The MH10f and MH10 Merger Hubs support bidirectional parallel network connections in Pro64® audio networks. Similar to a familiar Ethernet switch, but with features and performance designed specifically for networking and distributing audio, the MH10f and MH10 offer unprecedented flexibility and simplicity in system design.

Both the MH10f and the MH10 feature ten bidirectional A-Net® ports. On the MH10, all network ports use heavy-duty locking Neutrik® EtherCon® connectors. On the MH10f, eight ports use EtherCons while the remaining two feature SFP slots which can be outfitted with either single- or multi-mode fiber optic transceivers.

In Pro64 systems running in Auto Mode, the Merger Hub creates a single network stream which is redistributed out all ten ports. This ensures that all 64 audio channels are available throughout the network, regardless of the physical location of any audio input or output. Channels can be physically located off any combination of the ten ports, even if they go through multiple Mergers.

In a Manual Mode system, the Merger Hub provides three preset configurations, allowing users to optimize the way each point merges and distributes audio channels. Each configuration preserves the bidirectionality of the system, even as inputs are separated physically off various legs of a hub. The MH10f and MH10 can also be used to provide the protection of a backup cable for main runs, as in a digital snake.

The Merger Hub will also merge Aviom's Virtual Data Cable™ data, allowing Pro64 devices to send and share control data effortlessly over long cable distances (up to 400ft/120m between devices).

The MH10f adds the security of a rear-panel four-pin XLR connector for optional backup DC power.

PRODUCT HIGHLIGHTS

- *Supports fully bidirectional parallel network connections*

- *10 bidirectional Pro64 A-Net ports for merging and distributing audio and VDC data*

- *8 EtherCon ports and 2 SFP slots (MH10f) or 10 EtherCon ports (MH10)*

- *3 pre-programmed configurations for routing audio data*

- *Use any number of MH10 or MH10f Merger Hubs in a network*

- *Create backup cable paths*

- *Add digital splits anywhere in a network*

- *Four-pin XLR connector for optional backup DC power (MH10f)*
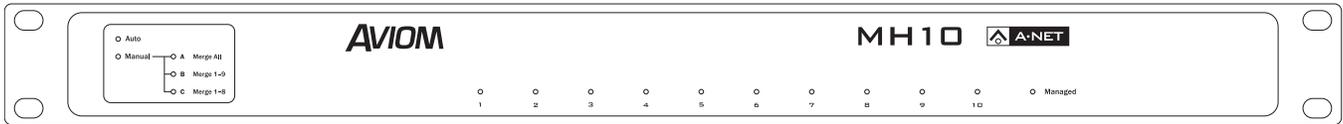
TECHNICAL SPECIFICATIONS

MH10f

LED indicators	A-Net Active, x10
A-Net	8 EtherCon® RJ45 connectors, rear panel; 2 100Mbps Ethernet SFP fiber optic transceiver slots, rear panel; supports single- or multi-mode
A-Net Cable Length	400 feet (120 meters) between devices (Cat-5e); Fiber optic performance by transceivers
Power Supply	100–240VAC 50–60Hz, 40W
	Internal switching type; IEC connector
Backup DC Power Inlet	24VDC, 2.0 amp max. 4-pin XLR (Pin 1: GND; Pin 4: 24VDC)
Dimensions	1U; 19"w x 8"d x 1.75"h (482.6 x 203 x 44 mm)
Weight	8 pounds (3.63 kg)

MH10

LED indicators	A-Net Active, x10
A-Net	10 EtherCon® RJ45 connectors, rear panel
A-Net Cable Length	400 feet (120 meters) between devices
Power Supply	100–240VAC 50–60Hz, 24W
	Internal switching type; IEC connector
Dimensions	1U; 19"w x 8"d x 1.75"h (482.6 x 203 x 44 mm)
Weight	8 pounds (3.63 kg)

All Aviom products are designed and manufactured in the USA.

MH10 • AVIOM • A·NET

○ Auto
○ Manual — A Merge All
        — B Merge 1-9
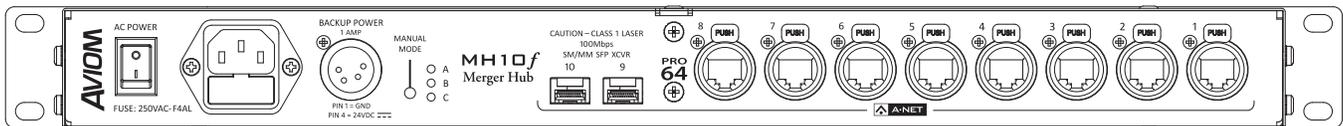   — C Merge 1-8

1 2 3 4 5 6 7 8 9 10 ○ Managed

▲ FRONT PANEL FEATURES

- Auto/Manual Mode indicator LEDs
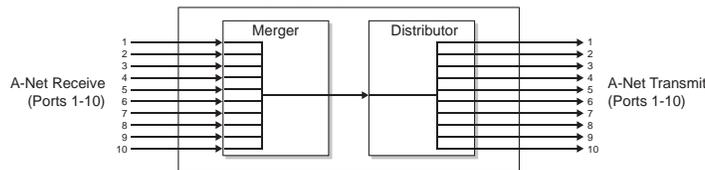- A-Net Active Indicator LEDs per port (10)

▼ REAR PANEL FEATURES

- A-Net Ports 1-10
- Manual Mode configuration switch with LEDs
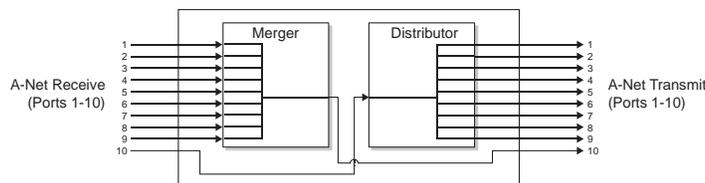- Backup DC power inlet (MH10f)

AUDIO SIGNAL FLOW DIAGRAMS

The MH10f and MH10 provide three preset configurations for routing the audio content of the A-Net streams received at the 10 network ports.

AUTO MODE
MANUAL MODE CONFIGURATION A (Merge All)

Merger Distributor

A-Net Receive (Ports 1-10) 1 2 3 4 5 6 7 8 9 10

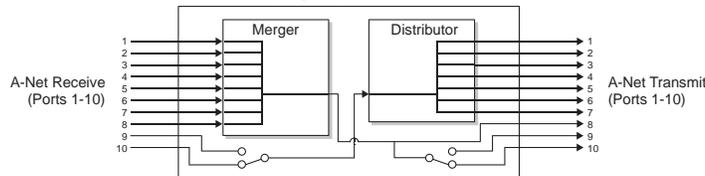A-Net Transmit (Ports 1-10) 1 2 3 4 5 6 7 8 9 10

In **Auto Mode**, audio channels from all 10 ports are merged into a single stream, which is then distributed through the transmitted streams at all 10 ports. **Manual Mode Configuration A** (Merge All) functions similarly.

MANUAL MODE CONFIGURATION B (Merge 1-9)

Merger Distributor

A-Net Receive (Ports 1-10) 1 2 3 4 5 6 7 8 9 10

A-Net Transmit (Ports 1-10) 1 2 3 4 5 6 7 8 9 10

In **Manual Mode Configuration B** (Merge 1-9), audio from the streams received at ports 1-9 is merged into a single stream, which is transmitted out port 10. The stream received at port 10 is distributed out ports 1-9.

MANUAL MODE CONFIGURATION C (Merge 1-8)

Merger Distributor

A-Net Receive (Ports 1-10) 1 2 3 4 5 6 7 8 9 10

A-Net Transmit (Ports 1-10) 1 2 3 4 5 6 7 8 9 10

In **Manual Mode Configuration C** (Merge 1-8), ports 9 and 10 serve as a redundant pair, with one port available as a backup. Audio from the streams received at ports 1-8 is merged into a single stream, which is transmitted out port 8, as well as port 9 or 10. Audio received at ports 9 and 10 is distributed out ports 1-7.

ARCHITECTURAL SPECIFICATION

The Aviom MH10f and MH10 Merger Hubs shall employ the Aviom A-Net® audio transmission protocol to provide ten ports capable of A-Net data distribution to/from devices connected in a Pro64® A-Net network. It shall digitally transmit full-bandwidth, high-quality audio by employing the Aviom A-Net audio transmission protocol. The MH10 shall have EtherCon® RJ45 connectors for all A-Net digital network connections, while the MH10f shall provide two slots for SFP modules in addition to eight EtherCon RJ45 connectors.

The front panel shall provide ten LED indicators for the A-Net data ports, a Managed Mode LED, and A-Net network mode LEDs.

The unit shall be powered by an internal universal power supply (110 to 240VAC) with an AC power receptacle with fuse, and be supplied with a detachable AC cable. It shall be UL and CE listed. The MH10f shall provide a four-pin XLR jack for connecting optional external backup DC power.

Its dimensions shall be 19 inches wide, 8 inches deep, and 1U (1.75") high. Its net weight shall be 5 pounds, and its front panel shall be finished in blue. The unit shall be Aviom Incorporated model MH10 or MH10f.

A·NET