MERIDIAN
TECHNOLOGIES

Unidirectional, Eight Channels Audio
Mux/Demux over One Optical Fiber
and BNC Connector Audio Interface

8 CH. AUDIO →

FEATURES:

- Up to 8 Channels of 24 bit Digitally Encoded Audio over One Fiber

- Low Signal Latency

- Laser Based Systems for Multimode and Singlemode Fiber

- Surface Mount Technology (SMT) for High Reliability and Repeatability

- SpectraSmart™ Network Management Compatible

- Local LED Status Indicators to Monitor Critical System Diagnostics and Performance Parameters

- ST, FC Optical Connector

- Hot Swappable Rack Cards

- Back - Biased Photo Detector Circuitry for Stable Optical Laser Output Over Full Temperature Range

- Meets NEMA TS1 / TS2 & CALTRANS Specifications.

- Utilizes Internal Switching Power Supplies

- Automatically Resettable Solid-State Current Limiters on All Power Lines: Provides Equipment Protection

- BNC Type Connectors for Audio

- Wide Optical Dynamic Range: Optical Attenuators are Never Needed

DESCRIPTION:

The DT/DR-8A-x-E87 series products incorporate a new digital encoding technology with Low Signal Latency.

This fiber optic system is available in different configurations and will transmit 8 channels of Unidirectional Audio signal over one single-mode or multimode fiber.

Meridian's digital product line incorporates plug-in personality circuit cards to easily configure a wide variety of data channels on this system.

The functionality of the DT/DR-8A-x-E87 series are further enhanced by their compatibility with Meridian's PC based SpectraSmart™ Network Management & Diagnostic Software system. SpectraSmart™ supervises the operating parameters of the transmission system such as the status on Digital carrier detect, voltages, temperatures, optical levels , Laser currents, Digital Power supply etc. See SpectraSmart™ brochure for further details.

CONFIGURATIONS:

The DT/DR-8A-x-E87 product is available as rack mount cards suitable for mounting in Meridian card chassis and utilizes 2 card slots. These products can easily be converted to a Standalone module with the SR-1550, Desk / Wall mount 2-slot chassis. See SR-1002 chassis spec. for further details.

MARKETS:

√ CCTV Networks
√ Intercoms
√ Security & Surveillance

SPECIFICATIONS:

Audio

In/Out Impedance. . . . . 600 Ohm (Balanced)
Frequenct Response . . . . 10Hz to 20KHz
SNR . . . . > 90 dB (Weighted) @ 1KHz
In / Out Level . . . . -8 to +8 dBm (6V$_{P-P}$max.)
Total Harmonic Distortion . . < 0.01% @ 1 KHz
Resolution . . . . 24 Bit
Tx-Rx Latency. . . . . 0.15 mS

Optical

Bandwidth . . . . 250 Mb/s.

Connectors

Audio. BNC
Optical . . . . ST - MM (default),
FC- SM (default)

Environmental

Operating Temperature. . . . . . -34°C to +74°C
Storage Temperature. . . . . -55°C to +85°C
Relative Humidity. . . . . 0 to 95% Non-condensing

Power*

Card . . . . 8 Watts

Indicators (LEDs)

1- Green . . . .   Power On
1- Bi-color . . . .   TX Carrier / Laser Over Current
1- Bi-color . . . .   RX Carrier - Present / Error
1- Bi-color . . . .   RX Optical Signal - Present/Absent
1- Green . . . .   Audio Present (One Per Channel)
1- Red . . . .   Audio Overload (One Per Channel)
1- Bi-color (Optional) . .   Card Diagnostics

Physical

Dimensions:
Cards. . . . . 160 mm (6.3") L, 100 mm (4") H
44 mm (1.7") W
Weight:
Cards . . . . 540 g (1.2 lb.)
Number of Rack Slots . . . Two

Quality

MTBF. . . . . >200,000 hours, @ 35°C Ground
Fix as per MIL 217F

Part Numbers:

D☐ — 8A — ☐☐ — ☐ — E87

TRANSMITTER **T**
RECEIVER **R**

MULTIMODE - **0**
MULTIMODE - **1**
SINGLEMODE - **3**

CONFORMAL COATING - **C**
SpectraSmart ™ DIAGNOSTIC- **D**

FC SINGLE-MODE OPTICAL CONNECTOR
ST SINGLE-MODE OPTICAL CONNECTOR
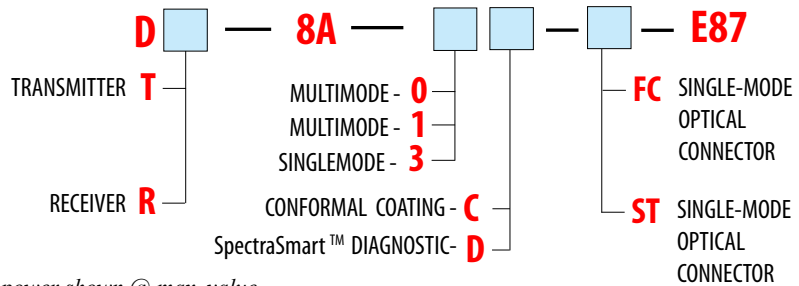
* Due to variations of drivers and diagnostic options, power shown @ max value

AUDIO 1 IN
AUDIO 2 IN
AUDIO 3 IN
AUDIO 4 IN
AUDIO 5 IN
AUDIO 6 IN
AUDIO 7 IN
AUDIO 8 IN

DT-8A-x-E87
Transmitter

FIBER

DR-8A-x-E87
Receiver

AUDIO 1 OUT
AUDIO 2 OUT
AUDIO 3 OUT
AUDIO 4 OUT
AUDIO 5 OUT
AUDIO 6 OUT
AUDIO 7 OUT
AUDIO 8 OUT
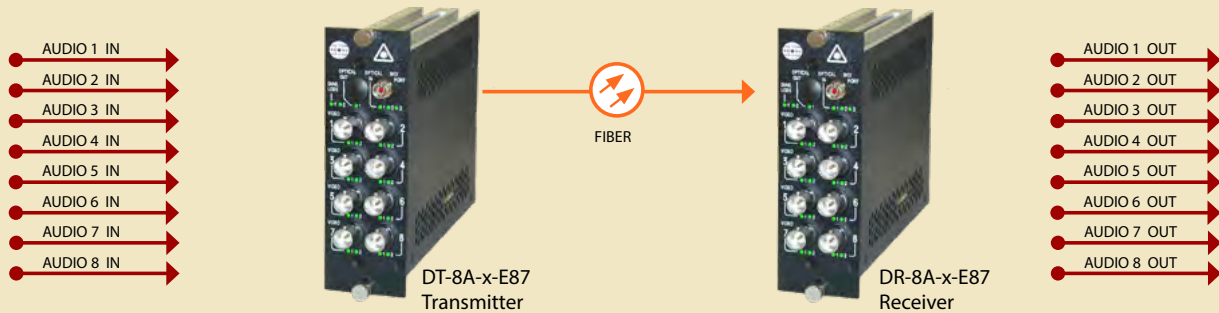
OPTICAL:

* Meridian Optical Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
0	Multimode (VCSEL Laser) 62.5 / 125	-5	-27	22	850	ST	24	4
1	Multimode (FP Laser) 62.5 / 125	-3	-25	22	1300	ST	24	4
3	Single-mode (FP Laser) 9 / 125	-3	-25	22	1310	ST, FC	24	50