

InnoMedia

ESBC 9380-4B

Quick Install Guide



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Table of Contents

Introduction..... 3

Package Contents..... 3

Wall-Mounting Instructions 6

Troubleshooting..... 7

Appendix A. LED Status Summary..... 8

Appendix B. T1/E1 Wiring Diagram..... 9

Specifications..... 9

Federal Communication Commission Interference Statement..... 10

Optional Battery Pack Use..... 11

Introduction

Designed for MSOs offering SIP trunking and high-speed data services, InnoMedia's ESBC 9380-4B is a highly integrated and highly manageable Enterprise Session Border Controller (ESBC) that can be auto-provisioned and remotely managed. It is ideally suitable for wide deployment by MSOs addressing SIP-PBX interoperability.

Package Contents

The InnoMedia ESBC 9380-4B comes with the following items:

- 1 ESBC
- 1 RJ-45 Cable
- 2 RJ-11 Phone Cables
- 1 AC/DC Power Adapter
- 1 Battery Backup Supply (Optional)



CAUTION

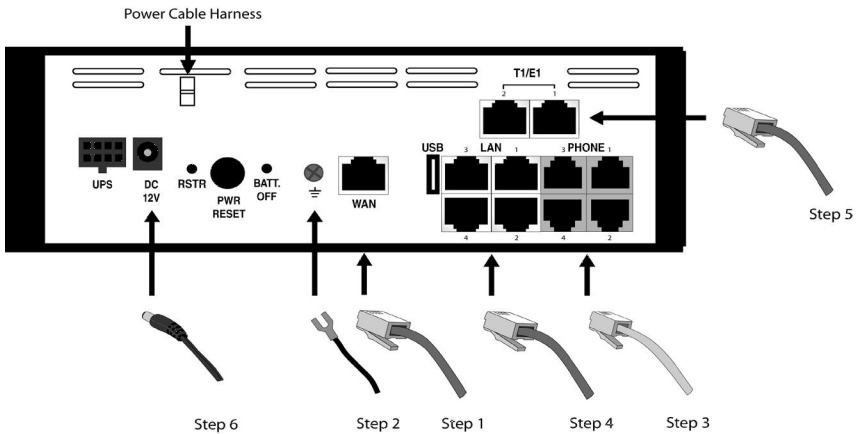
Disconnect power adapter from the equipment before removing the cover of the battery compartment.



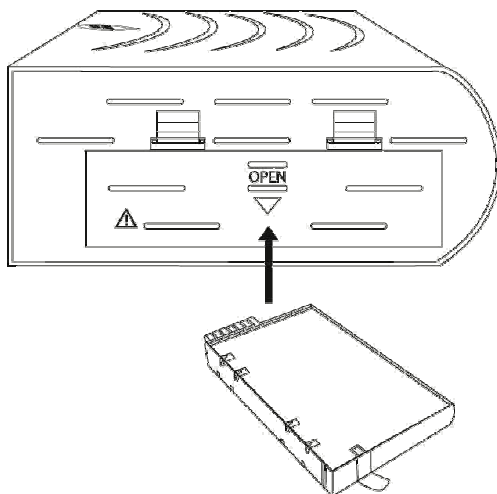
ATTENTION

Débranchez l'adaptateur d'alimentation de l'équipement avant de retirer le couvercle du compartiment de piles.

Installation



1. Connect the RJ-45 cable to the “WAN” connector.
2. For additional grounding, it is strongly recommended that a grounding cable to be connected to the ground screw terminal as shown in the diagram.
3. Connect any standard analog telephone or fax machine to ESBCs “PHONE” connector, labeled 1-4.
4. Optionally, connect LAN port 2, 3, or 4 to corporate LAN which has IP Phone or IP PBX.
5. Optionally, connect T1/E1 port 1 and Port 2 to a corporate TDM PBX. If only 1 T1/E1 connection is used to connect to a TDM PBX, connect to the ESBC T1/E1 Port 1 only. Do not connect to T1/E1 Port 2 unless T1/E1 Port 1 is also connected to the same TDM PBX. For wiring information, see T1/E1 cable wiring pin-out in Appendix B.
6. Open the battery compartment and insert the optional battery completely until it is secured properly with the plastic latch. Put the cover back in place.

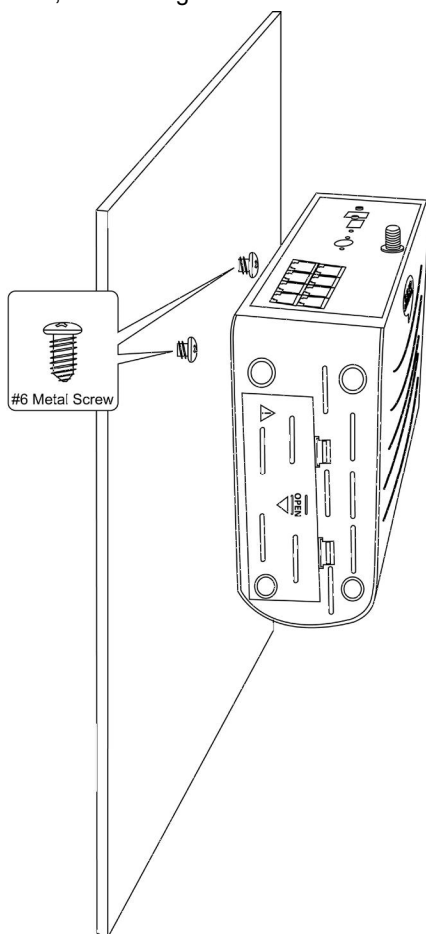


7. Connect included AC power cable to the electrical outlet and its cable to the ESBC's "12V DC" connector.
8. Secure AC power cord in the plastic cable harness for power cable in the back of the unit.
9. If you have performed step 5, wait for "T1/E1" LED on front of ESBC to be steady green.
10. At this point you have completed the ESBC installation. You will hear the dial tone when you pick up the handset of the phone or fax machine connected to the FXS port. You can now start placing and receiving telephone and fax calls.
11. Optionally, you can place calls from IP Phone or IP PBX connected on the corporate LAN port, or the phones connected to the TDM PBX via the T1/E1 connection.

Wall-Mounting Instructions

Optionally, you may choose to mount your ESBC on the wall.

1. Drill two holes 13.5 cm apart on the wall.
2. Use a screwdriver to install one #6 metal screw in each hole. Leave the screw heads 1/4 to 3/8 inch away from the wall.
3. Position the ESBC with the ports at the top.
4. Place the unit above the screws and lower it so the screw heads are inside and at the tops of the wall mount slots on the back of the unit.
5. Adjust to fit. If the unit is too loose, remove it from the wall, slightly tighten screws, and rehang.



Troubleshooting

Problem:

Telephone on FXS port has no dial tone

Solution:

1. Ensure that all cables (power, Ethernet, telephone) are properly connected to the ESBC. Ensure that ESBC's AC power adapter is plugged in, and "PWR" indicator lights are ON (see Front Cover Picture).
2. Pick up telephone handset (phone off-hook), check for corresponding PHONE (1-4) indicator light to be ON. Also, the "WAN" indicator light is Blinking Amber. If not, please disconnect ESBC power cable, and then reconnect it again (see Front Cover Picture).
3. If previous steps fail, report the failure to service provider for attention.

Problem:

Cannot establish Internet connection.

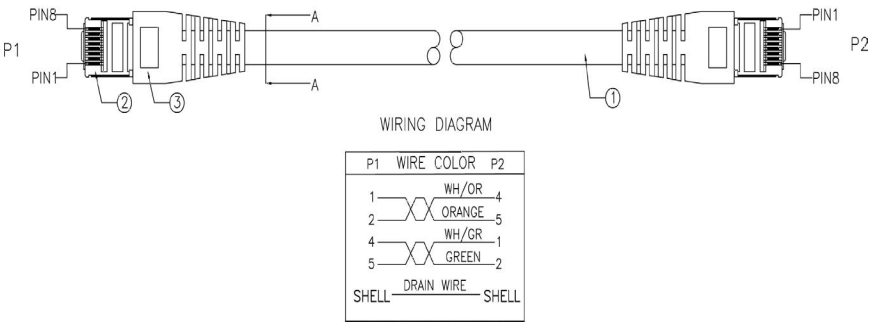
Solution:

1. If the PWR, WAN, and LAN LEDs are lit, the ESBC is working properly. Try restarting the computer so that it could reestablish a connection with the cable modem.
2. Power cycle the ESBC by switching the power to the Off position, remove the power adapter from the electrical outlet and plug it back in. Wait several minutes for the ESBC to reestablish communications with your cable service provider.
3. If your PC is connected to a hub or gateway, try connecting the PC directly into the ESBC.
4. Your Ethernet cable may be damaged. Try using another cable.
5. If none of these suggestions work, contact your cable service provider for further assistance.

Appendix A. LED Status Summary

LED / Control	Blinking State	ESBC 8528-4B/9528-4B State
PWR	Steady Green	Device power is on
	Off	Device power is off
T1/E1	Steady Green	Indicates synchronized link
	Blinking Green	Indicates unit is training
	Steady Red	Indicates link is down due to LOS, LFA or RAI
	Blinking Red	Indicates T1/E1 cable is unplugged
UPS	Steady Orange	Battery Fully Charged
	Blinking Orange	Battery is charging (AC power on)
	Steady Green	Battery is in use (AC power off)
	Blinking Red	Battery Low (AC power off)
	Steady Red	Failed or Bad battery (AC power off)
	Off	Battery discharged (AC power off)
BATT-INT	Steady Orange	Battery Fully Charged
	Blinking Orange	Battery is charging (AC power on)
	Steady Green	Battery is in use (AC power off)
	Blinking Red	Battery Low (AC power off)
	Steady Red	Failed or Bad battery (AC power off)
	Off	Battery discharged (AC power off)
LAN 1-4	Blinking Amber	When Data is passed while PC is connected to LAN Ethernet port
	Off	No PC connected to USB or LAN Ethernet ports
PHONE 1-4	Blinking Amber	The connected telephone handset is on the hook (not in use) and there are new voice mail messages
	Steady Amber	The connected telephone handset is off the hook
	Off	The connected telephone handset is on the hook (not in use) and there are no new voice mail messages

Appendix B. T1/E1 Wiring Diagram



Specifications

Telephone Interface	4 FXS voice ports
	Connector RJ-11 REN=5
	Signaling Loop start
Service Provider Interface	Gigabit Ethernet RJ45 Connector
PBX Interface	Up to 2 T1/E1 trunk ports with PRI or CAS signaling
User Data Interface	4 10/100/1000 BaseT Ethernet (RJ-45)
UPS Rating	12V/4A
Dimension	2.5 in (H) x 7.8 in (W) x 6.0 in (D)
	63.5 mm (H) x 198 mm (W) x 152 mm (D)
Power Supply	AC 100~240V/50~60Hz (DC 12V @ 4.0 Amps)

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Optional Battery Pack Use

Due to the California Energy Commission on the CEC safety required of battery pack use. The optional peripheral of the ESBC battery:

- (1) That is embedded in a separate end-use product that is designed to continuously operate using mains power (including end-use products that use external power supplies); and
- (2) Whose sole purpose is to recharge a battery used to maintain continuity of power in order to provide normal or partial operation of a product in case of input power failure.

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