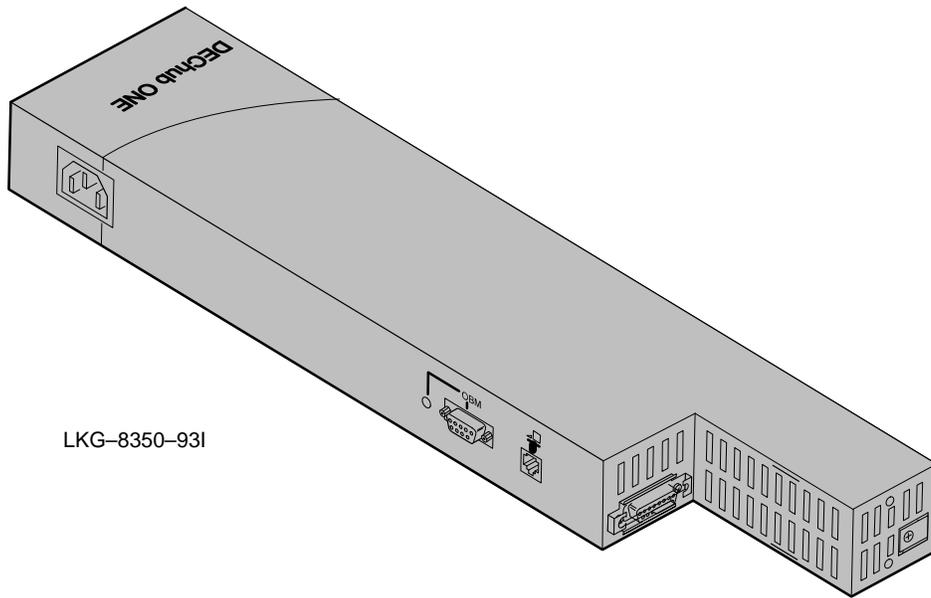




DEChub ONE INSTALLATION



LKG-8350-931

DEChub ONE

The DEChub ONE, when combined with a DEChub 900 full-height network module, forms a single-slot hub. This allows a network module to operate in a standalone configuration, independently of the DEChub 900 MultiSwitch. In single-slot hub configuration, the DEChub ONE provides dc power and connections to the network module, which include a setup port to configure an attached network module, an out-of-band management (OBM) port for network module management, and an Attachment Unit Interface (AUI) port for Ethernet connection. The AUI port connects the network module to a LAN (backbone) either directly or by using a Medium Attachment Unit (MAU).

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This equipment generates, uses, and may emit radio frequency energy. The equipment has been type tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such radio frequency interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference; in which case, measures taken to correct the interference are at the user's expense.

VCCI NOTICE – Class 1 Computing Device:

This equipment is in the 1st Class category (information equipment to be used in commercial and/or industrial areas) and conforms to the standards set by the Voluntary Control Council for Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in commercial and/or industrial areas.

Consequently, when used in a residential area or in an adjacent area thereto, radio interference may be caused to radios and TV receivers, etc.

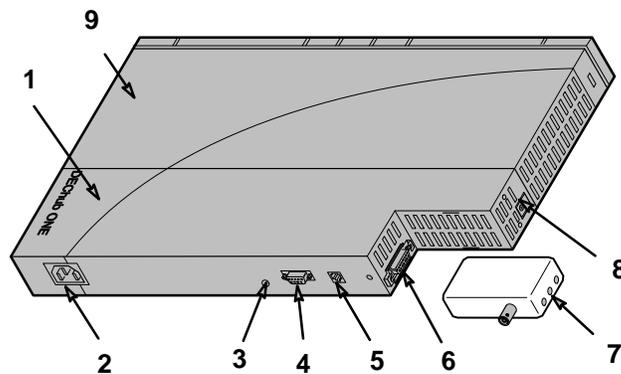
Read the instructions for correct handling.

Front Panel and Packaging

The DEChub ONE is a member of the DEChub family of products. The figure shows a network module attached to the DEChub ONE, forming a single-slot hub. A MAU, shown as item 7, is available separately from Digital to connect to a LAN using twisted-pair, ThinWire, or fiber-optic cables.

DEChub ONE Connectors, LED, and Optional Equipment

- 1) DEChub ONE
- 2) AC power connector
- 3) OBM port LED
- 4) 9-pin OBM port connector
- 5) Setup port connector
- 6) AUI port and slide latch
- 7) 15-pin MAU (not included)
- 8) Locking L-bracket
- 9) DEChub 900 full-height network module



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A DEChub ONE kit contains:

- DEChub ONE (Digital part number DEHUA-xx) and installation manual
- Power cord
- Locking L-bracket
- Rack-mount hardware

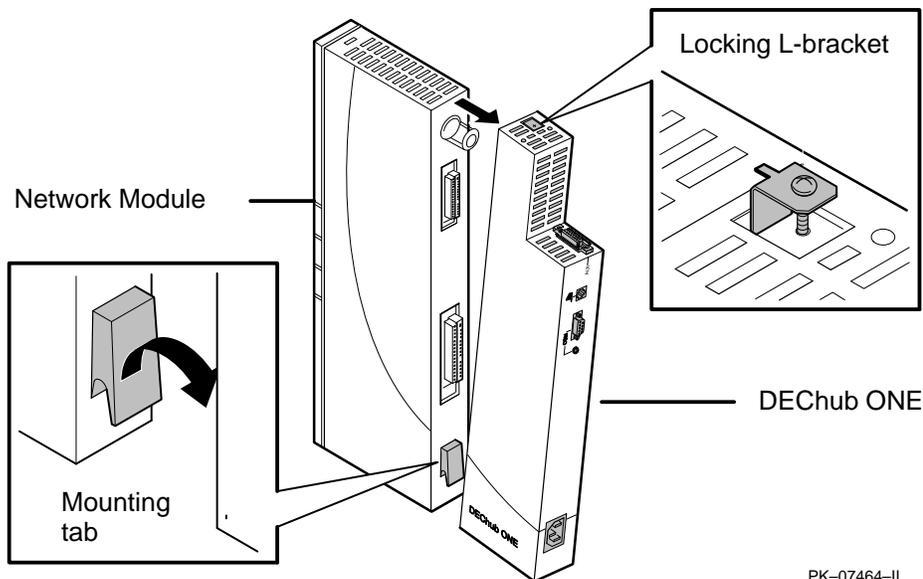
The following MAU options, and their installation manuals, are available separately. They connect the DEChub ONE's attached network module to a LAN or backbone:

- DETPM 10BaseT twisted-pair MAU
- DEEXM 10Base2 ThinWire MAU
- DEFLM fiber-optic MAU

Installing a Network Module in a DEChub ONE

To install a DEChub 900 network module in a DEChub ONE to form a single-slot hub:

- 1 Attach a network module to the DEChub ONE.**
 - a. Loosen and lift the locking L-bracket screw on the DEChub ONE.
 - b. Place the mounting tab located on the bottom of the module into the mounting slot on the bottom of the DEChub ONE.
 - c. Pivot the module into place to engage both the 160- and the 48-pin connectors.
 - d. Hold the network module and DEChub ONE together and tighten the locking L-bracket screw. This secures the network module to the DEChub ONE and activates the network module's hot-swap switch.



- 2 Connect the AUI port to the LAN.**

After inserting a connector in the AUI port, move the AUI port slide latch outward (using a small screwdriver) to secure the connection (see Connecting the AUI Port to a LAN). Cables and MAUs are not supplied.

- 3 Connect the power cord to the power connector and then to a wall outlet.**

To connect to the setup and OBM ports, perform the following steps:

- a. Connect the setup port (MJ8 RS-232 standard EIA-TIA-574) to a setup port device.
- b. Connect the 9-pin male OBM port (RS-232 standard EIA-TIA-574) to a 9-pin female interface connector. The OBM port LED lights to indicate that the port is in use.

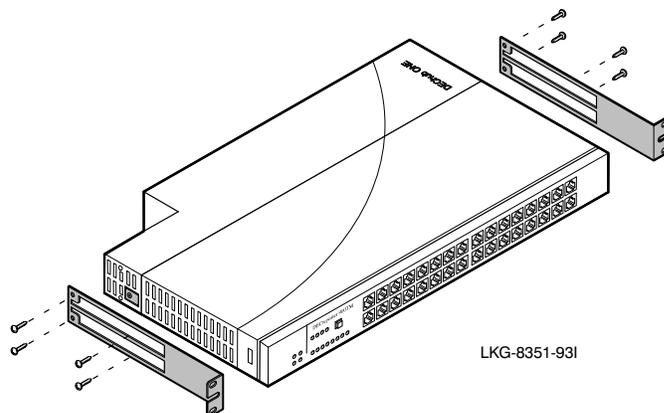
Mounting the Single-Slot Hub

The single-slot hub may be placed on a table top or mounted in a 19-inch equipment rack. To use it on a table top, attach four self-sticking rubber foot pads (provided) on the underside of the single-slot hub, placing 2 foot pads on the DEChub ONE and 2 foot pads on the attached network module.

To mount a single-slot hub in a 19-inch equipment rack, follow these steps:

1 Connect the rack-mount brackets to the single-slot hub.

Align the screw holes on each end of the rack-mount brackets with the holes on the DEChub ONE and network module and attach them using eight #6-32 flat-head screws.



2 Position and secure the single-slot hub unit in the equipment rack.

Align the screw holes on the rack-mount brackets with the equipment rack holes. Attach the rack-mount single-slot hub to the rack using four #10-32 screws and U-nuts.

3 Connect the cables to the single-slot hub.

See the cabling section in this manual and in the network module installation manual for information on cabling. Do not connect the power cord on the single-slot hub to a power outlet at this time.

4 Provide strain relief for the cabling.

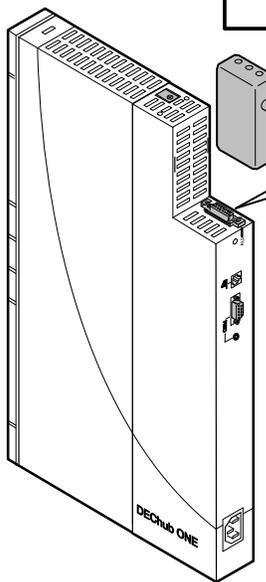
Use TyRaps or other suitable means to secure the cables to the rack along the raceways. Avoid placing undue strain on the cable connectors – do not tighten the TyRaps excessively or exceed the nominal bend radius of the cables.

5 Connect the power cord to the single-slot hub power connector and then to an outlet on the rack or to a wall outlet.

Switch on the power and operate the module according to product recommendations.

Connecting the AUI Port to a LAN

The AUI Port can be connected to a MAU (available separately from Digital), or to an AUI cable (not provided) that connects to a MAU located on the LAN.



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Connecting a MAU to the AUI port.

- a. Insert a MAU transceiver into the AUI connector, as illustrated, and slide the latch mechanism to lock the MAU in place.

Note:

Some non-Digital MAUs may not fit into the DEChub ONE's AUI connector.

- b. Connect the cabling (twisted-pair, ThinWire, or fiber-optic) from the MAU to the LAN. Refer to the documentation that is provided with the MAU for additional cabling information.

Connecting Directly to the AUI Port.

- a. You can cable the AUI port directly to a network MAU on the LAN or backbone.
- b. Connect the AUI cable to the AUI connector and move the slide latch (using a small screwdriver) to lock the connection securely. Connect the other end of the AUI cable to a network MAU on the LAN.

The cables Digital recommends for use with the AUI port are listed in the following table:

Cable	Description
BNE3H-xx ¹	PVC-insulated with straight connector
BNE3K-xx	PVC-insulated with right-angle connector

¹ The xx represents the length in meters.

Using the Setup Port

You can connect a setup port device (terminal device, personal computer, or terminal server) to the setup port connector on the single-slot hub using various cables and adapters. This allows you to use the setup port to configure the attached network module's parameters. The default speed for the setup port is 9600 baud.

The setup port provides access to the setup port menu for the attached network module. This menu and the setup parameters are described in the documentation for the attached network module. Not all network modules support the setup port. Refer to the documentation for the specific network module for additional information.

The signals for the setup port connector are listed in the following table:

Setup Port (shielded MJ-8) Pin Out

Pin	Signal Name
1	No connect
2	Receive (RX)
3	Ground
4	No connect
5	No connect
6	Transmit (TX)
7	Always high (+5 Vdc)
8	Always low

The cable/adapters are listed in the following table:

Setup Port Cabling

Cable/Adapter Type	Connecting Device
BN24H-xx ¹	Terminal with 6-pin MMJ connector
BN24H-xx/H8871-J	Terminal with 9-pin D-sub connector
BN24H-xx/H8575-J	Terminal with 25-pin D-sub connector

¹ The xx represents the length in meters.

Using the OBM Port

The signals on the OBM Port conform to standard EIA-574, which is based on EIA-232D, but uses a 9-pin (DB9) connector, instead of a 25-pin connector. EIA-574 is the signaling standard used by the serial ports on most personal computers. The OBM port appears as a data terminal equipment (DTE) device. The port can be connected to a modem by using a standard AT modem cable.

When the DEChub ONE has an OBM connection to an attached network module, the network module becomes manageable using Simple Network Management Protocol (SNMP) over Serial Line Interface Protocol (SLIP). Not all network modules support the OBM port. Refer the *DEChub 900 MultiSwitch Owner's Manual* for more OBM information.

The signals for the OBM port DB9 connector are listed in the following table:

OBM Port (DB9) Pin Out

Pin	Signal Name
1	Data Carrier Detect (DCD)
2	Receive Data (RXD)
3	Transmit Data (TXD)
4	Data Terminal Ready (DTR)
5	Ground
6	Data Set Ready (DSR)
7	Request to Send (RTS)
8	Clear to Send (CTS)
9	No connect

OBM Port Cabling

The OBM port cable/adapters are listed in the following table:

Cable/Adapter Type	Connecting Device
BN24H-xx ¹ /H8571-J	DECserver 900TM, DECserver 900TL, or DECserver 90M with 8-pin MJ connector
BC29Q-10	PC with 9-pin D-sub connector
BC29P-10	Modem with 25-pin D-sub communications port

¹ The xx represents the length in meters.

Problem Solving

If ...	Then ...	Do This ...
<p>Power LED is off on the attached network module.</p>	<p>The single-slot hub has no power input.</p> <p>The DEChub ONE fan runs continuously.</p> <p>The fan is not running.</p>	<p>Ensure that the ac power cord is properly connected to the DEChub ONE and wall outlet.</p> <p>Check the wall outlet power.</p> <p>Ensure that the hot-swap switch is properly engaged and reseal the connectors.</p> <p>Reseat the connectors. If the fan still runs, replace the attached network module.</p> <p>Separate the network module from the DEChub ONE. If fan still does not run, replace the DEChub ONE. If the fan begins running, replace the network module.</p>
<p>Power LED is flashing on the attached network module.</p>	<p>The DEChub ONE fan runs intermittently.</p>	<p>Separate the module from the DEChub ONE. If the fan continues to run intermittently, replace the DEChub ONE. If the fan begins to run continuously, troubleshoot or replace the network module using its problem-solving recommendations.</p>
<p>The MAU Power OK LED is off and the Power LED on the attached network module is on.</p>	<p>The MAU does not have power.</p>	<p>Ensure that the MAU is properly connected to the AUI port and that the slide latch is secure. Refer to the MAU documentation for proper cabling. If the MAU is properly connected, replace the DEChub ONE.</p>
<p>The OBM port LED is off, and the Power LED on the attached network module is on.</p>	<p>Either the OBM port is not in use, or the OBM LED is faulty.</p>	<p>Ensure that the network module supports OBM (has modem capability) and that the OBM port is in use. If the DEChub ONE is not the problem, troubleshoot or replace the network module using its problem-solving recommendations.</p>

Product Specifications

Product Specification	DEChub ONE	Single-Slot Hub
Height	44.45 cm (17.5 in)	44.45 cm (17.5 in)
Width	4.45 cm (1.75 in)	4.45 cm (1.75 in)
Depth	10.16 cm (4.0 in)	25.4 cm (10.0 in)
Weight	1.59 kg (3.5 lb)	3.4 kg (7.5 lb)
Operating temperature	5° C to 50° C (41° F to 122° F)	5° C to 50° C (41° F to 122° F)
Relative humidity	10% to 95% non-condensing	10% to 95% non-condensing
Altitude	Sea level to 4900 m (16,000 ft)	Sea level to 4900 m (16,000 ft)
Input power	100 Vac to 120 Vac @ 2 A 220 Vac to 240 Vac @ 1 A	N/A N/A
Output power	40.0 W @ +5.0 Vdc 7.2 W @ +12.0 Vdc 37.5 W @ +15.0 Vdc	Total power is the sum of the DEChub ONE power and network module power
Connectors	RJ-45, DB-9, 15-pin AUI	RJ-45, DB-9, 15-pin AUI
Agency certification	CE, CSA, FCC, TÜV, UL, VCCI, VDE	CE, CSA, FCC, TÜV, UL, VCCI, VDE
Acoustics: Declared values per ISO 9296 and ISO 7779 ¹ Product, DEHUA	Idle/Operate Sound Power Level $L_{WA,d}$, B Sound Pressure Level L_{pAm} , dBA 5,1	Idle/Operate Sound Power Level $L_{WA,d}$, B Sound Pressure Level L_{pAm} , dBA 37
Schallemissionwerte: Werteangaben nach ISO 9296 und ISO 7779/DIN EN27779 ² Produkt, DEHUA	Leerlauf/Betrieb Schalleistungspegal $L_{WA,d}$, B Schalldruckpegal L_{pAm} , dBA 5,1	Leerlauf/Betrieb Schalleistungspegal $L_{WA,d}$, B Schalldruckpegal L_{pAm} , dBA 37

¹ Current values for specific configurations are available from Digital Equipment representatives. 1 B = 10 dBa.

² Aktuelle Werte für spezielle Ausrüstungsstufen sind über die Digital Equipment Vertretungen erhältlich. 1 B = 10 dBa.

Associated Documents

DEChub 900 MultiSwitch Owner's Manual

Open DECconnect Building Wiring Components and Application

DEChub 900 full-height network module installation manuals

MAU transceiver installation manuals: EK-DECXM-IC, EK-DEFLM-IC, or EK-DETPM-IC