BLACK BOX®
NETWORK SERVICES

G.703 75—120 ADAPTERS • BALUN MATE II
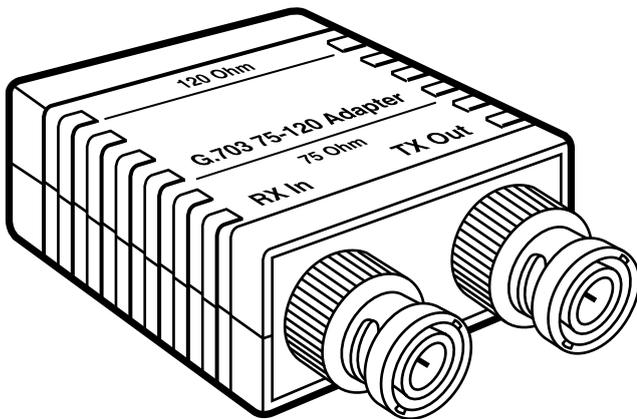
Your 75-ohm coax hardware can communicate with 120-ohm twisted-pair equipment!

Key Features

▶ **Connect 75-ohm dual-coax G.703 terminations to 120-ohm twisted-pair G.703 terminations.**

▶ **Bidirectional operation.**

▶ **Interface powered.**

▶ **Data rates for adapters range from 2.048 Mbps to 8 Mbps!**

▶ **MT255A-M, MT256A-F, and MT257A feature transformer isolation and 1.6/5.6-mm coax connectors.**

The G.703 75–120 Adapters and Balun Mate II enable 75-ohm coax G.703 equipment and networks to communicate with 120-ohm twisted-pair G.703 equipment and networks.

All G.703 75–120 Adapters are specifically designed to address the Open Network Provision (ONP) requirement that European post, telephone, and telegraph (PTT) authorities offer 120-ohm twisted-pair terminations to customers. Some PTTs and private carriers are standardized on 75-ohm coax or have customers whose premise equipment has only 75-ohm coax connections. These adapters help solve termination mismatches by converting 75-ohm signals to 120-ohm signals and vice versa, at data rates ranging from full E1 speed (2.048 Mbps) up to 8 Mbps!

The G.703 75–120 Adapters feature two internal jumpers that enable shield connection or disconnection. All Adapters are interface powered, so no AC or battery power is required. In addition, all circuitry is housed in low-profile, flame-retardant enclosures.

Each Adapter comes with two interfaces. Interface A has two BNC coax connectors and Interface B is an 8-pin shielded RJ-45 connector. The MT255A-M and MT256A-F adapters sport dual 1.6/5.6-mm BNC coax connectors for use in telephone sites. Plus, these adapters also feature transformer isolation to protect your G.703 equipment from harmful ground loops.

While Balun Mate II's connectors and circuitry are similar to the MT256A-F adapter, it enables up to 16 connections.

Balun Mate II, at 19 inches wide, is designed to fit in a standard rack and takes only 2U of rack space. It converts up to sixteen 75-ohm signals to 120-ohm signals and vice versa, at data rates up to 2.048 Mbps.

Like the MT256A-F, Balun Mate II's coax connectors are the 1.6/5.6-mm types used extensively in telephone sites. It also features transformer isolation to protect G.703 equipment from the dangers of ground loops.

For even greater protection from ground loops, Balun Mate II has two jumpers mounted on each of its 16 port-card modules; these enable shield connection or disconnection. In some cases, it's better for modules that are connected back-to-back to have their twisted-pair and coax shields isolated from each other. Balun Mate II provides this flexibility and protection.

Install twisted-pair equipment with your G.703 network.
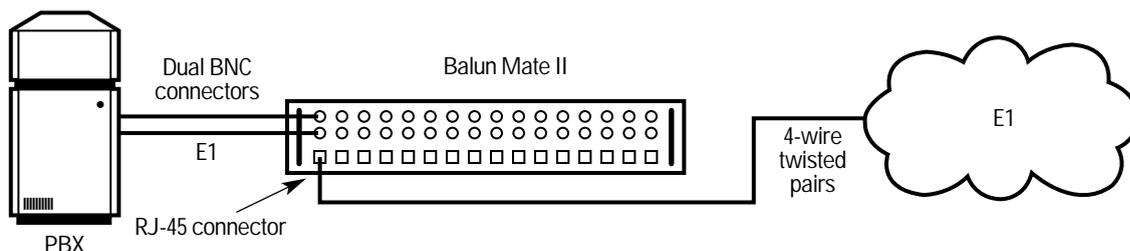
Specifications

Speed: MT242A-M, MT242A-F, MT255A-M, MT256A-F, MT257A, MT1242A-M, MT1242A-F: Up to 2.048 Mbps (E1); MT260A-F, MT260A-M: Up to 8 Mbps

Transformer Isolation: MT255A-M, MT256A-F, MT257A: 500 volts AC/DC between coax and twisted-pair sides; MT242A-M, MT242A-F, MT1242A-M, MT1242A-F: 100 V insulation voltage

Transmission Line: ITU CTR-12 G.703 (unstructured)

Interface:
ITU CTR-12 G.703 (unstructured):
Coaxial (Interface A): Unbalanced 75-ohm (RG59 cable);
Twisted-pair (Interface B): Balanced 120-ohm (STP or UTP cable)

User Controls:
All adapters: (2) internal jumpers for shield connection or disconnection;
Balun Mate II: (32) jumpers for shield connection or disconnection, (2) on each port-card module

Connectors:
MT242A-M, MT260A-M, MT1242A-M:
Coaxial (Interface A): Dual BNC M (RG59);
Twisted-pair (Interface B): 8-pin shielded RJ-45;
MT242A-F, MT260A-F, MT1242A-F:
Coaxial (Interface A): Dual BNC F (RG59);
Twisted-pair (Interface B): 8-pin shielded RJ-45;
MT255A-M:
Coaxial (Interface A): Dual 1.6/5.6-mm BNC M;
Twisted-pair (Interface B): 8-pin shielded RJ-45;

MT256A-F:
Coaxial (Interface A): Dual 1.6/5.6-mm BNC F;
Twisted-pair (Interface B): 8-pin shielded RJ-45;
MT257A:
Coaxial (Interface A): Dual 1.6/5.6-mm BNC F;
Twisted-pair (Interface B): 8-pin shielded RJ-45 (internal terminal block included)

Temperature Tolerance: 32 to 122°F (0 to 50°C)

Humidity Tolerance: 5 to 95% noncondensing

Power: From interfaces

Size: All adapters: 0.8"H x 1.7"W x 2.7"D (2 x 4.3 x 6.9 cm); Balun Mate II: 3.5"H x 19"W x 1.9"D (8.9 x 48.3 x 4.8 cm)

What is G.703?

G.703 is the primary high-speed WAN standard in nearly all worldwide markets, other than the United States. (The U.S. standard is T1.)

G.703/E1 digital networks are widely used in applications that range from Internet Web networks to LAN-to-LAN configurations.

▼ *Ordering Information*

ITEM	CODE
2.048-Mbps G.703 75–120 Adapters	
While supplies last, order…	
Dual BNC Male	MT242A-M
Dual BNC Female	MT242A-F
For replacement part numbers for MT242A, choose…	
Dual BNC Male	MT1242A-M
Dual BNC Female	MT1242A-F
For telephone applications, choose…	
Dual 1.6/5.6 BNC Male	MT255A-M
Dual 1.6/5.6 BNC Female	MT256A-F
Balun Mate II	MT257A
If you need faster speeds, select…	
8-Mbps G.703 75–120 Adapters	
Dual BNC Female	MT260A-F
Dual BNC Male	MT260A-M
For optimum performance, order…	
Shielded Twisted-Pair Cable, Stranded, 568-B, 10-ft. (3-m)	EVNSL60-0010
Coax Cable, RG59, 10-ft. (3-m)	ETN59-0010-BNC