

# EM2-VR

One channel Voice / Data combiner  
E&M Voice + RS232 Data to E0/DS0

## Applications

- Industrial and factory control with voice



## Description

The EM2-VR combines a bi-directional 2-wire or 4-wire voice signal with a full duplex RS232 data channel, and transmits it over a 64 kbps synchronous E0 or DS0 channel with a V.35 interface. At the remote end which may be another EM2-VR or an EM200-VR, these combined data/voice signals are separated, and output on their respective connectors. Note that when using a DS0 channel in a T1 carrier, there must be no “robbed bits”. The voice channel supports E&M signaling and a high quality voice which is compressed to 40 kbps. The RS232 channel is data format and speed transparent to rates of 19.2, 9.6, 4.8, 2.4, and 1.2 Kbps and less.

## Features

- High quality Voice plus RS232 data over one E0/DS0 channel
- Transparent to standard RS232 rates
- USB configuration port shows network-wide status
- 2-Wire or 4-Wire voice
- Back to back operation
- Isolated 48VDC power input
- Industrial temperature -40°C to 70°C
- 5 Year warranty

## EM2-VR back to back connection



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## Specifications

### E0/DS0 Port

E0/DS0 Port .....	1
Configuration .....	DB-25P
E1 Line Code .....	HDB3
E1 Data Rate .....	2048 Kbps
Standards .....	G.703, G.736, G.775
Line Impedance .....	Balanced 120 ohm

### RS232 Port

RS232 Port .....	EIA/TIA 561 DCE
Data rates .....	19.2, 9.6, 4.8, 2.4, and 1.2 Kbps or less
Input/Output connectors .....	RJ-45

### Audio Port

Number of audio channels .....	1
Input/Output connectors .....	RJ-45
Input/Output impedance .....	600 ohms nominal
Analog bandwidth .....	200 Hz to 3.4 kHz
Analog input Level without significant distortion .....	7 Vpp
Analog insertion gain adjustable .....	0, +/-1, +/-2, +/-3 dB
Encoding .....	5 bit ADPCM
Idle channel noise (C Message Weighted) .....	< 20 dBBrnC
Idle channel noise (3 kHz flat) .....	< 27 dBBrn
Tip/Ring DC voltage .....	0V

### Power Source

Power source (Stand-alone version) .....	48VDC
Supply voltage range (stand-alone version) .....	36V to 62V DC
Input connector .....	2.1mm barrel jack

### General

Operating temperature .....	-25°C to +71°C
Humidity (RH) .....	10% to 95%
MTBF .....	> 50,000 hours
Dimensions, stand-alone version (H*W*D) .....	8.9 * 13.5 * 2.4cm
Dimensions, rack version (H*W*D) .....	11.4 * 2.9 * 17.5cm

\* Specifications are subject to change without notice.

## Part Numbers

\* For additional accessories, please consult with Luxcom.

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