

IPC Series

CD-ROM/DVD-ROM
Drive Unit

IPC-CDD-03

User's Manual

CONTEC CO.,LTD.

Check Your Package

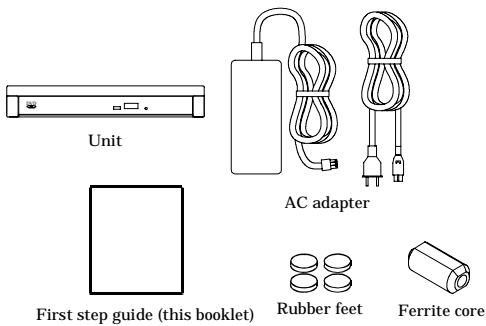
Thank you for purchasing the CONTEC product.

The product consists of the items listed below.

Check, with the following list, that your package is complete. If you discover damaged or missing items, contact your retailer.

Product Configuration List

- Unit [IPC-CDD-03] ...1
- First step guide ...1
- AC adapter ...1
- Rubber feet ...4
- Ferrite core ...1



Copyright

Copyright 2007 CONTEC CO., LTD. ALL RIGHTS RESERVED

No part of this document may be copied or reproduced in any form by any means without prior written consent of CONTEC CO., LTD.

CONTEC CO., LTD. makes no commitment to update or keep current the information contained in this document. The information in this document is subject to change without notice.

All relevant issues have been considered in the preparation of this document. Should you notice an omission or any questionable item in this document, please feel free to notify CONTEC CO., LTD.

Regardless of the foregoing statement, CONTEC assumes no responsibility for any errors that may appear in this document nor for results obtained by the user as a result of using this product.

Trademarks

MELSEC and CC-Link are trademarks of MITSUBISHI ELECTRIC CORPORATION. Other brand and product names are trademarks of their respective holder.

Table of Contents

Check Your Package..... i
Copyright ii
Trademarks ii
Table of Contents..... iii

1. BEFORE USING THE PRODUCT 1

About the Drive Unit 1
Customer Support 2
 Web Site..... 2
Limited One-Year Warranty..... 2
How to Obtain Service 2
Liability..... 2
Safety Precautions 3
 Safety Information..... 3
 Handling Precautions..... 4
 Environment..... 6
 Storage 6
 Disposal 6

2. ABOUT HARDWARE 7

Specifications..... 7
External Dimensions..... 9

3. FUNCTIONS OF COMPONENTS 11

Component Locations 11
+5VDC input connector : 5VDC 12
IDE SW : SW1 13
PC SW : SW2 13
IDE Interface 14

4. OPTION LIST 17

IDE Cable 17



1. Before Using the Product

This chapter provides information you should know before using the product.

About the Drive Unit

This product is a CD-ROM/DVD-ROM drive unit dedicated to the CONTEC's BOX-PC and PANEL-PC and to the PC CPU unit compatible with the Mitsubishi Programmable Logic Controller MELSEC-Q series.

The target device (personal computer) is hereafter abbreviated PC.

For configuration of the system using this drive unit and its connection, refer to the user's manual for each PC.

Customer Support

CONTEC provides the following support services for you to use CONTEC products more efficiently and comfortably.

Web Site

Japanese <http://www.contec.co.jp/>
English <http://www.contec.com/>
Chinese <http://www.contec.com.cn/>

Latest product information

CONTEC provides up-to-date information on products.

CONTEC also provides product manuals and various technical documents in the PDF.

Free download

You can download updated driver software and differential files as well as sample programs available in several languages.

Note! For product information

Contact your retailer if you have any technical question about a CONTEC product or need its price, delivery time, or estimate information.

Limited One-Year Warranty

CONTEC products are warranted by CONTEC CO., LTD. to be free from defects in material and workmanship for up to one year from the date of purchase by the original purchaser.

Repair will be free of charge only when this device is returned freight prepaid with a copy of the original invoice and a Return Merchandise Authorization to the distributor or the CONTEC group office, from which it was purchased.

This warranty is not applicable for scratches or normal wear, but only for the electronic circuitry and original products. The warranty is not applicable if the device has been tampered with or damaged through abuse, mistreatment, neglect, or unreasonable use, or if the original invoice is not included, in which case repairs will be considered beyond the warranty policy.

How to Obtain Service

For replacement or repair, return the device freight prepaid, with a copy of the original invoice. Please obtain a Return Merchandise Authorization number (RMA) from the CONTEC group office where you purchased before returning any product.

* No product will be accepted by CONTEC group without the RMA number.

Liability

The obligation of the warrantor is solely to repair or replace the product. In no event will the warrantor be liable for any incidental or consequential damages due to such defect or consequences that arise from inexperienced usage, misuse, or malfunction of this device.

Safety Precautions

Understand the following definitions and precautions to use the product safely.

Safety Information

This document provides safety information using the following symbols to prevent accidents resulting in injury or death and the destruction of equipment and resources. Understand the meanings of these labels to operate the equipment safely.

⚠ DANGER	DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

Handling Precautions

DANGER

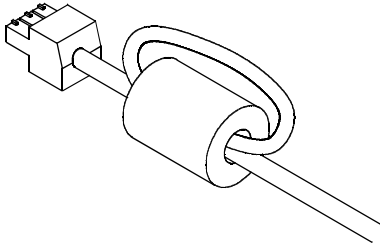
Do not use the product where it is exposed to flammable or corrosive gas. Doing so may result in an explosion, fire, electric shock, or failure.

CAUTION

- Do not use or store this product in a location exposed to temperature that exceeds range of Operating temperature (5 - 40°C), Storage temperature (-20 - 60°C).
Example:
 - Exposure to direct sun
 - In the vicinity of a heat source
- Avoid using or storing the device in locations subject to shock or vibration.
- Do not use or store the product in the vicinity of devices that generate strong magnetic force or electric wave.
- Do not use the product in extremely humid or dusty locations. It is extremely dangerous to use the product with its interior penetrated by water or any other fluid or conductive dust.
- Do not use or store the product in the presence of chemicals.
- Do not use or store the product in the vicinity of devices that generate strong magnetic force or electric wave.
- Be sure to unplug the AC adapter from a wall outlet before plugging or unplugging a cable or any connector.
- Do not modify this product. CONTEC will bear no responsibility for any problems, etc., resulting from modifying this product.
- In the event of failure or abnormality (foul smells or excessive heat generation), unplug the AC adapter immediately and contact your retailer.
- To clean this product, wipe it gently with a soft cloth dampened with either water or mild detergent. Do not use chemicals or a volatile solvent, such as benzene or thinner, to prevent peeling or discoloration of the paint.
- Component Life:
 - (1)AC adapter : The life expectancy of the AC adapter is 14,000 hours for continuous operation of the unit at 40°C.
The life expectancy of the AC adapter is 40,000 hours for continuous operation of the unit at 25°C.
 - (2)CD/DVD drive : The life expectancy of the AC adapter is 9,000 hours for continuous operation of the unit at 40°C. Operating / closing expectancy of the tray is 10,000 or more.

- Regarding “VCCI Class A Notice”

Attach the bundled ferrite core (SEIWA E04SR200935A) in the power cable so that this product may suit the above-mentioned standard. When attaching a ferrite core, coil it around once near the connector while leaving it open, and then close it.



Environment

Use this product in the following environment. If used in an unauthorized environment, the board may overheat, malfunction, or cause a failure.

Operating temperature

5 - 40°C

Humidity

20 - 80%RH, Max. wet-bulb temperature 29.4°C or less (No condensation)

Corrosive gases

None

Storage

When storing this product, keep it in its original packing form.

- (1) Wrap it in the packing material, then put it in the box.
- (2) Store the package at room temperature at a place free from direct sunlight, moisture, shock, vibration, magnetism, and static electricity.

Disposal

When disposing of the product, follow the disposal procedures stipulated under the relevant laws and municipal ordinances.

2. About Hardware

Specifications

Table 2.1. Function Specifications

Item		Specification
Bus interface		36 pin dedicated IDE connector
Formats supported		CD-ROM(Mode1, Mode2) DVD-ROM
Disk media supported *1		CD-ROM, DVD-ROM
Maximum data transfer rate		33.3MB/sec (Ultra DMA Mode2)
Maximum read speeds		CD-ROM : 50X speed DVD-ROM : 8X speed
Average access time (Random access)		CD-ROM:130ms DVD-ROM:140ms
Data buffer size		198KB
Master/Slave switching		Selector switch
DC power supply	Input power voltage	+5VDC±5%
	Current consumption	1.5A(Max.)
External dimensions (mm)		146(W) x 156.8(D) x 23(H) (No protrusions)
Weight		About 0.6kg
Attached AC adapter	Cable length	About 3.1m
	Input voltage range	90 - 264VAC (47 - 63Hz)
	Rated output voltage	+5VDC±5%
	Rated output current	2.0A (Max.)
	Allowable instantaneous	16ms or less (Typ.) (AC IN 100V) 16ms or less (Typ.) (AC IN 200V)

*1 The drive unit can only read but cannot write to DVD-RAM.

Table 2.2. General Specifications

Parameter		Requirement description
Operating temperature		5 - 40°C
Storage temperature		-20 - 60°C
Humidity		20 - 80%RH, Max. wet-bulb temperature 29.4°C or less (No condensation)
Corrosive gases		None
Line-noise resistance *1	Line noise	AC line/2kV (IEC1000-4-4Level 3, EN61000-4-4Level 3)
	Static voltage resistance	Contact discharge/4kV (IEC1000-4-2Level 2, EN61000-4-2Level 2)
		Atmospheric discharge/8kV (IEC1000-4-2Level 3, EN61000-4-2Level 3)
Vibration resistance	During operation	10 - 150Hz, 2.45m/s ² (0.25G) 40 min. each in x, y, and z directions (JIS C0040-compliant, IEC68-2-6-compliant)
	Not during operation	10 - 150Hz, 9.8m/s ² (1.0G) 40 min. each in x, y, and z directions (JIS C0040-compliant, IEC68-2-6-compliant)
Impact resistance	During operation	19.6m/s ² (2.0G) 11-ms half-sine wave. x, y, and z directions (JIS C0041-compliant, IEC68-2-27-compliant)
	Not during operation	98m/s ² (10G) 11-ms half-sine wave. x, y, and z directions (JIS C0041-compliant, IEC68-2-27-compliant)
Tray load/eject		10,000 times
Mounting orientation		Horizontal only *2 Tilt: Within ±30° horizontally (both lengthwise and widthwise)
Grounding		Class D grounding (previous class 3 grounding)

*1 Under the environment with a remarkable generation of the noise, it may malfunction by the combination of PC and the connecting cable. Please attach the ferrite core in both ends of the AC side of power cable and in both ends of the connected cable side.

*2 The drive unit cannot be mounted vertically.

External Dimensions

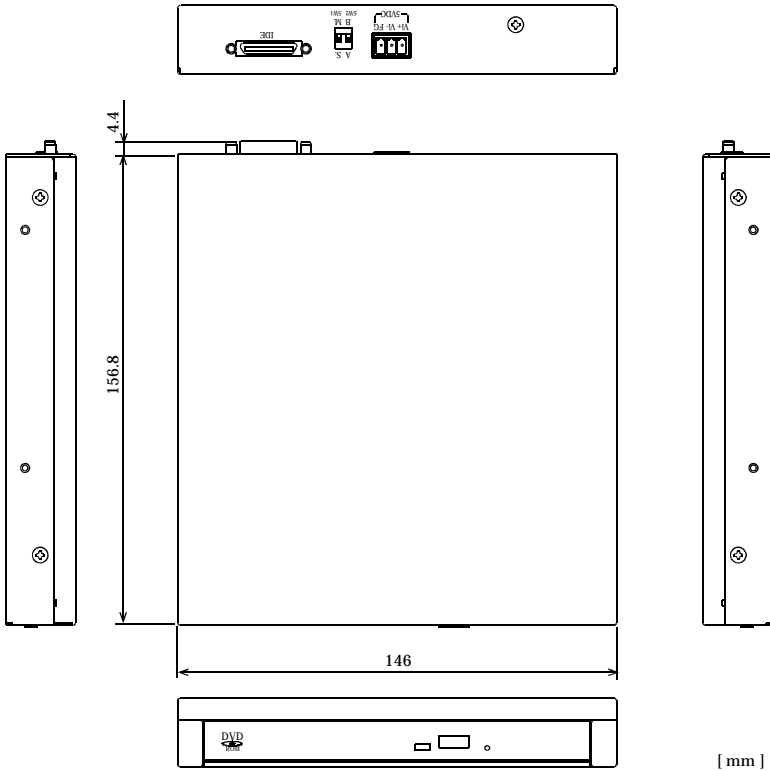


Figure 2.1. External Dimensions

3. Functions of Components

Component Locations

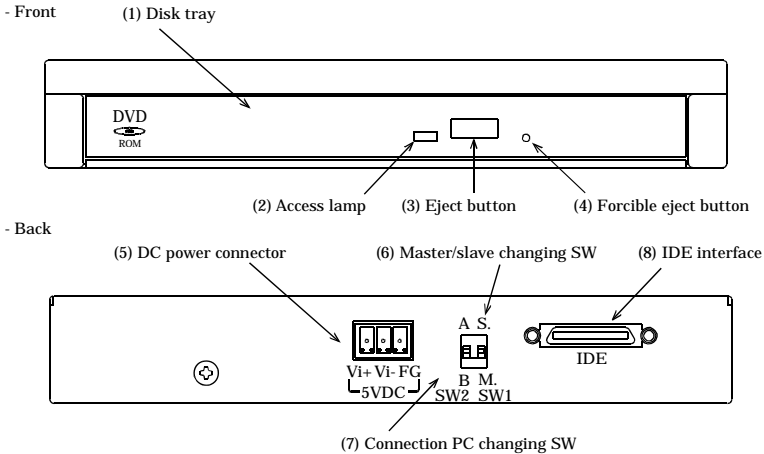


Figure 3.1. Component Locations

Table 3.1. Component Functions

No.	Name	Function
(1)	Disk tray	Sets a Disk.
(2)	Access lamp	Comes on when data is read from the CD.
(3)	Eject button	Opens and closes the Disk tray.
(4)	Forcible eject button	Accepts a forcible eject pin used when the eject button fails to eject the Disk tray.
(5)	DC power connector (5VDC)	Connect the attached AC adapter.
(6)	Master/slave changing SW (SW1)	Use the up and down buttons to switch between master and slave. 1: Slave 2: Master (Factory default setting)
(7)	Connection PC changing SW (SW2)	Use the up and down buttons to specify the destination PC of drive. A: Sets it in case of connecting to the IPC-BX720 Series. B: Sets it in case of connecting to the device other than the above-mentioned (Factory default setting).
(8)	IDE interface	Connect the attached IDE cable.

+5VDC input connector : 5VDC

This product must be connected with an external power supply. Connect the attached AC adapter POA200-20.

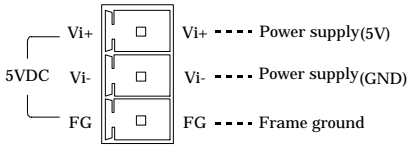


Figure 3.2. +5 VDC Input Terminal Pinouts

⚠ CAUTION

- Please use an attached AC adapter for the power supply to the main unit. If you use the other one, it may malfunction, cause a failure or breakage.
- Firstly, be sure to connect the AC adapter with the drive itself and then connect the AC adapter to the power. Plugging or unplugging to this drive with the AC adapter connected to the power may cause their malfunction or fault.
- If the AC adapter is continuously used in the state of the high temperature, it influences the longevity of the AC adapter.
- Please use it in not the place sealed up but in an airy place so that the AC adapter should not become a high temperature.
- Turn on this drive unit before turning on the PC.

Connecting the ground

Vacant of housing (connector) part of attached AC adapter is the ground connection. Please process the cable properly and then connect it with the ground.

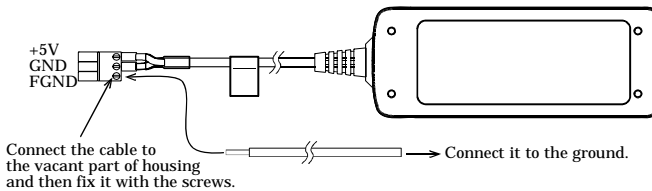



Figure 3.3. Connecting the ground cable

IDE SW : SW1

The IDE SW can do the master/ slave setting of the drive.


Table 3.2. IDE SW

SW diagram	State	Description
	S. (Up)	Set the drive to the slave.
	M. (Down)	Set the drive to the master. (Factory setting)

PC SW : SW2

The PC SW specifies PC that connects this drive.

Table 3.3. IDE SW

SW diagram	State	Description
	A (Up)	Sets it when connecting it to the IPC-BX720 series.
	B (Down)	Sets it when connecting it to the other PC. (Factory setting)

IDE Interface

Use the dedicated IDE cable to connect this drive unit to the IDE connector on the PC or on the front of the disk unit. For the system configuration and connections, consult the user manual for your PC.

Moreover, dedicated IDE cable is different according to PC. Please refer to the following paragraphs of option cable.

Table 3.4. IDE Connector

Connector type		36-pin Half-pitch connector (0.8 mm pitch)			
Pin No.	Single name	Direction	Pin No.	Single name	Direction
1	RESET-	Input	2	GND	-
3	DD7	I/O	4	DD8	I/O
5	DD6	I/O	6	DD9	I/O
7	DD5	I/O	8	DD10	I/O
9	DD4	I/O	10	DD11	I/O
11	DD3	I/O	12	DD12	I/O
13	DD2	I/O	14	DD13	I/O
15	DD1	I/O	16	DD14	I/O
17	DD0	I/O	18	DD15	I/O
19	DDRQ	Output	20	GND	-
21	DIOW-	Input	22	GND	-
23	DIOR-	Input	24	GND	-
25	IOCHRDY	Output	26	DDACK-	Output
27	GND	-	28	INTRQ	Output
29	NC	-	30	DA1	Input
31	PDIAG-	I/O	32	DA0	Input
33	DA2	Input	34	CS1-	Input
35	CS3-	Input	36	DACT-	I/O

⚠ CAUTION

- When this drive unit has been connected to the PC, the PC may fail to operate normally with the drive's power off. To use the PC with the drive's power off, unplug the IDE cable in advance.
 - Before changing the master/slave setting or plugging or unplugging the cable, always ensure that both of the drive unit and PC are off. Performing such operations with the drive unit or PC powered can cause their malfunction or fault.
 - To manually unload a disc using the forcible eject hole, turn off the drive unit, leave it for at least one minute, then insert a pin or straightened paper clip into the eject hole to eject the disc tray.
 - To connect this drive unit to general purpose sequencer MELSEC-Q series disk unit made by Mitsubishi Electric Corporation [PPC-HDD(MS)x or PPC-SDD(MS)-xx], connect the IDE interface connector on the disk unit to the PC CPU unit [PPC-CPU686(MS)-128 / PPC-852] using an IDE cable and the IDE connector on this drive unit to the extended IDE interface connector on the disk unit using another IDE cable. After connecting them, set the master/slave selector appropriately.
-

4. Option List

IDE Cable

- | | |
|----------------------------------|--------------------------------------|
| - IPC-CDD-03 dedicated IDE cable | IPC-CDC-03 |
| BOX-PC | IPC-BX/M6x0 Series |
| PANEL-PC | IPC-PT/x6x0x Series |
| Micro Controller Unit | CPU-SB303 Series |
| MELSEC-Q Series PC CPU Unit | PPC-CPU686(MS) Series + PPC-HDD(MS)x |
| MELSEC-Q Series PC CPU Unit | PPC-CPU852(MS) + PPC-HDD(MS)A *1 |
| | |
| - IPC-CDD-03 dedicated IDE cable | IPC-CDC-04 |
| BOX-PC | IPC-BX8x0 Series |
| BOX-PC | IPC-BX720 Series |
| BOX-PC | IPC-BX/M360 Series |
| | |
| - IPC-CDD-03 dedicated IDE cable | PPC-CDC-02 |
| MELSEC-Q Series PC CPU Unit | PPC-CPU852(MS) + CF card *1 |

- *1 When connecting the hard disk unit PPC-HDD(MS)A and install the OS on it, use the IPC-CDC-03 and do the OS on the CF card loaded to the CPU unit, use the PPC-CDC-02.

IPC-CDD-03

User's Manual

CONTEC CO.,LTD.

November 2007 Edition

3-9-31, Himesato, Nishiyodogawa-ku, Osaka 555-0025, Japan

Japanese <http://www.contec.co.jp/>

English <http://www.contec.com/>

Chinese <http://www.contec.com.cn/>

No part of this document may be copied or reproduced in any form by any means without prior written consent of CONTEC CO., LTD. [11162007]

[11162007]

Management No. A-51-526

Parts No. LYHY321