TEAM Specifications

Physical

Dimensions	19" W x 7" H x 9.8" D 48.3 x 17.8 x 24.9 cm
Weight	20 lbs. 9 kg

Power Requirements

Universal AC Supply	90-255 VAC, 48-65 Hz
60 VDC Supply	42-75 VDC

Environmental

Temperature	41° F to 113° F +5° C to +45° C
Humidity	20% to 80%, non-condensing

Encoder

Connector	Gold plated Neutrik® XLR Female
A/D Converter	24 bit delta-sigma
Sampling Frequency	16, 24, 32 & 48 kHz
Input Impedance	600 ohms or >12K ohm, selectable
Clipping Level	+15, +18, +21, +/-1 dBu, selectable
THD+N	<0.005% at 1 kHz
SNR	>95 dB
Crosstalk	<-90 dB
L/R Phase Difference	<0.5°
Algorithms	CCS MUSICAM® Old CCS MUSICAM® New ISO/MPEG Layer II ISO/MPEG Layer III G.722 J.41 J.57 Linear audio over T1
Digital Input	AES/EBU or S/PDIF
Lock Range	+/- 200ppm
Rate Adaption	Automatic
Ancillary Data Connector	DB25 Female
Ancillary Data Bit Rates	300, 1200, 2400, 9600 & 38,400 bps
Ancillary Data Mode	8 data bits, 1 stop bit

Decoder

Connector	Gold plated Neutrik® XLR Male
D/A Converter	24 bit delta-sigma
Sampling Frequency	16, 24, 32 & 48 kHz
Output Impedance	600 ohms or <20 ohm, selectable
Clipping Level	+15, +18, +21, +/-1 dBu, selectable
THD+N	<0.005% at 1 kHz
SNR	>95 dB
Crosstalk	<-90 dB
L/R Phase Difference	<0.5°
Algorithms	CCS MUSICAM® Old CCS MUSICAM® New ISO/MPEG Layer II ISO/MPEG Layer III G.722 J.41 J.57 Linear audio over T1
Digital Output	AES/EBU or S/PDIF
Lock Range	+/- 200ppm
Rate Adaption	Automatic
Digital Audio Sync Input	
Ancillary Data Connector	DB25 Female
Ancillary Data Bit Rates	300, 1200, 2400, 9600 & 38,400 bps
Ancillary Data Mode	8 data bits, 1 stop bit

T1 Multiplexer

Line termination	DB9 or RJ45
CSU/DSU	All diagnostics included

E1 Multiplexer

Meets or exceeds ITU-T G.703 specifications

Audio Streaming

MPEG 3 encoded audio from all installed encoders is available for audio streaming. All MPEG 3 data rates and sampling rates are supported. Multiple TEAM units may be stacked to support additional groups of encoders. See User Manual or contact factory for details.

Optional TEAM Status Alarm Panel

Monitors up to 10 TEAM Systems

MUSICAM USA

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TEAM™

T1/E1 Audio Multiplexing Transmission System with Streaming Audio

TEAM typical configuration with 5 stereo channels, E1 Multiplexer with ISDN back up and dual redundant power supplies

TEAM is a universal audio transmission system for T1 and E1 leased lines and ISDN. Its modular construction and support of both linear and multiple coding standards make it ideal for STL use and your multiple audio transmission requirements.

TEAM's exclusive Ethernet port lets you send multiple channels of streaming audio to the Internet or to your Local or Wide Area Network.

MUSICAM USA

TEAM-More than a codec...

... an expandable system with all audio algorithms self-contained, and multi-channel, multiple data rate, multiple sample rate audio streaming

TEAM is based on MUSICAM USA's years of experience in the field of digital audio transmission systems.

TEAM's modular design lets you customize an audio and data transmission system that fits your needs today, while giving you room to expand tomorrow. Each TEAM Base Unit contains a Main Fame, Control Processor with Ethernet port and an AC Power Supply. An optional 60-volt DC power supply or second AC supply may also be installed to provide redundancy for the primary power supply. Chose your Encoders, Decoders and connectivity options to build the system that's right for you.

Seven open slots are available for any combination of the following plug-in modules:

- **Encoder**—Includes analog and digital inputs for dual mono or stereo feeds with a variety of audio coding standards, including linear non-compressed audio. An additional RS232 data signal, or special satellite "push button" relay data, can be transmitted. A-to-D converters are 24-bit for superb audio quality, low noise and low distortion.
- **Decoder**—Includes analog and digital outputs for dual mono or stereo, plus RS232 ancillary data. D-to-A converters are 24-bit.
- **T1 Multiplexer Module**—supports direct connection to T1 lines for 1.544 MB transmission. Includes built-in CSU/DSU for full diagnostics and Drop/Add capability.
- **E1 Multiplexer Module**—supports direct connection to E1 lines for 2.048 MB transmission. Meets ITU-T G.703 standards and includes Drop/Add capability.
- **1, 2 or 3-BRI ISDN Module**—Lets you connect individual Encoders and Decoders to 1, 2 or 3 ISDN BRIs. Makes an ideal backup for your E1 or T1 signal.
- **X.21/RS422 Module**—Supports I/O of synchronous data signals with bit rates of n x 64 kb/s. Each module provides two separate X.21 ports. Free time slots within the total time frame may be allocated for each port.
- **V.35 Module**—As above, for V.35 data protocol.

TEAM is engineered for years of continuous operation and has the following mechanical features:

- 4U rack mount with removable, adjustable rack ears for desktop or cabinet mounting
- All wiring, maintenance and card access is through front of unit
- Fully modular construction with hot swap option cards
- Runs cool—no fan, or forced air cooling requirements
- Optional Status Alarm Panel can monitor up to 10 TEAM units

Powerful Motorola® MPC860 Power PC-based Control Processor Module gives you total control:

- FLASH ROM operating system makes upgrades easy
- All audio algorithms are stored in FLASH ROM, so any algorithm is available at any Encoder or Decoder module
- RS232 or RS485 Remote Control protocol lets you control multiple TEAM units
- Two RS232 ancillary data ports route data to/from optional plug in cards
- Alarm relay port with Alarm A, Alarm B capability
- Four assignable relay outputs and optically isolated inputs for facility control and status

Assemble your TEAM with the following plug-in modules:

T1 Multiplexer
Supports multiplexing and de-multiplexing of T1 signals. All signals from the Encoder, Decoder, X.21 or V.35 Interfaces are routed through the internal bus to the T1/E1 module.

- Connects to T1 leased line
- Full function on-board CSU/DSU with line diagnostics
- Fully functional Drop & Insert supports complex networks
- Two RS232 interface ports to utilize free time slot capacity
- Status LEDs and test port for in-service maintenance

E1 Multiplexer
Supports multiplexing and de-multiplexing of E1 signals. All signals from the Encoder, Decoder, X.21 or V.35 Interfaces are routed through the internal bus to the E1 module.

- Connects to E1 leased line
- ITU-T G.703 compliant
- Fully functional Drop & Insert supports complex networks
- Two RS232 interface ports to utilize free time slot capacity
- Status LEDs and test port for in-service maintenance

Stereo Encoder Module (room for up to 6 units)
Supports analog and AES/EBU digital inputs, RS232 ancillary data and satellite relay command functions

- 24-bit A-to-D converter for superior performance
- Supported algorithms: Linear (J.57), MPEG Layer 2, MPEG Layer 3, J.41 (384 kb/s mono) and G.722
- Switchable gain settings: +15, +18 and +21 dBu clipping levels
- Automatic rate adapter circuitry for AES/EBU timing

Stereo Decoder Module (room for up to 6 units)
Supports analog or AES/EBU digital outputs and RS232 ancillary data

- 24-bit D-to-A converter for superior performance
- Supported algorithms: Linear (J.57), MPEG Layer 2, MPEG Layer 3, J.41 (384 kb/s mono) and G.722
- Switchable gain settings: +15, +18 and +21 dBu clipping levels
- Automatic rate adapter circuitry for AES/EBU timing

X.21 Module
Receives and transmits data at bit rates of n x 64 kb/s

- Two fully independent bi-directional ports
- Provides continuous clock and data

V.35 Module
Receives and transmits data at bit rates of n x 64 kb/s

- Two fully independent bi-directional ports
- Provides continuous clock and data

3-BRI ISDN Module

- Available with 1, 2 or 3 ISDN BRI connections
- Contains both U (North America) and S/T ISDN interfaces
- Ideal for STL backup