoltage (INTEGER)
- 104 - 1.3.6.1.4.1.6247.21.1.8.10 --- oduPhaseLockLoop (INTEGER)
- 105 - 1.3.6.1.4.1.6247.21.1.8.11 --- oduOutputPowerLevel (INTEGER)
- 106 - 1.3.6.1.4.1.6247.21.1.8.12 --- oduTemperature (INTEGER)
- 107 - 1.3.6.1.4.1.6247.21.1.8.13 --- oduSoftwareVersion (INTEGER)
- 108 - 1.3.6.1.4.1.6247.21.1.8.14 --- oduPowerClass (INTEGER)
- 109 - 1.3.6.1.4.1.6247.21.1.8.15 --- oduTargetPower (INTEGER)
- 110 - 1.3.6.1.4.1.6247.21.1.9 --- logs
- 111 - 1.3.6.1.4.1.6247.21.1.9.1 --- clearEventsLog (INTEGER)
- 112 - 1.3.6.1.4.1.6247.21.1.9.2 --- numberUnreadEvents (INTEGER)
- 113 - 1.3.6.1.4.1.6247.21.1.9.3 --- retrieveNext5Events (OCTET STRING)
- 114 - 1.3.6.1.4.1.6247.21.1.9.4 --- setStatisticInterval (INTEGER)
- 115 - 1.3.6.1.4.1.6247.21.1.9.5 --- clearStatisticsLog (INTEGER)
- 116 - 1.3.6.1.4.1.6247.21.1.9.6 --- numberUnreadStatistics (INTEGER)
- 117 - 1.3.6.1.4.1.6247.21.1.9.7 --- retrieveNext5Statistics (OCTET STRING)
- 118 - 1.3.6.1.4.1.6247.21.1.10 --- trapNotifications
- 119 - 1.3.6.1.4.1.6247.21.1.10.0 --- trapNotificationsPrefix
- 120 - 1.3.6.1.4.1.6247.21.1.10.0.1 --- unitFaultTraps
- 121 - 1.3.6.1.4.1.6247.21.1.10.0.2 --- unitConfigChangeTrap
- 122 - 1.3.6.1.4.1.6247.21.1.10.0.3 --- unitCommFaultTrap

## CDM-600L MIB

### A.6.1 ISO

Name	iso
OID	1
Full path	iso(1)
Module	SNMPv2-SMI
Child	org
Type	OBJECT-IDENTIFIER

### A.6.2 ORG

Name	org
OID	1.3
Full path	iso(1).org(3)
Module	SNMPv2-SMI
Parent	iso
Child	dod
Type	OBJECT-IDENTIFIER

### A.6.3 DOD

Name	dod
OID	1.3.6
Full path	iso(1).org(3).dod(6)
Module	SNMPv2-SMI
Parent	org
Child	internet
Type	OBJECT-IDENTIFIER

### A.6.4 INTERNET

Name	internet
OID	1.3.6.1
Full path	iso(1).org(3).dod(6).internet(1)
Module	SNMPv2-SMI
Parent	dod
Child	private
Type	OBJECT-IDENTIFIER

### A.6.5 PRIVATE

Name	private
OID	1.3.6.1.4

<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4)
<b>Module</b>	CDM600L
<b>Parent</b>	internet
<b>Child</b>	enterprises
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.6 ENTERPRISES

<b>Name</b>	enterprises
<b>OID</b>	1.3.6.1.4.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1)
<b>Module</b>	CDM600L
<b>Parent</b>	private
<b>Child</b>	comtech
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.7 COMTECH

<b>Name</b>	comtech
<b>OID</b>	1.3.6.1.4.1.6247
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247)
<b>Module</b>	CDM600L
<b>Parent</b>	enterprises
<b>Child</b>	cdm600l
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.8 CDM600L

<b>Name</b>	cdm600l
<b>OID</b>	1.3.6.1.4.1.6247.21
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21)
<b>Module</b>	CDM600L
<b>Parent</b>	comtech
<b>Child</b>	ModemSelect
<b>Type</b>	OBJECT-IDENTIFIER

### A.6.9 CDM600L OBJECTS

<b>Name</b>	cdm600lObjects
<b>OID</b>	1.3.6.1.4.1.6247.21.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600l
<b>Child</b>	SystemInfo
<b>Type</b>	OBJECT-IDENTIFIER

### A.6.10 MODEMSELECT

<b>Name</b>	ModemSelect
<b>OID</b>	1.3.6.1.4.1.6247.21.1.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).modemSelect(1)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Next sibling</b>	systemInfo
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	local(1)
<b>2</b>	distant(2)
<b>Description</b>	Select Local Modem or Distant end Modem to communicate

### A.6.11 SYSTEMINFO

<b>Name</b>	systemInfo
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Next sibling</b>	txParameters
<b>Child</b>	equipmentID
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.12 EQUIPMENTID

<b>Name</b>	equipmentID
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).equipmentID(1)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Next sibling</b>	unitSerialNumber
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	10
<b>Description</b>	Equipment ID. (EID?)

## A.6.13 UNITSERIALNUMBER

<b>Name</b>	unitSerialNumber
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).unitSerialNumber(2)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	equipmentID
<b>Next sibling</b>	softwareRevision
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	9
<b>Description</b>	Unit Serial Number. (SNO?)

## A.6.14 SOFTWAREREVISION

<b>Name</b>	softwareRevision
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).softwareRevision(3)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	unitSerialNumber
<b>Next sibling</b>	deviceTime
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	5
<b>Description</b>	Software Revision. (SWR?)

## A.6.15 DEVICE TIME

<b>Name</b>	deviceTime
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).deviceTime(4)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	softwareRevision
<b>Next sibling</b>	deviceDate
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	6
<b>Description</b>	Modem Time. (TIM?, TIM=)

## A.6.16 DEVICEDATE

<b>Name</b>	deviceDate
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).deviceDate(5)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	deviceTime
<b>Next sibling</b>	circuitID
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	6
<b>Description</b>	Modem Date. (DAY?, DAY=)

## A.6.17 CIRCUITID

<b>Name</b>	circuitID
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).circuitID(6)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	deviceDate
<b>Next sibling</b>	localRemoteState
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	40
<b>Description</b>	Circuit ID. (CID?, CID=)

### A.6.18 LOCALREMOTESTATE

<b>Name</b>	localRemoteState
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).localRemoteState(7)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	circuitID
<b>Next sibling</b>	deviceTemperature
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	local(0)
2	remote(1)
<b>Description</b>	Local/Remote State. (LRS?, LRS=)

### A.6.19 DEVICE TEMPERATURE

<b>Name</b>	deviceTemperature
<b>OID</b>	1.3.6.1.4.1.6247.21.1.2.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).systemInfo(2).deviceTemperature(8)
<b>Module</b>	CDM600L
<b>Parent</b>	systemInfo
<b>Prev sibling</b>	localRemoteState
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Units</b>	degrees C
<b>Description</b>	Modem Internal Temperature. (TMP?, TMP=)

## A.6.20 TXPARAMETERS

<b>Name</b>	txParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	systemInfo
<b>Next sibling</b>	rxParameters
<b>Child</b>	txFrequency
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.21 TXFREQUENCY

<b>Name</b>	txFrequency
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txFrequency(1)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Next sibling</b>	txDataRate
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	9500000..19500000
<b>Description</b>	TX Frequency. Value Multiplied by 10000. (TFQ?, TFQ=)

## A.6.22 TXDATARATE

<b>Name</b>	txDataRate
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txDataRate(2)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txFrequency
<b>Next sibling</b>	txModType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	2400..20000000
<b>Description</b>	TX Data Rate. Value Multiplied by 1000. (TDR?, TDR=)

## A.6.23 TXMODTYPE

<b>Name</b>	txModType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txModType(3)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txDataRate
<b>Next sibling</b>	txFECType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	bpsk(0)
<b>2</b>	qpsk(1)
<b>3</b>	oqpsk(2)
<b>4</b>	tx8psk(3)
<b>5</b>	tx16qam(4)
<b>6</b>	Tx8qam(5)
<b>Description</b>	TX Modulator Type. (TMD?, TMD=)

## A.6.24 TXFECTYPE

<b>Name</b>	txFECType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txFECType(4)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txModType
<b>Next sibling</b>	txFECCodeRate
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	none_Diff_enc_On(0)
<b>2</b>	viterbi(1)
<b>3</b>	viterbiReedSolomon(2)
<b>4</b>	sequential(3)
<b>5</b>	sequentialReedSolomon(4)
<b>6</b>	tcm(5)
<b>7</b>	tcmReedSolomon(6)
<b>8</b>	turbo(7)
<b>9</b>	none_Diff_enc_Off(8)
<b>10</b>	ldpc(9)
<b>Description</b>	TX FEC Type. (TFT?, TFT=)

## A.6.25 TXFECCodeRate

<b>Name</b>	txFECCodeRate
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txFECCodeRate(5)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txFECType
<b>Next sibling</b>	txSpecInv
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	rate1/2(0)
2	rate3/4(1)
3	rate7/8(2)
4	rate2/3(3)
5	rate1/1(4)
6	rate21/44(5)
7	rate5/16(6)
8	rate0_95(7)
<b>Description</b>	TX FEC Code Rate. (TCR?, TCR=)

## A.6.26 TXSPECINV

<b>Name</b>	txSpecInv
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txSpecInv(6)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txFECCodeRate
<b>Next sibling</b>	txScrambler
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	normal(0)
2	inverted(1)
<b>Description</b>	TX Spectrum Inversion. (TSI?, TSI=)

### A.6.27 TXSCRAMBLER

<b>Name</b>	txScrambler
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txScrambler(7)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txSpecInv
<b>Next sibling</b>	txRSEncoding
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
3	iess315_TurboOnly(2)
<b>Description</b>	TX Scrambler. (TSC?, TSC=)

### A.6.28 TXRSENCODING

<b>Name</b>	txRSEncoding
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txRSEncoding(8)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txScrambler
<b>Next sibling</b>	txPowerLevel
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	normal(0)
2	iess310(1)
3	efdata(2)
4	ibs(3)

### A.6.29 TXPOWERLEVEL

<b>Name</b>	txPowerLevel
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txPowerLevel(9)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txRSEncoding
<b>Next sibling</b>	txCarrierState
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..450
<b>Description</b>	TX Power Level. Value Multiplied by 10. (TPL?, TPL=)

### A.6.30 TXCARRIERSTATE

<b>Name</b>	txCarrierState
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txCarrierState(10)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txPowerLevel
<b>Next sibling</b>	txDataInv
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	offPanelORRemote(0)
<b>2</b>	on(1)
<b>3</b>	rti(2)
<b>4</b>	offExternal(3)
<b>5</b>	offBUCdelay(4)
<b>Description</b>	TX Carrier State. (TXO?, TXO=)

### A.6.31 TXDATAINV

<b>Name</b>	txDataInv
<b>OID</b>	1.3.6.1.4.1.6247.21.1.3.11
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).txParameters(3).txDataInv(11)
<b>Module</b>	CDM600L
<b>Parent</b>	txParameters
<b>Prev sibling</b>	txCarrierState
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	normal(0)
<b>2</b>	inverted(1)
<b>Description</b>	Invert Tx Data. (ITD?, ITD=)

### A.6.32 RXPARAMETERS

<b>Name</b>	rxParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	txParameters
<b>Next sibling</b>	interfaceParameters
<b>Child</b>	rxFrequency
<b>Type</b>	OBJECT-IDENTIFIER

### A.6.33 RXFREQUENCY

<b>Name</b>	rxFrequency
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxFrequency(1)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Next sibling</b>	rxDataRate
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	9500000..19500000
<b>Description</b>	RX Frequency. Value Multiplied by 10000. (RFQ?, RFQ=)

### A.6.34 RXDATARATE

<b>Name</b>	rxDataRate
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxDataRate(2)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxFrequency
<b>Next sibling</b>	rxDemodType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	2400..20000000
<b>Description</b>	RX Data Rate. Value Multiplied by 1000. (RDR?, RDR=)

### A.6.35 RXDEMOTYPE

<b>Name</b>	rxDemodType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxDemodType(3)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxDataRate
<b>Next sibling</b>	rxFECType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	bpsk(0)
<b>2</b>	qpsk(1)
<b>3</b>	oqpsk(2)
<b>4</b>	rx8psk(3)
<b>5</b>	rx16qam(4)
<b>6</b>	Rx8qam(5)
<b>Description</b>	RX Demodulator Type. (RMD?, RMD=)

## A.6.36 RXFECTYPE

<b>Name</b>	rxFECType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxFECType(4)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxDemodType
<b>Next sibling</b>	rxFECCodeRate
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	none_Diff_enc_On(0)
<b>2</b>	viterbi(1)
<b>3</b>	viterbiReedSolomon(2)
<b>4</b>	sequential(3)
<b>5</b>	sequentialReedSolomon(4)
<b>6</b>	tcm(5)
<b>7</b>	tcmReedSolomon(6)
<b>8</b>	turbo(7)
<b>9</b>	none_Diff_enc_Off(8)
<b>10</b>	ldpc(9)
<b>Description</b>	RX FEC Type. (RFT?, RFT=)

### A.6.37 RXFECCodeRate

<b>Name</b>	rxFECCodeRate
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxFECCodeRate(5)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxFECType
<b>Next sibling</b>	rxSpecInv
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	rate1/2(0)
2	rate3/4(1)
3	rate7/8(2)
4	rate2/3(3)
5	rate1/1(4)
6	rate21/44(5)
7	rate5/16(6)
8	rate0_95(7)
<b>Description</b>	RX FEC Code Rate. (RCR?, RCR=)

### A.6.38 RXSPECINV

<b>Name</b>	rxSpecInv
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxSpecInv(6)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxFECCodeRate
<b>Next sibling</b>	rxDescrambler
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	normal(0)
2	inverted(1)
<b>Description</b>	RX Spectrum Inversion. (RSI?, RSI=)

### A.6.39 RXDESCRAMBLER

<b>Name</b>	rxDescrambler
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxDescrambler(7)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxSpecInv
<b>Next sibling</b>	rxRSDecoding
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
3	less315_TurboOnly(2)
<b>Description</b>	RX Descrambler. (RDS?, RDS=)

### A.6.40 RXRSDECODING

<b>Name</b>	rxRSDecoding
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxRSDecoding(8)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxDescrambler
<b>Next sibling</b>	rxDataInv
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	normal(0)
2	iess310(1)
3	efdata(2)
4	ibs(3)
<b>Description</b>	Rx Reed-Solomon Decoding. (RRS?, RRS=)

### A.6.41 RXDATAINV

<b>Name</b>	rxDataInv
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxDataInv(9)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxRSDecoding
<b>Next sibling</b>	rxAcqSweepRange
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	normal(0)
2	inverted(1)
<b>Description</b>	Invert Rx Data. (IRD?, IRD=)

### A.6.42 RXACQSWEPRANGE

<b>Name</b>	rxAcqSweepRange
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxAcqSweepRange(10)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxDataInv
<b>Next sibling</b>	rxEbnoAlarmPoint
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
1	1..32

### A.6.43 RXEBNOALARMPOINT

<b>Name</b>	rxEbnoAlarmPoint
<b>OID</b>	1.3.6.1.4.1.6247.21.1.4.11
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).rxParameters(4).rxEbnoAlarmPoint(11)
<b>Module</b>	CDM600L
<b>Parent</b>	rxParameters
<b>Prev sibling</b>	rxAcqSweepRange
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	1..160
<b>Description</b>	RX EBN0 Alarm Point. Value Multiplied by 10. (EBA?, EBA=)

### A.6.44 INTERFACEPARAMETERS

<b>Name</b>	interfaceParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	rxParameters
<b>Next sibling</b>	utilityParameters
<b>Child</b>	txInterfaceType
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.45 TXINTERFACE TYPE

<b>Name</b>	txInterfaceType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).txInterfaceType(1)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Next sibling</b>	rxInterfaceType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	rs422(0)
<b>2</b>	v35(1)
<b>3</b>	rs232(2)
<b>4</b>	g703balanced(3)
<b>5</b>	g703unbalanced(4)
<b>6</b>	audio(5)
<b>7</b>	lvds(6)
<b>Description</b>	Tx Interface Type. (TIT?, TIT=)

## A.6.46 RXINTERFACE TYPE

<b>Name</b>	rxInterfaceType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxInterfaceType(2)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	txInterfaceType
<b>Next sibling</b>	txFramingMode
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	rs422(0)
<b>2</b>	v35(1)
<b>3</b>	rs232(2)
<b>4</b>	g703balanced(3)
<b>5</b>	g703unbalanced(4)
<b>6</b>	audio(5)
<b>7</b>	lvds(6)
<b>Description</b>	Rx Interface Type. (RIT?, RIT=)

## A.6.47 TXFRAMINGMODE

<b>Name</b>	txFramingMode
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).txFramingMode(3)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxInterfaceType
<b>Next sibling</b>	rxFramingMode
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	unframed(0)
<b>2</b>	ibs(1)
<b>3</b>	idr(2)
<b>4</b>	drop(3)
<b>5</b>	edmac(4)
<b>6</b>	dni_plus_plus(5)
<b>Description</b>	Tx Framing Mode. (TFM?, TFM=)

## A.6.48 RXFRAMINGMODE

<b>Name</b>	rxFramingMode
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxFramingMode(4)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	txFramingMode
<b>Next sibling</b>	txClockSource
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	unframed(0)
<b>2</b>	ibs(1)
<b>3</b>	idr(2)
<b>4</b>	drop(3)
<b>5</b>	edmac(4)
<b>6</b>	dni_plus_plus(5)
<b>Description</b>	Rx Framing Mode. (RFM?, RFM=)

### A.6.49 TXCLOCKSOURCE

<b>Name</b>	txClockSource
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).txClockSource(5)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxFramingMode
<b>Next sibling</b>	rxClockSource
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	internal(0)
2	txTerrestrial(1)
3	rxLoopTimed(2)
4	external(3)
<b>Description</b>	TX Clock Source. (TCK?, TCK=)

### A.6.50 RXCLOCKSOURCE

<b>Name</b>	rxClockSource
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxClockSource(6)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	txClockSource
<b>Next sibling</b>	rxBufferSize
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	rxSatellite(0)
2	txTerrestrial(1)
3	external(2)
4	insert(3)
<b>Description</b>	RX Clock Source. (RCK?, RCK=)

## A.6.51 RXBUFSIZE

<b>Name</b>	rxBufferSize
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxBufferSize(7)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxClockSource
<b>Next sibling</b>	externalClock
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	16..32768
<b>Description</b>	RX Buffer Size. (RBS?, RBS=)

## A.6.52 EXTERNALCLOCK

<b>Name</b>	externalClock
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).externalClock(8)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxBufferSize
<b>Next sibling</b>	modemReferenceClock
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	10
<b>Description</b>	External Reference Value. (REF?, REF=)

### A.6.53 MODEMREFERENCECLOCK

<b>Name</b>	modemReferenceClock
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).modemReferenceClock(9)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	externalClock
<b>Next sibling</b>	txTernaryCode
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	internal(0)
<b>2</b>	external1MHz(1)
<b>3</b>	external2MHz(2)
<b>4</b>	external5MHz(3)
<b>5</b>	external10MHz(4)
<b>6</b>	external20MHz(5)
<b>Description</b>	Modem Reference Clock. (MRC?, MRC=)

### A.6.54 TXTERNARYCODE

<b>Name</b>	txTernaryCode
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).txTernaryCode(10)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	modemReferenceClock
<b>Next sibling</b>	rxTernaryCode
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	ami(0)
2	b8zs(1)
3	b6zs(2)
4	hdb3(3)
<b>Description</b>	Tx Ternary Code. (G.703 Parameter) (TTC?, TTC=)

### A.6.55 RXTERNARYCODE

<b>Name</b>	rxTernaryCode
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.11
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxTernaryCode(11)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	txTernaryCode
<b>Next sibling</b>	idrTxESCType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	ami(0)
2	b8zs(1)
3	b6zs(2)
4	hdb3(3)
<b>Description</b>	Rx Ternary Code. (G.703 Parameter) (RTC?, RTC=)

### A.6.56 IDR Tx ESC TYPE

<b>Name</b>	idrTxESCType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.12
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).idrTxESCType(12)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxTernaryCode
<b>Next sibling</b>	idrRxESCType
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	data(0)
2	audio(1)
<b>Description</b>	IDR Tx ESC Type. (IDR Parameter) (TET?, TET=)

### A.6.57 IDR Rx ESC TYPE

<b>Name</b>	idrRxESCType
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.13
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).idrRxESCType(13)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	idrTxESCType
<b>Next sibling</b>	txAudioVolume
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	data(0)
2	audio(1)
<b>Description</b>	IDR Rx ESC Type. (IDR Parameter) (RET?, RET=)

## A.6.58 TXAUDIOVOLUME

<b>Name</b>	txAudioVolume
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.14
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).txAudioVolume(14)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	idrRxESCType
<b>Next sibling</b>	rxAudioVolume
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	4
<b>Description</b>	Tx Audio Volume. (Audio/IDR Parameter) (TVL?, TVL=)

## A.6.59 RXAUDIOVOLUME

<b>Name</b>	rxAudioVolume
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.15
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxAudioVolume(15)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	txAudioVolume
<b>Next sibling</b>	dropAndInsert
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	4
<b>Description</b>	Rx Audio Volume. (Audio/IDR Parameter) (RVL?, RVL=)

## A.6.60 DROPANDINSERT

<b>Name</b>	dropAndInsert
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.16
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).dropAndInsert(16)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxAudioVolume
<b>Next sibling</b>	txTerrestrialAlarmMask
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	51
<b>Description</b>	Drop & Insert. (DNI?, DNI=) 51 Bytes.
	<p>25 bytes of Drop information - 24 bytes defining Timeslot locations, followed by Drop type (0 = T1-D4, 1 = T1-ESF, 2 = E1-CCS, 3 = E1-CAS) as DTY</p> <p>25 bytes of Insert information - 24 bytes defining Timeslot locations, followed by Insert type (0 = T1-D4, 1 = T1-ESF, 2 = E1-CCS, 3 = E1-CAS) as ITY</p> <p>Timeslot definition</p> <p>0 = Unused</p> <p>1-9 for timeslots 1-9 A=10, B=11, C=12, D=13...V=31.</p> <p>Last byte = Drop and Insert Internal Loop (0 = OFF, 1 = ON)</p> <p>If data rate equals 1920 kbps and DNI Type equals E1-CCS or E1-CAS then channels cannot be programmed. The DNI? Command will display all 'x'in the time-slot positions.</p>

## A.6.61 TXTERRESTRIALALARMMASK

<b>Name</b>	txTerrestrialAlarmMask
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.17
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).txTerrestrialAlarmMask(17)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	dropAndInsert
<b>Next sibling</b>	rxTerrestrialAlarmEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	alarmActive(0)
2	alarmMasked(1)
<b>Description</b>	Tx Terrestrial Alarm Mask. (TTA?, TTA=)
<b>Note</b>	Used for DROP operation only.

## A.6.62 RXTERRESTRIALALARMENABLE

<b>Name</b>	rxTerrestrialAlarmEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.18
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).rxTerrestrialAlarmEnable(18)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	txTerrestrialAlarmMask
<b>Next sibling</b>	recenterBuffer
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	disable(0)
2	enable(1)
<b>Description</b>	Rx Terrestrial Alarm Enable. (RTE?, RTE=)
<b>Note</b>	Used for INSERT operation only.

### A.6.63 RECENTERBUFFER

<b>Name</b>	recenterBuffer
<b>OID</b>	1.3.6.1.4.1.6247.21.1.5.19
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).interfaceParameters(5).recenterBuffer(19)
<b>Module</b>	CDM600L
<b>Parent</b>	interfaceParameters
<b>Prev sibling</b>	rxTerrestrialAlarmEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	yes(1)
<b>Description</b>	Recenter Buffer. Write-ONLY. (RCB=)

### A.6.64 UTILITYPARAMETERS

<b>Name</b>	utilityParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(5)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	interfaceParameters
<b>Next sibling</b>	aupcParameters
<b>Child</b>	edmacFramingMode
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.65 EDMACFRAMINGMODE

<b>Name</b>	edmacFramingMode
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).edmacFramingMode(1)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Next sibling</b>	edmacAddress
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	idle(0)
<b>2</b>	master(1)
<b>3</b>	slave(2)
<b>Description</b>	EDMAC Framing Mode. (EFM?, EFM=)

## A.6.66 EDMACADDRESS

<b>Name</b>	edmacAddress
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).edmacAddress(2)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	edmacFramingMode
<b>Next sibling</b>	unitTestMode
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..9999
<b>Description</b>	Edmac Slave Address Range. (ESA?, ESA=) This command is only valid for an EDMAC master. When used as a Query, it may be sent to an EDMAC slave, which will respond with the appropriate address.

## A.6.67 UNITTESTMODE

<b>Name</b>	unitTestMode
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).unitTestMode(3)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	edmacAddress
<b>Next sibling</b>	unitAlarmMask
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	normal(0)
<b>2</b>	txCW(1)
<b>3</b>	txAlt10Pattern(2)
<b>4</b>	ifLoopBack(3)
<b>5</b>	rfLoopBack(4)
<b>6</b>	digitalLoopBack(5)
<b>7</b>	ioLoopBack(6)
<b>Description</b>	Unit Test Mode. (TST?, TST=)

## A.6.68 UNITALARMMASK

<b>Name</b>	unitAlarmMask
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).unitAlarmMask(4)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	unitTestMode
<b>Next sibling</b>	txBackwardAlarmEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..111111
<b>Description</b>	Unit Alarm Mask. (MSK?, MSK=) MSK=123456, Bit 1 = Mask TX AIS Alarm. (0=Unmasked, 1=Masked) Bit 2 = Mask RX AIS Alarm. (0=Unmasked, 1=Masked) Bit 3 = Mask Bufferslip Alarm. (0=Unmasked, 1=Masked) Bit 4 = spare, always 1. Bit 5 = Mask RX AGC Alarm. (0=Unmasked, 1=Masked) Bit 6 = Mask Eb/No Alarm. (0=Unmasked, 1=Masked)

## A.6.69 TXBACKWARDALARMBEABLE

<b>Name</b>	txBackwardAlarmEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).txBackwardAlarmEnable(5)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	unitAlarmMask
<b>Next sibling</b>	rxBackwardAlarmEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..2222
<b>Description</b>	Tx Backward Alarms Enable. (TBA?, TBA=)

### A.6.70 RXBACKWARDALARMENABLE

<b>Name</b>	rxBackwardAlarmEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).rxBackwardAlarmEnable(6)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	txBackwardAlarmEnable
<b>Next sibling</b>	unitConfigStore
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..1111
<b>Description</b>	Rx Backward Alarms Enable. (RBA?, RBA=)

### A.6.71 UNITCONFIGSTORE

<b>Name</b>	unitConfigStore
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).unitConfigStore(7)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	rxBackwardAlarmEnable
<b>Next sibling</b>	unitConfigLoad
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>Description</b>	Unit Config Store. Write-ONLY. (CST=)

### A.6.72 UNITCONFIGLOAD

<b>Name</b>	unitConfigLoad
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).unitConfigLoad(8)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	unitConfigStore
<b>Next sibling</b>	oduCommEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..9
<b>Description</b>	Unit Config Load. Write-ONLY. (CLD=)

### A.6.73 ODUCOMMENABLE

<b>Name</b>	oduCommEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduCommEnable(9)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	unitConfigLoad
<b>Next sibling</b>	InbPower
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	disable(0)
<b>2</b>	enable(1)
<b>Description</b>	ODU Comm Enable. (ODU?, ODU=)

## A.6.74 LNBPOWER

<b>Name</b>	InbPower
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).InbPower(10)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduCommEnable
<b>Next sibling</b>	InbVoltage
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
<b>Description</b>	LNB Power. (LNB?, LNB=)

## A.6.75 LNBVOLTAGE

<b>Name</b>	InbVoltage
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.11
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).InbVoltage(11)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	InbPower
<b>Next sibling</b>	InbRefEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	v_13(0)
2	v_18(1)
3	v_24(2)
<b>Description</b>	LNB Voltage. (LNV?, LNV=)

### A.6.76 LNBREFENABLE

<b>Name</b>	InbRefEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.12
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).InbRefEnable(12)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	InbVoltage
<b>Next sibling</b>	InbThresholdLow
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
<b>Description</b>	LNB 10MHz Reference Enable. (LNR?, LNR=)

### A.6.77 LNBTRESHOLDLOW

<b>Name</b>	InbThresholdLow
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.13
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).InbThresholdLow(13)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	InbRefEnable
<b>Next sibling</b>	InbThresholdHigh
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
1	0..500
<b>Units</b>	mA
<b>Description</b>	LNB Threshold Low. (LNL?, LNL=)

### A.6.78 LNBTHRESHOLDHIGH

<b>Name</b>	InbThresholdHigh
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.14
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).InbThresholdHigh(14)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	InbThresholdLow
<b>Next sibling</b>	rxLOFrequency
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..500
<b>Units</b>	mA
<b>Description</b>	LNB Threshold High. (LNH?, LNH=)

### A.6.79 RXLOFREQUENCY

<b>Name</b>	rxLOFrequency
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.15
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).rxLOFrequency(15)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	InbThresholdHigh
<b>Next sibling</b>	oduPower
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	1..6
<b>Description</b>	LNB LO Frequency. (RLO?, RLO=)

## A.6.80 ODUPOWER

<b>Name</b>	oduPower
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.16
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduPower(16)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	rxLOFrequency
<b>Next sibling</b>	oduRefEnable
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
<b>Description</b>	ODU Power. (ODP?, ODP=)

## A.6.81 ODUREFENABLE

<b>Name</b>	oduRefEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.17
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduRefEnable(17)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduPower
<b>Next sibling</b>	oduThresholdLow
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
<b>Description</b>	ODU 10MHz Reference Enable. (ODR?, ODR=)

### A.6.82 ODUThresholdLow

<b>Name</b>	oduThresholdLow
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.18
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduThresholdLow(18)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduRefEnable
<b>Next sibling</b>	oduThresholdHigh
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..4000
<b>Units</b>	mA
<b>Description</b>	ODU Power Monitor Low Current Limit. (ODL?, ODL=)

### A.6.83 ODUThresholdHigh

<b>Name</b>	oduThresholdHigh
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.19
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduThresholdHigh(19)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduThresholdLow
<b>Next sibling</b>	oduOutputPower
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..4000
<b>Units</b>	mA
<b>Description</b>	ODU Power Monitor High Current Limit. (ODH?, ODH=)

### A.6.84 ODUOUTPUTPOWER

<b>Name</b>	oduOutputPower
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.20
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduOutputPower(20)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduThresholdHigh
<b>Next sibling</b>	oduPowerLeveling
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
<b>Description</b>	ODU Output Power Enable. (OOP?, OOP=)

### A.6.85 ODUPOWERLEVELING

<b>Name</b>	oduPowerLeveling
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.21
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduPowerLeveling(21)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduOutputPower
<b>Next sibling</b>	oduCarrierOutputDelay
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
1	off(0)
2	on(1)
<b>Description</b>	Outdoor Unit Power Leveling Enable. (OPL?, OPL=)

## A.6.86 ODU CARRIER OUTPUT DELAY

<b>Name</b>	oduCarrierOutputDelay
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.22
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduCarrierOutputDelay(22)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduPowerLeveling
<b>Next sibling</b>	txLOFrequency
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	5
<b>Description</b>	Outdoor Unit Carrier Output Delay. Format is MM:SS. (OOD?, OOD=)

## A.6.87 TX LO FREQUENCY

<b>Name</b>	txLOFrequency
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.23
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).txLOFrequency(23)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	oduCarrierOutputDelay
<b>Next sibling</b>	oduAddress
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	1..6
<b>Description</b>	BUC LO Frequency. (TLO?, TLO=)

## A.6.88 ODUADDRESS

<b>Name</b>	oduAddress
<b>OID</b>	1.3.6.1.4.1.6247.21.1.6.24
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).utilityParameters(6).oduAddress(24)
<b>Module</b>	CDM600L
<b>Parent</b>	utilityParameters
<b>Prev sibling</b>	txLOFrequency
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	0..15
<b>Description</b>	Outdoor Unit Address. (OAD?, OAD=)

## A.6.89 AUPCPARAMETERS

<b>Name</b>	aupcParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).aupcParameters(7)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	utilityParameters
<b>Next sibling</b>	statusParameters
<b>Child</b>	aupcEnable
<b>Type</b>	OBJECT-IDENTIFIER
<b>Composed syntax</b>	

## A.6.90 AUPCENABLE

<b>Name</b>	aupcEnable
<b>OID</b>	1.3.6.1.4.1.6247.21.1.7.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).aupcParameters(7).aupcEnable(1)
<b>Module</b>	CDM600L
<b>Parent</b>	aupcParameters
<b>Next sibling</b>	aupcControlParameters
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	disable(0)
<b>2</b>	enable(1)
<b>Description</b>	AUPC Enable. (AUP?, AUP=)

## A.6.91 AUPCCONTROLPARAMETERS

<b>Name</b>	aupcControlParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.7.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).aupcParameters(7).aupcControlParameters(2)
<b>Module</b>	CDM600L
<b>Parent</b>	aupcParameters
<b>Prev sibling</b>	aupcEnable
<b>Next sibling</b>	remoteEbno
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Size list</b>	
<b>1</b>	6
<b>Description</b>	AUPC Control Parameters. (APP?, APP=)

## A.6.92 REMOTEEBNO

<b>Name</b>	remoteEbno
<b>OID</b>	1.3.6.1.4.1.6247.21.1.7.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).aupcParameters(7).remoteEbno(3)
<b>Module</b>	CDM600L
<b>Parent</b>	aupcParameters
<b>Prev sibling</b>	aupcControlParameters
<b>Next sibling</b>	txPowerLevelIncrease
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
1	-1
2	20..160
3	999
<b>Description</b>	Remote EB/N0. Value Multiplied by 10 if not -1. (REB?)

## A.6.93 TXPOWERLEVELINCREASE

<b>Name</b>	txPowerLevelIncrease
<b>OID</b>	1.3.6.1.4.1.6247.21.1.7.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).aupcParameters(7).txPowerLevelIncrease(4)
<b>Module</b>	CDM600L
<b>Parent</b>	aupcParameters
<b>Prev sibling</b>	remoteEbno
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
1	-1
2	0..90
<b>Description</b>	TX Power Level Increase. Value Multiplied by 10 if not -1. (PLI?)

## A.6.94 STATUSPARAMETERS

<b>Name</b>	statusParameters
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	aupcParameters
<b>Next sibling</b>	logs
<b>Child</b>	rxEbno
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.95 RXEBNO

<b>Name</b>	rxEbno
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).rxEbno(1)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Next sibling</b>	rxSignalLevel
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..160
<b>2</b>	999
<b>Units</b>	dB
<b>Description</b>	RX Eb/N0. Value Multiplied by 10. (EBN?)

## A.6.96 RXSIGNALLEVEL

<b>Name</b>	rxSignalLevel
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).rxSignalLevel(2)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	rxEbno
<b>Next sibling</b>	rxFrequencyOffset
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	5
<b>Units</b>	dBm
<b>Description</b>	Rx Signal Level. (RSL?)

## A.6.97 RXFREQUENCYOFFSET

<b>Name</b>	rxFrequencyOffset
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).rxFrequencyOffset(3)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	rxSignalLevel
<b>Next sibling</b>	bufferFillState
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	-30..30
<b>2</b>	99999
<b>Units</b>	kHz
<b>Description</b>	RX Frequency Offset. Value Multiplied by 10 if not 99999. (RFO?)

## A.6.98 BUFFERFILLSTATE

<b>Name</b>	bufferFillState
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).bufferFillState(4)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	rxFrequencyOffset
<b>Next sibling</b>	rxBER
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..99
<b>Units</b>	percentage
<b>Description</b>	Buffer Fill State. % Full. (BFS?)

## A.6.99 RXBER

<b>Name</b>	rxBER
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).rxBER(5)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	bufferFillState
<b>Next sibling</b>	redundancyState
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_GAUGE32
<b>Base syntax</b>	Unsigned32
<b>Composed syntax</b>	Unsigned32
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Description</b>	RX BER. Value Multiplied by 10E-10. (BER?)

## A.6.100 REDUNDANCYSTATE

<b>Name</b>	redundancyState
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).redundancyState(6)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	rxBER
<b>Next sibling</b>	unitFaults
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Value list</b>	
1	offline(0)
2	online(1)
<b>Description</b>	Redundancy State. (RED?)

## A.6.101 UNITFAULTS

<b>Name</b>	unitFaults
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).unitFaults(7)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	redundancyState
<b>Next sibling</b>	oduCurrent
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only

<b>Description</b>	<p>Unit Faults. Where response is abcd.</p> <p>a = Unit faults</p> <ul style="list-style-type: none"> <li>0 = No faults</li> <li>1 = Power supply fault, +5 volts</li> <li>2 = Power supply fault, +12 volts</li> <li>3 = Power supply fault, -5 volts</li> <li>4 = Power supply fault, +18 volts</li> <li>5 = Power supply fault, -12 volts</li> <li>6 = RAM load fail</li> <li>7 = Tx synthesizer lock</li> <li>8 = Rx synthesizer</li> <li>9 = Power cal Checksum error</li> <li>A = FPGA main chain load fail</li> <li>B = Turbo FPGA load fail</li> <li>C = Modem card FPGA load</li> <li>D = MUX FPGA load</li> <li>E = Demux FPGA load</li> </ul>
	<p>b = Tx Traffic status</p> <ul style="list-style-type: none"> <li>0 = Tx traffic OK</li> <li>1 = No clock from terrestrial interface</li> <li>2 = Tx FIFO slip</li> <li>3 = AIS detected on incoming data</li> <li>4 = AUPC upper limit reached</li> <li>5 = Ref PLL</li> <li>6 = BUC current</li> <li>7 = BUC voltage</li> <li>8 = BUC checksum</li> <li>9 = BUC PLL</li> <li>A = BUC temperature</li> </ul>
	<p>c = Rx Traffic status</p> <ul style="list-style-type: none"> <li>0 = Rx Traffic OK</li> <li>1 = Demodulator unlocked</li> <li>2 = AGC Alarm - signal out of range</li> <li>3 = Demux</li> <li>4 = Spare</li> <li>5 = Buffer Slip</li> <li>6 = AIS detected on incoming data</li> <li>7 = Eb/No alarm</li> <li>8 = Buffer Clock activity</li> <li>9 = LNB current</li> <li>A = LNB voltage</li> </ul>

	d = Open Network 0 = No Faults 1 = Loss of Tx frame 2 = BER Alarm 3 = Loss of Tx multiframe 4 = Tx signaling AIS 5 = Tx Remote alarm 6 = IBS satellite alarm 7 = IDR Rx BWA1 8 = IDR Rx BWA2 9 = IDR Rx BWA3 A = IDR Rx BWA4 B = IDR Tx BWA1 C = IDR Tx BWA2 D = IDR Tx BWA3 E = IDR Tx BWA4
--	---

### A.6.102 ODUCURRENT

<b>Name</b>	oduCurrent
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.8
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduCurrent(8)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	unitFaults
<b>Next sibling</b>	oduVoltage
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..9999
<b>Units</b>	mA
<b>Description</b>	ODU Current. (ODC?)

### A.6.103 ODUVOLTAGE

<b>Name</b>	oduVoltage
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduVoltage(9)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduCurrent
<b>Next sibling</b>	oduPhaseLockLoop
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..640
<b>Units</b>	volts
<b>Description</b>	ODU Voltage. Value multiplied by 10. (ODV?)

### A.6.104 ODUPHASELOCKLOOP

<b>Name</b>	oduPhaseLockLoop
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduPhaseLockLoop(10)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduVoltage
<b>Next sibling</b>	oduOutputPowerLevel
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Value list</b>	
<b>1</b>	locked(0)
<b>2</b>	unlocked(1)
<b>Description</b>	Outdoor Unit Phase Lock Loop. (OLL?)

### A.6.105 ODUOUTPUTPOWERLEVEL

<b>Name</b>	oduOutputPowerLevel
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.11
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduOutputPowerLevel(11)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduPhaseLockLoop
<b>Next sibling</b>	oduTemperature
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Description</b>	ODU Output Power Level. Value multiplied by 10. (OOL?)

### A.6.106 ODUTEMPERATURE

<b>Name</b>	oduTemperature
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.12
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduTemperature(12)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduOutputPowerLevel
<b>Next sibling</b>	oduSoftwareVersion
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Description</b>	Outdoor Unit Temperature. (ODT?)

### A.6.107 ODU SOFTWARE VERSION

<b>Name</b>	oduSoftwareVersion
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.13
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduSoftwareVersion(13)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduTemperature
<b>Next sibling</b>	oduPowerClass
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..15
<b>Description</b>	Outdoor Unit Software Version. (OSV?)

### A.6.108 ODU POWER CLASS

<b>Name</b>	oduPowerClass
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.14
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduPowerClass(14)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduSoftwareVersion
<b>Next sibling</b>	oduTargetPower
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	2..60
<b>Units</b>	watts
<b>Description</b>	Outdoor Unit Power Class. (OPC?)

### A.6.109 ODUTARGETPOWER

<b>Name</b>	oduTargetPower
<b>OID</b>	1.3.6.1.4.1.6247.21.1.8.15
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).statusParameters(8).oduTargetPower(15)
<b>Module</b>	CDM600L
<b>Parent</b>	statusParameters
<b>Prev sibling</b>	oduPowerClass
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..400
<b>Units</b>	dBm
<b>Description</b>	Outdoor Unit Target Power. Value multiplied by 10. (OTP?)

### A.6.110 LOGS

<b>Name</b>	logs
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	statusParameters
<b>Next sibling</b>	trapNotifications
<b>Child</b>	clearEventsLog
<b>Type</b>	OBJECT-IDENTIFIER

### A.6.111 CLEAREVENTSLOG

<b>Name</b>	clearEventsLog
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).clearEventsLog(1)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Next sibling</b>	numberUnreadEvents
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	yes(1)
<b>Description</b>	Clear Events Log. Write-ONLY. (CAE=)

### A.6.112 NUMBERUNREADEVENTS

<b>Name</b>	numberUnreadEvents
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).numberUnreadEvents(2)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Prev sibling</b>	clearEventsLog
<b>Next sibling</b>	retrieveNext5Events
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..999
<b>Description</b>	Number of Unread Events. (NUE?)

### A.6.113 RETRIEVENEXT5EVENTS

<b>Name</b>	retrieveNext5Events
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).retrieveNext5Events(3)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Prev sibling</b>	numberUnreadEvents
<b>Next sibling</b>	setStatisticInterval
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Description</b>	Retrieve Next 5 Events. (RNE?)

### A.6.114 SETSTATISTICINTERVAL

<b>Name</b>	setStatisticInterval
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.4
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).setStatisticInterval(4)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Prev sibling</b>	retrieveNext5Events
<b>Next sibling</b>	clearStatisticsLog
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	none(0)
<b>2</b>	mins10(1)
<b>3</b>	mins20(2)
<b>4</b>	mins30(3)
<b>5</b>	mins40(4)
<b>6</b>	mins50(5)
<b>7</b>	mins60(6)
<b>8</b>	mins70(7)
<b>9</b>	mins80(8)
<b>10</b>	mins90(9)
<b>Description</b>	Set Statistics Interval. (SSI?, SSI=)

### A.6.115 CLEARSTATISTICSLOG

<b>Name</b>	clearStatisticsLog
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.5
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).clearStatisticsLog(5)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Prev sibling</b>	setStatisticInterval
<b>Next sibling</b>	numberUnreadStatistics
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-write
<b>Value list</b>	
<b>1</b>	yes(1)
<b>Description</b>	Clear Statistics Log. Write-ONLY. (CAS=)

### A.6.116 NUMBERUNREADSTATISTICS

<b>Name</b>	numberUnreadStatistics
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.6
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).numberUnreadStatistics(6)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Prev sibling</b>	clearStatisticsLog
<b>Next sibling</b>	retrieveNext5Statistics
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_INT
<b>Base syntax</b>	INTEGER
<b>Composed syntax</b>	INTEGER
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Size list</b>	
<b>1</b>	0..999
<b>Description</b>	Number of Unread Statistics. (NUS?)

### A.6.117 RETRIEVENEXT5STATISTICS

<b>Name</b>	retrieveNext5Statistics
<b>OID</b>	1.3.6.1.4.1.6247.21.1.9.7
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).logs(9).retrieveNext5Statistics(7)
<b>Module</b>	CDM600L
<b>Parent</b>	logs
<b>Prev sibling</b>	numberUnreadStatistics
<b>Type</b>	OBJECT-TYPE
<b>Numerical syntax</b>	SNMP_SYNTAX_OCTETS
<b>Base syntax</b>	OCTET STRING
<b>Composed syntax</b>	OCTET STRING
<b>Status</b>	current
<b>Max-access</b>	read-only
<b>Description</b>	Retrieve Next 5 Statistics. (RNS?)

### A.6.118 TRAPNOTIFICATIONS

<b>Name</b>	trapNotifications
<b>OID</b>	1.3.6.1.4.1.6247.21.1.10
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).trapNotifications(10)
<b>Module</b>	CDM600L
<b>Parent</b>	cdm600lObjects
<b>Prev sibling</b>	logs
<b>Child</b>	trapNotificationsPrefix
<b>Type</b>	OBJECT-IDENTIFIER

### A.6.119 TRAPNOTIFICATIONS PREFIX

<b>Name</b>	trapNotificationsPrefix
<b>OID</b>	1.3.6.1.4.1.6247.21.1.10.0
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).trapNotifications(10).trapNotificationsPrefix(0)
<b>Module</b>	CDM600L
<b>Parent</b>	trapNotifications
<b>Child</b>	unitFaultTraps
<b>Type</b>	OBJECT-IDENTIFIER

## A.6.120 UNITFAULTTRAPS

<b>Name</b>	UnitFaultTraps
<b>OID</b>	1.3.6.1.4.1.6247.21.1.10.0.1
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).trapNotifications(10).trapNotificationsPrefix(0).unitFaultTraps(1)
<b>Module</b>	CDM600L
<b>Parent</b>	trapNotificationsPrefix
<b>Type</b>	NOTIFICATION-TYPE
<b>Status</b>	current
<b>Objects</b>	
<b>1</b>	unitFaults
<b>Description</b>	Unit Fault Trap Using unitFaults. Where abcd.  a = Unit faults 0 = No faults 1 = Power supply fault, +5 volts 2 = Power supply fault, +12 volts 3 = Power supply fault, -5 volts 4 = Power supply fault, +18 volts 5 = Power supply fault, -12 volts 6 = RAM load fail 7 = Tx synthesizer lock 8 = Rx synthesizer 9 = Power cal Checksum error A = FPGA main chain load fail B = Turbo FPGA load fail C = Modem card FPGA load D = MUX FPGA load E = Demux FPGA load
	b = Tx Traffic status 0 = Tx traffic OK 1 = No clock from terrestrial interface 2 = Tx FIFO slip 3 = AIS detected on incoming data 4 = AUPC upper limit reached 5 = Ref PLL 6 = BUC current 7 = BUC voltage 8 = BUC checksum 9 = BUC PLL A = BUC temperature

	<p>c = Rx Traffic status</p> <ul style="list-style-type: none"> <li>0 = Rx Traffic OK</li> <li>1 = Demodulator unlocked</li> <li>2 = AGC Alarm - signal out of range</li> <li>3 = Demux</li> <li>4 = Spare</li> <li>5 = Buffer Slip</li> <li>6 = AIS detected on incoming data</li> <li>7 = Eb/No alarm</li> <li>8 = Buffer Clock activity</li> <li>9 = LNB current</li> <li>A = LNB voltage</li> </ul>
	<p>d = Open Network</p> <ul style="list-style-type: none"> <li>0 = No Faults</li> <li>1 = Loss of Tx frame</li> <li>2 = BER Alarm</li> <li>3 = Loss of Tx multiframe</li> <li>4 = Tx signaling AIS</li> <li>5 = Tx Remote alarm</li> <li>6 = IBS satellite alarm</li> <li>7 = IDR Rx BWA1</li> <li>8 = IDR Rx BWA2</li> <li>9 = IDR Rx BWA3</li> <li>A = IDR Rx BWA4</li> <li>B = IDR Tx BWA1</li> <li>C = IDR Tx BWA2</li> <li>D = IDR Tx BWA3</li> <li>E = IDR Tx BWA4</li> </ul>

#### A.6.121 UNITCONFIGCHANGETRAP

<b>Name</b>	UnitConfigChangeTrap
<b>OID</b>	1.3.6.1.4.1.6247.21.1.10.0.2
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).trapNotifications(10).trapNotificationsPrefix(0).unitConfigChangeTrap(2)
<b>Module</b>	CDM600L
<b>Parent</b>	TrapNotificationsPrefix
<b>Type</b>	NOTIFICATION-TYPE
<b>Status</b>	Current
<b>Objects</b>	
<b>1</b>	UnitFaults
<b>Description</b>	Trap is generated when a modem parameter command is submitted since the last poll.

## A.6.122 UNITCOMMFAULTTRAP

<b>Name</b>	UnitCommFaultTrap
<b>OID</b>	1.3.6.1.4.1.6247.21.1.10.0.3
<b>Full path</b>	iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).comtech(6247).cdm600l(21).cdm600lObjects(1).trapNotifications(10).trapNotificationsPrefix(0).unitCommFaultTrap(3)
<b>Module</b>	CDM600L
<b>Parent</b>	TrapNotificationsPrefix
<b>Type</b>	NOTIFICATION-TYPE
<b>Status</b>	Current
<b>Objects</b>	
<b>1</b>	UnitFaults
<b>Description</b>	Trap is generated when a communication error occurs between the CIM25 and the modem (local or distant).

## NOTES

# Index

## A

About this Manual.....	x
Administration and Security .....	7
Administration Page (Common).....	16

## C

CDM-600L MIB Tree:.....	56
CDM-600L MIB .....	61

### a

aupcControlParameters.....	108
aupcEnable .....	108
aupcParameters.....	107

### b

bufferFillState.....	112
----------------------	-----

### c

cdm6001.....	62
cdm6001Objects.....	63
circuitID.....	66
clearEventsLog.....	120
clearStatisticsLog .....	122
comtech .....	62

### d

deviceDate .....	65
deviceTemperature .....	67
deviceTime .....	65
dod	61
dropAndInsert.....	92

### e

edmacAddress .....	95
edmacFramingMode.....	95
enterprises.....	62
equipmentID .....	63
externalClock.....	87

## i

idrRxESCType .....	90
idrTxESCType .....	90
interfaceParameters .....	81
internet .....	61
iso .....	61

### la

lnbPower .....	100
lnbRefEnable.....	101
lnbThresholdHigh .....	102
lnbThresholdLow .....	101
lnbVoltage .....	100
localRemoteState .....	66
logs .....	119

### m

modemReferenceClock .....	88
numberUnreadEvents .....	120
numberUnreadStatistics .....	122

### o

oduAddress.....	107
oduCarrierOutputDelay.....	106
oduCommEnable.....	99
oduCurrent .....	115
oduOutputPower .....	105
oduOutputPowerLevel .....	117
oduPhaseLockLoop.....	116
oduPower .....	103
oduPowerClass .....	118
oduPowerLeveling .....	105
oduRefEnable.....	103
oduSoftwareVersion.....	118
oduTargetPower .....	119
oduTemperature .....	117
oduThresholdHigh .....	104
oduThresholdLow .....	104
oduVoltage .....	116
org .....	61

	<b>p</b>
private.....	62
	<b>r</b>
recenterBuffer.....	94
redundancyState .....	113
remoteEbno .....	109
retrieveNext5Events .....	121
retrieveNext5Statistics.....	123
rxAcqSweepRange .....	80
rxAudioVolume.....	91
rxBackwardAlarmEnable .....	98
rxBER.....	112
rxBufferSize .....	87
rxClockSource .....	86
rxDataInv .....	80
rxDataRate.....	75
rxDemodType.....	76
rxDescrambler .....	79
rxEbno .....	110
rxEbnoAlarmPoint.....	81
rxFECCodeRate.....	78
rxFECType .....	77
rxFramingMode.....	85
rxFrequency .....	75
rxFrequencyOffset.....	111
rxInterfaceType .....	83
rxLOFrequency .....	102
rxParameters .....	74
rxRSDecoding .....	79
rxSignalLevel .....	111
rxSpecInv.....	78
rxTernaryCode.....	89
rxTerrestrialAlarmEnable.....	93
	<b>s</b>
setStatisticInterval .....	121
softwareRevision .....	64
statusParameters .....	110
systemInfo .....	63
	<b>t</b>
trapNotifications .....	123
trapNotificationsPrefix .....	123
txAudioVolume .....	91
txBackwardAlarmEnable .....	97
txCarrierState.....	73
txClockSource .....	86
txDataInv .....	74

txDataRate.....	68
txFECCodeRate .....	71
txFECType .....	70
txFramingMode.....	84
txFrequency .....	68
txInterfaceType .....	82
txLOFrequency .....	106
txModType .....	69
txParameters .....	67
txPowerLevel .....	73
txPowerLevelIncrease .....	109
txRSEncoding .....	72
txScrambler .....	72
txSpecInv .....	71
txTernaryCode .....	89
txTerrestrialAlarmMask .....	93

	<b>u</b>
unitAlarmMask .....	97
unitConfigLoad .....	99
unitConfigStore .....	98
unitFaults.....	113
unitFaultTraps .....	124
unitSerialNumber .....	64
unitTestMode .....	96
utilityParameters .....	94

Changing MAC Address.....	36
Changing Network IP Address .....	36
Changing Serial Number.....	37
CiM-25 Connectors.....	4
CiM-25 MIB Tree .....	40
CiM-25 MIB .....	42

	<b>a</b>
administratorName .....	53
administratorPassword .....	52

	<b>c</b>
cim25.....	43
cim25IpAddress .....	49
cim25IpGateway .....	50
cim25IpMask .....	50
cim25Objects .....	44
comtech .....	43

	<b>d</b>
dnsIpAddressPrimary .....	48
dnsIpAddressSecondary .....	49

dod .....	42	External Control.....	24
<b>e</b>			
enterprises.....	43		
<b>i</b>			
internet.....	42		
ipAddress1.....	44		
ipAddress12Range.....	45		
ipAddress2.....	44		
ipAddress3.....	45		
ipAddress34Range.....	46		
ipAddress4.....	46		
ipAddress5.....	47		
ipAddress56Range.....	48		
ipAddress6.....	47		
iso .....	42		
<b>m</b>			
macAddress .....	55		
<b>o</b>			
org .....	42		
<b>p</b>			
private.....	43		
<b>r</b>			
readonlyName .....	54		
readonlyPassword.....	51		
readwriteName .....	54		
readwritePassword.....	51		
<b>s</b>			
submitconfig.....	55		
<b>t</b>			
trapCommunity.....	53		
trapIpAddress .....	52		
CIM-25/600L SNMP INTERFACE .....			
Configuration .....	3		
Connecting CiM-25 To Equipment .....	4		
Conventions and References.....	x		
Customer Support .....	ii		
<b>E</b>			
EMC Compliance.....	xi		
EN 60950 .....	xii		
<b>F</b>			
Federal Communications Commission (FCC) .....	xi		
<b>H</b>			
Home Page .....	13		
HTTP Interface .....	10		
INSTALLATION .....	3		
<b>I</b>			
Interface Parameters Page (Tx/Rx).....	21		
INTRODUCTION .....	1		
<b>L</b>			
Local LAN Configuration.....	10		
Logoff Page.....	14		
<b>M</b>			
Maintenance Interface.....	35		
Metric Conversion .....	x		
MIB-II .....	39		
Modem Configuration Page (Rx/Tx).....	19		
<b>N</b>			
Network Administration .....	9		
<b>O</b>			
OPERATION .....	7		
<b>P</b>			
Powering the CiM-25.....	4		
Private MIB Implementations.....	39		
<b>R</b>			
Recommended Standard Designations .....	x		
Resetting to Factory Defaults.....	36		
<b>S</b>			
Safety Compliance .....	xii		
Security Tools .....	8		
SNMP Interface .....	25		
SNMP Interface .....	39		
Specifications .....	2		

Status Page .....	20
Stored Faults/Alarms .....	23
Support Page (Common).....	15

**T**

Telnet Administrative Functions.....	28
Telnet Interface .....	27
Trademarks .....	x

**U**

Unpacking and Inspection.....	3
Using Telnet with Equipment Remote Control Protocol.....	34
Utilities Page.....	22

**V**

Verifying Software Version.....	36
---------------------------------	----

**W**

Warranty Policy .....	xiii
-----------------------	------

## METRIC CONVERSIONS

---

### Units of Length

Unit	Centimeter	Inch	Foot	Yard	Mile	Meter	Kilometer	Millimeter
1 centimeter	—	0.3937	0.03281	0.01094	$6.214 \times 10^{-6}$	0.01	—	—
1 inch	2.540	—	0.08333	0.2778	$1.578 \times 10^{-5}$	0.254	—	25.4
1 foot	30.480	12.0	—	0.3333	$1.893 \times 10^{-4}$	0.3048	—	—
1 yard	91.44	36.0	3.0	—	$5.679 \times 10^{-4}$	0.9144	—	—
1 meter	100.0	39.37	3.281	1.094	$6.214 \times 10^{-4}$	—	—	—
1 mile	$1.609 \times 10^5$	$6.336 \times 10^4$	$5.280 \times 10^3$	$1.760 \times 10^3$	—	$1.609 \times 10^3$	1.609	—
1 mm	—	0.03937	—	—	—	—	—	—
1 kilometer	—	—	—	—	0.621	—	—	—

### Temperature Conversions

Unit	° Fahrenheit	° Centigrade	Formulas
32° Fahrenheit	—	0 (water freezes)	$C = (F - 32) * 0.555$
212° Fahrenheit	—	100 (water boils)	$F = (C * 1.8) + 32$
-459.6° Fahrenheit	—	273.1 (absolute 0)	

### Units of Weight

Unit	Gram	Ounce Avoirdupois	Ounce Troy	Pound Avoir.	Pound Troy	Kilogram
1 gram	—	0.03527	0.03215	0.002205	0.002679	0.001
1 oz. avoir.	28.35	—	0.9115	0.0625	0.07595	0.02835
1 oz. troy	31.10	1.097	—	0.06857	0.08333	0.03110
1 lb. avoir.	453.6	16.0	14.58	—	1.215	0.4536
1 lb. Troy	373.2	13.17	12.0	0.8229	—	0.3732
1 kilogram	$1.0 \times 10^3$	35.27	32.15	2.205	2.679	—



---

2114 WEST 7TH STREET TEMPE ARIZONA 85281 USA  
480 • 333 • 2200 PHONE  
480 • 333 • 2161 FAX