eMDee Technology, Inc.

Simulated FFCS, High Fidelity, DisComm Audio Network
Part No 10754
Rev A

Features:

- Powder Coated Aluminum Housing
- Tactical switches and knobs
- Mounting holes match tactical device
- Locking RJ-45 connector
- Gigabit Ethernet
- Compatible with H-250 handset and CVC helmet
- Power-over-Ethernet capable

Product Description

The Simulated FFCS for DisComm Audio Network has the capabilities for connection of a single headset to access 6 radio channels and two intercoms. It is compatible with standard H-250 handsets, CVC helmets, and Bose Tri-Port headsets.

This FFCS is built around an aluminum housing with very similar size of the tactical component. It is equipped with a U-283 connector on the bottom of the unit for a headset. A circular locking power connector is available on the side of the unit, but the unit can also be powered using Power-over-Ethernet (PoE).

Audio and Digital I/O is interfaced through a network port from a locking RJ-45 connector on the side of the unit. This interfaces to our DisComm Audio Network using 1Gbps Ethernet allowing the use of standard network switches and Cat5e/Cat6 cabling.

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About DisComm Audio Network

DisComm Audio Network (DcAN) uses IP-based networking to create a local voice network for a high-quality, low-latency audio network suitable for local intercoms and other full-duplex, clear-com applications. The network can also handle digital I/O for switches and displays. UDP/IP packets are used for digitized audio and TCP/IP packets are used for digital I/O, control, and status.

The protocol for DisComm Audio Network is similar to Voice-over-IP (VoIP) and Audio over Ethernet but with some minor changes to work efficiently in a simulated intercom architecture. The packet format and protocol definition for DcAN is non-proprietary and is freely available to developers and end users.

Digitized audio packets are raw audio streams typically set at 16 bit samples at 8000 samples per second. Each audio packet contains as few samples as possible in order to reduce latency from talker to listener. A listener can capture one or more audio streams from the network and mix them into its output.

External communications, such as over a simulated radio, can be accomplished by using an application that has access to the DisComm Audio Network and to the distributed network. Our DisComm software can be used to build such an application that translates DisComm Audio Network packets to DIS PDUs and vice versa. DisComm also has built-in radio modeling and many other effects useful for distributed radio communications.

SPECIFICATIONS

Connectors
Power	Amphenol PT02A-10-6S
Network	Neutrik NE8FDX-P6-B (compatible with standard non-locking RJ-45 connector)
Headset	U-283/U
External PTT	Amphenol PT02A-8-3P (dummy connector, not used)

Power
Input Power	when not using PoE: +28VDC provided at Power connector
	when using PoE: IEEE 802.3af Power-over-Ethernet at Network connector
Power Consumption	10W Max
Current Protection	Internal resettable fuse

Mechanical
Size (H x W x D)	4.57 x 6.34 x 3.5 in (116 x 161 x 89 mm)
Weight	1.85 lb (0.84 kg)
Enclosure	Powder coated aluminum
Color	Green - FED-STD-595 color no. 34094

Environmental
Storage Temperature	-20° to +70° C
Storage Humidity	5% to 95% Non-condensing
Operating Temperature	0° to +40° C
Operating Humidity	5% to 95% Non-condensing

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