

## G.703 75- to 100–120-Ohm Adapters

**Your 75-ohm coax hardware  
can communicate with 100-  
to 120-ohm twisted-pair  
equipment.**



- » Connect 75-ohm dual-coax G.703 terminations to 120-ohm twisted-pair G.703 terminations.
- » Bidirectional operation.
- » Interface powered.
- » Data rates for adapters up to 2.048 Mbps!
- » MT256A-F and MT257A feature transformer isolation and 1.6/5.6-mm coax connectors.

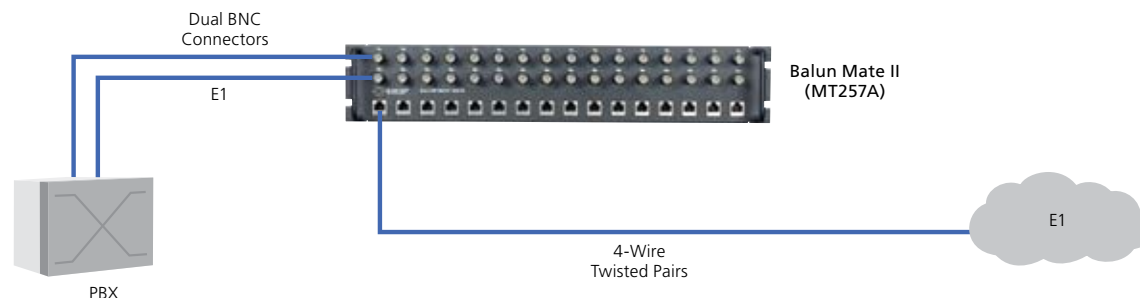


MT256A-F



MT257A

## Typical application.



## OVERVIEW

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 up to full E1 speed (2.048 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 MT256A-F has dual 1.6/5.6-mm female connectors for use in telephone sites. Plus, it also features 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 16 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.

For non-telephone applications that require speeds up to 2.048 Mbps, order the MT1242A-F and MT1242A-M. These models have standard dual coax BNC connectors (either female or male).

For even greater speeds (up to 8 Mbps), select the MT260A-F or MT260A-M. Like the MT1242A models, they also have standard dual coax BNC connectors.



MT1242A-M or  
MT1242A-F



MT260A-M

## TECH SPECS

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

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

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

**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

**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)

**Connectors** — MT260A-M, MT1242A-M:  
Coaxial (Interface A): Dual BNC M (RG59);  
Twisted-pair (Interface B): 8-pin shielded RJ-45;  
MT260A-F, MT1242A-F: Coaxial (Interface A): Dual BNC F (RG59);  
Twisted-pair (Interface B): 8-pin shielded RJ-45;  
MT256A-F: Coaxial (Interface A): Dual 1.6/5.6-mm female;  
Twisted-pair (Interface B): 8-pin shielded RJ-45;  
MT257A: Coaxial (Interface A): (16) Dual 1.6/5.6-mm female;  
Twisted-pair (Interface B): (16) 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)

Item	Code
G.703 75–120 Adapters	
<b>For telephone applications, choose...</b>	
2.048-Mbps Dual 1.6/5.6 Female	<b>MT256A-F</b>
Balun Mate II	<b>MT257A</b>
<b>For standard coax connections, choose...</b>	
2.048-Mbps Dual BNC Male	<b>MT1242A-M</b>
2.048-Mbps Dual BNC Female	<b>MT1242A-F</b>
<b>If you need faster speeds, select...</b>	
8-Mbps G.703 75–120 High-Speed Adapters	
Dual BNC Male	<b>MT260A-M</b>
Dual BNC Female	<b>MT260A-F</b>
<b>For optimum performance and a 20% savings...</b>	
Shielded Twisted-Pair Cable, Stranded, 568B, 10-ft. (3-m)	<b>EVNSL60T-0010</b>
Coax Cable, RG59, 10-ft. (3-m)	<b>ETN59-0010-BNC</b>

## Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application. Don't waste time and money—call Black Box today.