



High Density G.703 Coax to Twisted-Pair Balun Panel

TABLE OF CONTENTS

CE Notice..... 3

General Information..... 4

Features..... 4

Description..... 4

Installation..... 5

Reversing the cover..... 5

Connecting the 75-ohm BNC or 1.6/5.6 coax ports 5

Connecting the 120-ohm RJ-45 ports..... 6

 Connecting the RJ-45 ports..... 6

 Connecting the 64-pin AMP Champ port..... 7

Black Box MTU 464 Specifications 8

Transmission Line8

Data Rate8

75 ohm Connection8

120 ohm Connection8

Power Supply8

Link-to-Data Isolation8

Temperature Range8

Dimensions (without handles)8

Black Box MTU 464 Block Diagram 9

CE Notice

The CE symbol on your Patton Electronics equipment indicates that it is in compliance with the Electromagnetic Compatibility (EMC) directive and the Low Voltage Directive (LVD) of the Union European (EU). A Certificate of Compliance is available by contacting Patton Technical Support.

General Information

Thank you for your purchase of this Black Box product. This product has been thoroughly inspected and tested and is warranted for One Year parts and labor.

Features

- Connects 75 ohm dual coax to 120 ohm twisted pair
- Bi-Directional signal conversion according to CCITT G.703
- Data Rates up to **2.048 Mbps**
- 1 U high enclosed chassis
- Reversible cover with integrated mounting ears
- Mounts in standard 19" (48.3 cm) rack
- No AC power or batteries required
- Female BNC coax or 1.6/5.6 connectors (466RC)
- RJ-45 or 64 pin amp champ 120 ohm interface

Description

The **Black Box High Density G.703 Balun Panel** matches 16 sets of dual 75 ohm coax connections to 120 ohm twisted pair connections. This function allows carriers to provide 120 ohm G.703 service to customers retaining 75 ohm CPE hardware. It also allows carriers who have standardized on 75 ohm coax to provide 120 ohm terminations to their customers (in keeping with European ONP requirements).

Supporting E1 data rates to 2.048 Mbps, the MTU 464 panels bi-directionally match signal impedance and pulse shapes according to the CCITT G.703 standard. The Black Box MTU 464 balun panels mount in a standard 19" (48.3 cm) rack.

Installation

This section describes how to connect to the twisted pair interface and the serial interface. This section also describes procedures to reverse the cover of the unit in order to mount the RJ-45 ports on the front of the unit

Reversing the cover

The cover of the Balun Rack can be reversed in order to mount the RJ-45 ports on the front of the unit, flush with the mounting ears. To remove the cover of the unit, remove the eight screws on the sides of the unit (see Figure 1), lift the cover straight up, and re-attach the cover with the RJ-45 ports on the front of the unit.



Figure 1. Cover screws location

Connecting the 75-ohm BNC or 1.6/5.6 coax ports

The 75-ohm BNC or 1.6/5.6 coax ports on the front of the Balun Rack are labeled “TX” (Transmit Data Input) and “RX” (Receive Data Output). Simply connect the G.703 lines as shown in Figure 2.

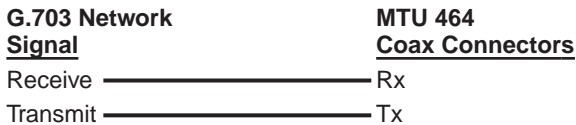


Figure 2. TX and RX lines connections

The numbers on each coax pair correspond to the RJ-45 ports on the rear of the unit (see Figure 3).

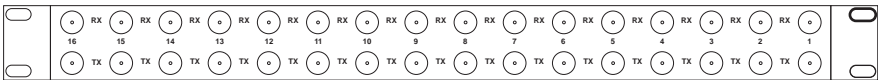


Figure 3. MTU 464

High Density G.703 Coax to Twisted-Pair Balun Panel

Connecting the 120-ohm RJ-45 ports

The 120-ohm balanced pairs can be accessed either by the RJ-45 ports or the 64-pin AMP Champ connector (see Figure 4). Because RJ-45 ports and the Amp Champ connections are in parallel, only one type of connection should be used at a time.

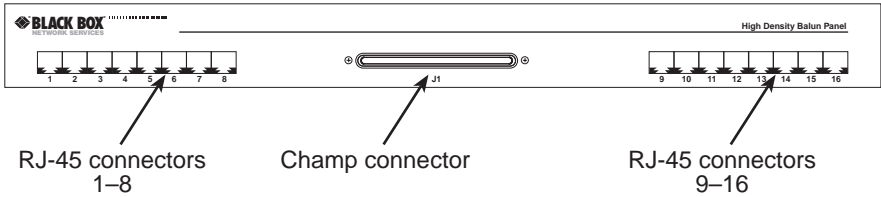


Figure 4. MTU 464 rear panel

Connecting the RJ-45 ports

The number on each RJ-45 port corresponds to the BNC pair numbers on the front of the unit. The pin configuration of the 120-ohm twisted-pair RJ-45 port is shown in Figure 5.

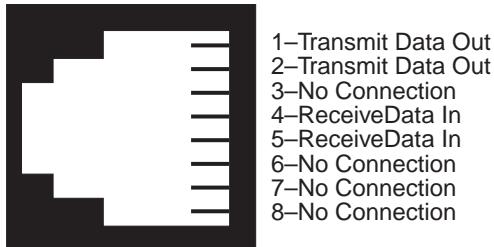


Figure 5. RJ-45 pinout diagram

Connecting the 64-pin AMP Champ port

The 120-ohm balanced pairs can be accessed via the 64-pin AMP Champ connector. The pins on this connector are wired directly to the RJ-45 ports. The AMP Champ pinout is shown in Figure 5.

Table 1: RJ-45 port/Champ connector pinout diagram

RJ-45 port & pin #	AMP Champ (J1) pin #	RJ-45 port & pin #
Port 1 Pin 1	1	Port 1 Pin 2
Port 1 Pin 4	2	Port 1 Pin 5
Port 2 Pin 1	3	Port 2 Pin 2
Port 2 Pin 4	4	Port 2 Pin 5
Port 3 Pin 1	5	Port 3 Pin 2
Port 3 Pin 4	6	Port 3 Pin 5
Port 4 Pin 1	7	Port 4 Pin 2
Port 4 Pin 4	8	Port 4 Pin 5
Port 5 Pin 1	9	Port 5 Pin 2
Port 5 Pin 4	10	Port 5 Pin 5
Port 6 Pin 1	11	Port 6 Pin 2
Port 6 Pin 4	12	Port 6 Pin 5
Port 7 Pin 1	13	Port 7 Pin 2
Port 7 Pin 4	14	Port 7 Pin 5
Port 8 Pin 1	15	Port 8 Pin 2
Port 8 Pin 4	16	Port 8 Pin 5
Port 9 Pin 1	17	Port 9 Pin 2
Port 9 Pin 4	18	Port 9 Pin 5
Port 10 Pin 1	19	Port 10 Pin 2
Port 10 Pin 4	20	Port 10 Pin 5
Port 11 Pin 1	21	Port 11 Pin 2
Port 11 Pin 4	22	Port 11 Pin 5
Port 12 Pin 1	23	Port 12 Pin 2
Port 12 Pin 4	24	Port 12 Pin 5
Port 13 Pin 1	25	Port 13 Pin 2
Port 13 Pin 4	26	Port 13 Pin 5
Port 14 Pin 1	27	Port 14 Pin 2
Port 14 Pin 4	28	Port 14 Pin 5
Port 15 Pin 1	29	Port 15 Pin 2
Port 15 Pin 4	30	Port 15 Pin 5
Port 16 Pin 1	31	Port 16 Pin 2
Port 16 Pin 4	32	Port 16 Pin 5

Appendix A: Black Box MTU 464 Specifications

Transmission Line

CCITT G.703 (unstructured)

Data Rate

2.048 Mbps

75 ohm Connection

Dual coax female BNC

120 ohm Connection

RJ-45 jack or 64 pin AMP Champ

Power Supply

None required

Link-to-Data Isolation

500 volts AC/DC

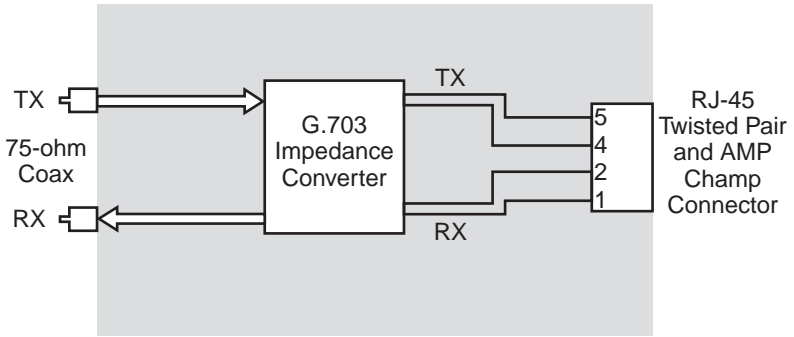
Temperature Range

32–122°F (0–50°C)

Dimensions (without handles)

19W x 3.5H x 1.9D in (48.3W x 8.9H x 4.8D cm)

Appendix B: Black Box MTU 464 Block Diagram



How To Contact Your Local Black Box Representative

Italy

Black Box Italia S.P.A
Tel: 0227400280
Fax: 0227400219
www.blackbox.it

Australia

Black Box Catalog Australia PTY LTD
Tel: 0398797100
Fax: 0398702955

Germany

Black Box Deutschland
Tel: 0811/5541-0
Fax: 0811/5541-499
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Brazil

Black Box Do Brasil
Tel: (011) 5515-4000
Fax: (011) 5515-4002
www.blackbox.com.br

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Datacom Black Box Services AG
Tel: 0554517070
Fax: 0554517075
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Canada

Black Box Canada Corp.
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Fax: 0416-736-7348
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Black Box Datacom BV
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Black Box De Mexico S.A. de C.V
Tel: 05-420-0100
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Black Box
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