Mini-Centralized ASN-GW

Installation Manual

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alvarion
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Contents

1. Mini-Centralized ASN-GW Overview

The Mini-Centralized ASN-GW provides ASN-GW functions in a small package, simplifying implementation of various deployment scenarios where a single ASN-GW serves several BTSs. Specifically, it targets high speed transport locations, which wouldn't normally host BTSs, allowing optimal, flexible, and scalable network design, significantly raising traffic bandwidth and reducing CAPEX and OPEX.

In future releases, the Mini-Centralized ASN-GW will support stackable solution with additional features such as load balancing and various redundancy configurations.

The stand alone ASN-GW is a 1U ETSI unit that can be installed in a standard 19" cabinet. It may complement both indoor and outdoor BTS systems (i.e. BreezeMAX 4Motion Indoor and Outdoor systems and BreezeMAX Extreme systems), while operating concurrently with integrated ASN-GW instances.
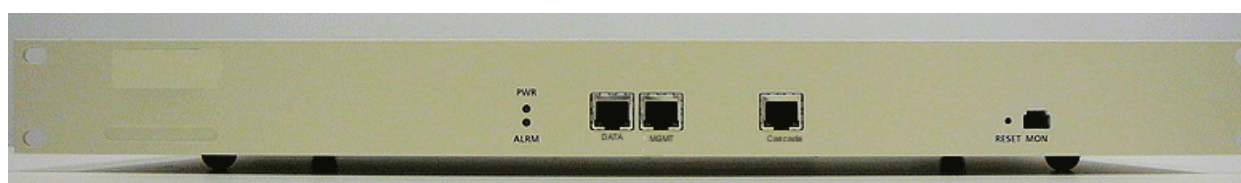

Figure 1: Mini-Centralized ASN-GW

2. Mechanical and Electrical specifications

Table 1-1: Mechanical & Electrical Specifications

Item	Description
Dimensions	1U high ETSI type shelf, 1U x 43.2 x 45 cm
Weight	2.67 Kg
Power Source	-36 to -60 VDC, typical -48 VDC
Power Consumption	100W maximum

3. Installation Requirements

3.1 Packing List

- Mini-Centralized ASN-GW Unit

- DC power cable (2.5m)

■ Monitor cable

3.2   Additional Installation Requirements

■ Ethernet cable (straight) for connecting the unit to the backbone network.

■ A grounding cable with appropriate terminations for connecting the unit's ground terminal to the rack or to a ground connection.

■ For installation in a 21" ETSI rack: two 21" ETSI rack adapters (available from Alvarion)

■ For installation in an outdoor cabinet - data equipment installed in the cabinet

■ A portable PC for configuring parameters using the Monitor cable.

■ Installation tools and materials

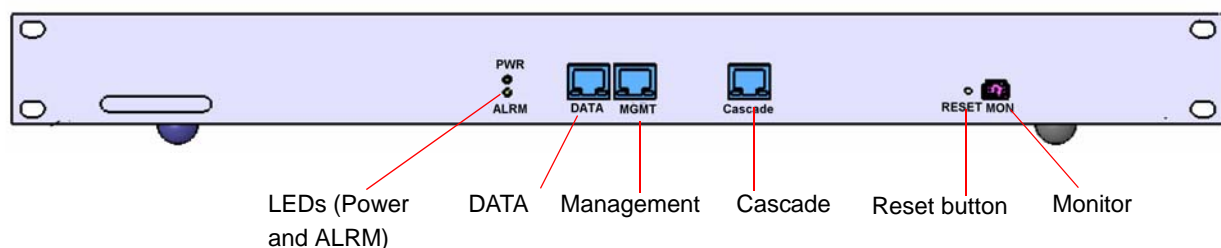# 4.   Mechanical Interface

4.1   Connectors

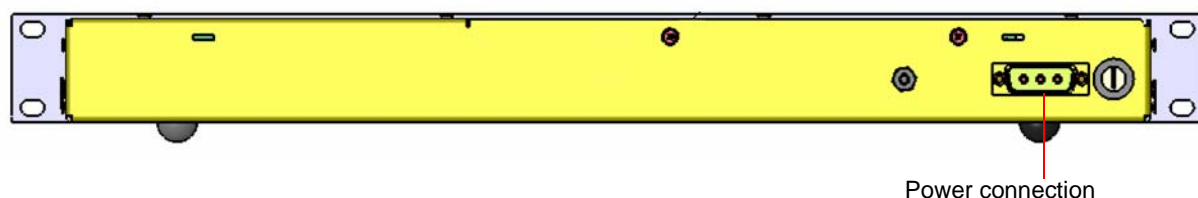**Figure 2: Mini-Centralized ASN-GW Unit Front Panel**

Figure 3: Mini-Centralized ASN-GW Unit Rare Panel

Table 2: Mini-Centralized ASN-GW Unit Connectors

Name	Connector	Functionality
DATA	10/100/1000 Mbps channel (RJ-45 shielded connector) with 2 embedded LEDs.	Connection to the backbone.
MGMT	10/100Base-T (RJ-45 shielded connector) with 2 embedded LEDs.	Connection to out-of-band management.
CSCD	10/100/1000 Mbps channel (RJ-45shielded connector) with 2 embedded LEDs.	Connection to local management and to cascaded ASN-GW (future option).
MON	RS-232 interface	Access for debugging and configuration
Power (rear panel)	D-type	Connection to DC power

4.2   Unit Reset

Press the Reset button for a few seconds to perform hardware reboot. The unit will reset to the latest saved configuration.

4.3   LEDs

Table 3: Mini-Centralized ASN-GW Unit LEDs

Name	Description	Functionality
PWR	Power indication	■ Off - Unit is not powered ■ Red - Input power failure ■ Green - Unit power is OK
ALRM	Alarm indication	■ Off - No alarm ■ Red - Unit failure ■ Blinking Red - Unit powers up.
MGMT/DATA/CSCD LEDs on the RJ-45 connectors	Port Activity	■ Blinking Yellow - Ethernet traffic activity. ■ Off - no traffic.
	Port Integrity	■ Green - Ethernet PHY layer connectivity is OK. ■ Off - Ethernet not connected.

5. Preparing a DC Power Cable

The unit is supplied with a 2.5m DC power cable. Additional DC cables can be ordered from Alvarion. If necessary, use the following instructions to prepare a DC cable.

To prepare the power cable:

1 Use a cable capable of supporting a current of at least 2A. Use a cable with 3 x 16AWG (or thicker) wires for the power and an additional 16AWG ground wire. The matching power connector to be used is D-type power with high power socket contacts.

2 Connect the wires to the power connector as follows:

   » Pin 1 (RTN): White (2 AWG min wire)

   » Pin 2 (-48V): Black (2 AWG min wire)

   » Pin 3 (⏚): Ground (shield-green/yellow) (16AWG wire)

3 Attach suitable terminal rings to the side that connects to the power source. (Not applicable to installation in an outdoor cabinet).
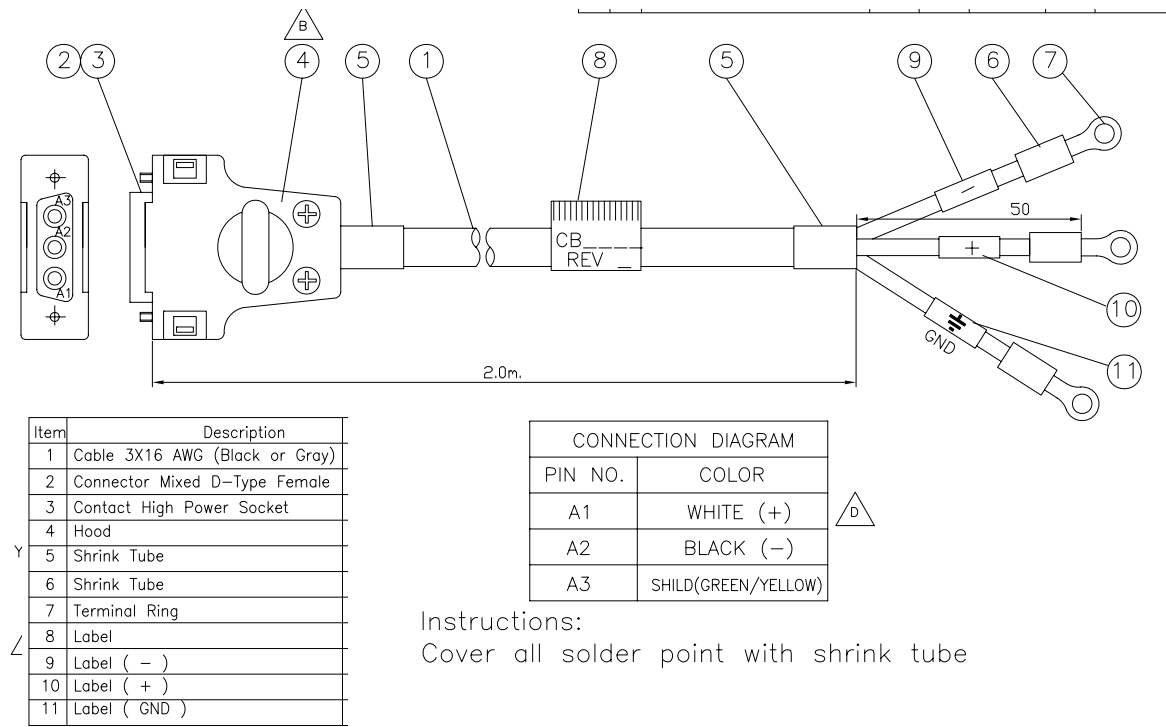
Item	Description
1	Cable 3X16 AWG (Black or Gray)
2	Connector Mixed D-Type Female
3	Contact High Power Socket
4	Hood
5	Shrink Tube
6	Shrink Tube
7	Terminal Ring
8	Label
9	Label (-)
10	Label (+)
11	Label (GND)

CONNECTION DIAGRAM	
PIN NO.	COLOR
A1	WHITE (+)
A2	BLACK (-)
A3	SHILD(GREEN/YELLOW)

Instructions:
Cover all solder point with shrink tube

Figure 4: Power Cable

6.   Installing the Mini-Centralized ASN-GW Unit

6.1   Installing in an Indoor Rack

The location of the indoor equipment should take into account its connection to the power source and to the base station networking equipment.

To install the Mini-Centralized ASN-GW Unit in an indoor rack:

1   Place the unit on a shelf/desk or install it in a 19" cabinet. For installation in a 21" cabinet, attach suitable ETSI rack adapters to the chassis.

2   Connect one end of a grounding cable to the grounding screw located on the rear panel of the unit (marked ⏚) and firmly tighten the grounding screw. Connect the opposite end of the grounding cable to a ground (earth) connection or to the cabinet, if applicable.

3   Connect the DATA port to the backbone data equipment (use a straight Ethernet cable to connect to the provider's core network . The maximum length of the Ethernet cable is 100m.

4   If the MGMT port will be used for remote management, connect it to the appropriate data equipment (use a straight Ethernet cable to connect to a hub/switch/router). The maximum length of the Ethernet cable is 100m.

5   Connect the power cord to the unit's DC socket, located on the rear panel. Connect the other end of the power cord to the -48 VDC power source.

NOTE

The color codes of the power cable are as follows:

Brown	Phase	~
Blue	Neutral	0
Yellow/Green	Ground	

6   Configure basic parameters using the Monitor program (Refer to the *Commissioning* section in the *System Manual*).

6.2   Installing the MC ASN-GW in an Outdoor Cabinet

The BreezeMAX Extreme and Macro Outdoor BTS outdoor solutions require the MC ASN-GW to be outdoor.

To install the Mini-Centralized ASN-GW Unit in an Outdoor cabinet:

1   To gain access for connecting the ASN-GW power cable, unlock the Smartpack controller in the top section of the cabinet and temporarily slide the controller out (see Figure 5).

Figure 5: Front View of Outdoor Cabinet Top Section

2   Connect the three ends of the ASN power cable to power shelf as follows (see Figure 6):

   ◇ Ground (green/yellow) to DC Earth

   ◇ (+) (white) to Common DC Output (+)
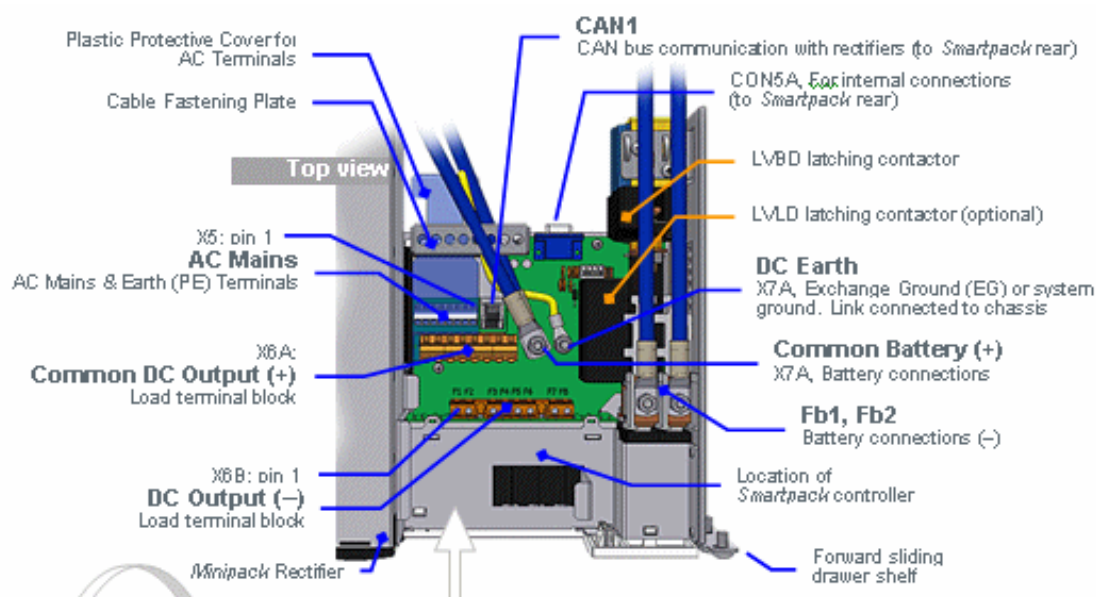
   ◇ (-) (black) to Common DC Output (-)

Figure 6: Top View of Outdoor Cabinet

3   Return the Minipack controller and lock it in its location.

4   Insert the MC ASN-GW into its location in the cabinet; fasten the screws at both sides of the 19" cabinet rails.

5   Connect the power connector to the unit's DC socket, located at the rear panel.

6   Connect the DATA port to the backbone data equipment in the cabinet (use a straight Ethernet cable to connect to the provider's core network.

7   If the MGMT port will be used for remote management, connect it to the appropriate data equipment (use a straight Ethernet cable to connect to a hub/switch/router).

8   Make sure the breakers are off (down) and turn on the power to the shelf.

9   Switch on the breakers and check that there is no short circuit.

10   Check the ASN LEDs to verify correct operation.

11   Configure basic parameters using the Monitor program (Refer to the *Commissioning* section in the *System Manual*).