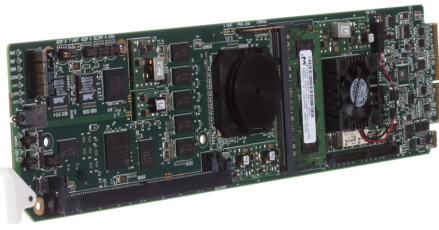


# 9374-EMDE • Quad-Stream SDI – AES – MADI Embedder/De-embedder



The **9374-EMDE** offers our most comprehensive solution for digital audio transport conversion and embedding/de-embedding. A full unrestricted audio crosspoint provides channel routing between any channels on up to four SDI streams, discrete AES-3id, and AES-10 MADI interfaces.

The card MADI interface supports a 64-channel payload at the industry standard 48 kHz sampling rate, and can reliably receive from 1694A cable runs up to 250m, thereby allowing longer MADI cable runs without resorting to fiber cabling. All SDI embedding and SDI output timing is timed in common to a selected timing source. A convenient 2-channel analog confidence monitor output allows monitoring of any selected input or output. The line-level output pair directly interfaces with audio monitoring units or powered monitors.

Utilizing the openGear® open-architecture platform, the 9374 offers scalable incorporation and the easy-to-use DashBoard™ setup and control operator interface. Full user remote and card-edge monitor/control allows full card status and control access locally or across a standard Ethernet network.

### Alternate Base Model

- **9374-EM** Quad-Stream SDI-AES-MADI Embedder
- **9374-DE** Quad-Stream SDI-AES-MADI De-Embedder

### FEATURES

Unrestricted de-embed/embed from multiple digital audio sources – embedded SDI audio, MADI, and discrete AES-3id (BNC) – all on the same card

De-embed, route, channel swap, and embed between up to four discrete SDI streams and discrete digital streams

Built-in flexible general-purpose cross-routing between any audio channels from any input to any card output

Up to 250m 1694A MADI receive capability

DashBoard PPM meters for all inputs and outputs helps in easily locating and assessing channel content and line-up

Built-in 2-channel analog audio confidence monitor outputs provide instant pushbutton routing of any input/output pair to playout monitors

Built-in multi-frequency configurable tone generators

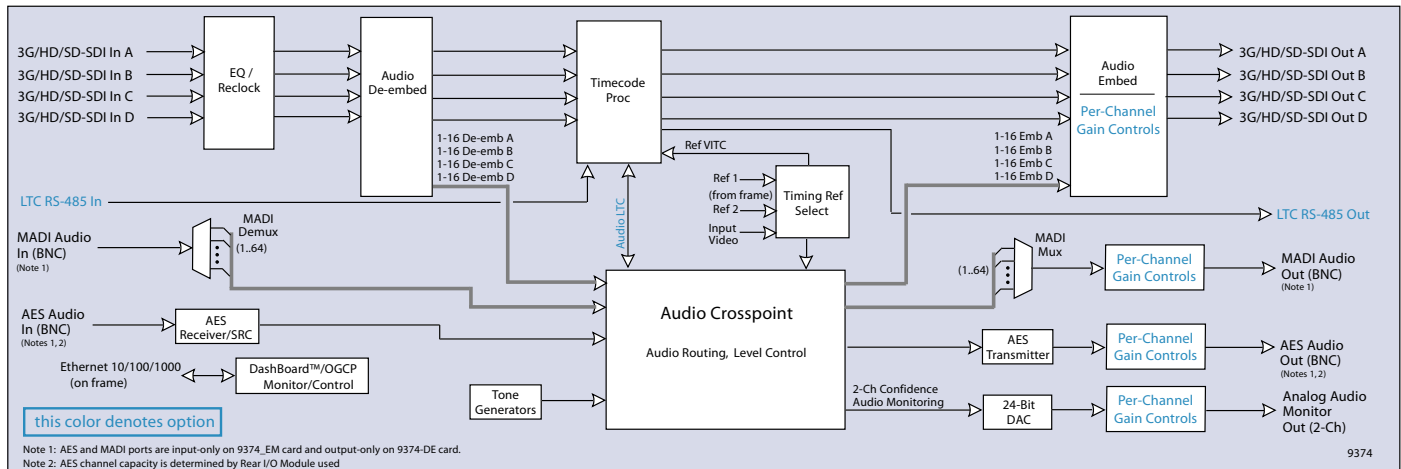
Remote monitoring via DashBoard™ software

Five year warranty

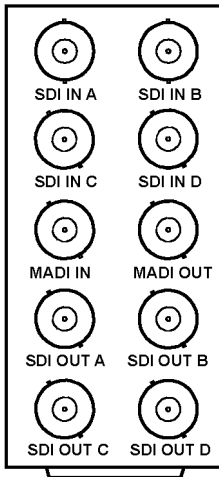
### OPTIONS

LTC In/Out (+LTC)

Output Gain Controls (+GAIN)

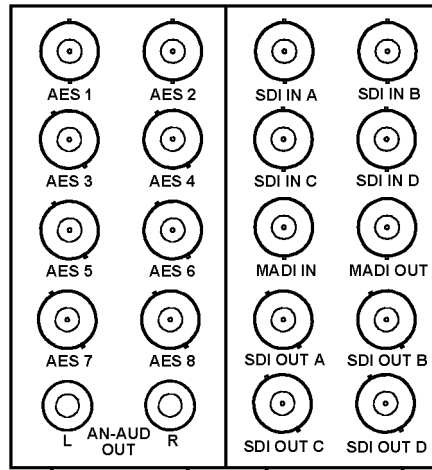


# 9374-EMDE • Quad-Stream SDI – AES – MADI Embedder/De-embedder



Note: MADI IN port only on 9374-EM card and MADI OUT port only on 9374-DE card.

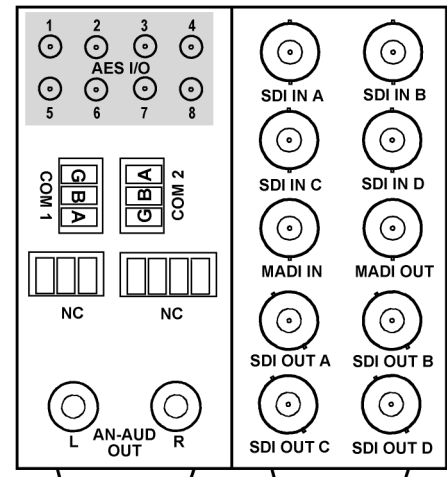
**RM20-9374-C**



Note: AES ports are GUI-configurable as inputs or outputs on 9374-EMDE card. AES ports and MADI ports are input-only on 9374-EM card and output-only on 9374-DE card.

**RM20-9374-E**

Note: This rear module is shown here for reference, but is no longer available. RM20-9374-F DIN or RM20-9374-F-HDBNC can provide the same functionality and can be used instead.



Note: AES ports are GUI-configurable as inputs or outputs on 9374-EMDE card. AES ports and MADI ports are input-only on 9374-EM card and output-only on 9374-DE card.

**RM20-9374-F-DIN**  
**RM20-9374-F-HDBNC**

## SPECIFICATIONS

Note: Inputs/outputs are a function in some cases of rear I/O module used.

### Power

< 20 Watts (maximum)

### SDI Input/Output

Capacity: 4 In, 4 Out  
Standards: SMPTE 259M, SMPTE 292M, SMPTE 425 A and B  
Cable Length: 3G/HD/SD: 120/180/320 m (Belden 1694A)  
Return Loss: >15 dB up to 1.485 GHz  
>10 dB up to 2.970 GHz  
Alignment Jitter: 3G/HD/SD: < 0.3/0.2/0.2 UI  
Timing Jitter: 3G/HD/SD: < 2.0/1.0/0.2 UI  
Latency:  
SD: approx 4.0 us (55 pixels)  
720p: approx 2.0 us (155 pixels)  
1080i: approx 1.8 us (132 pixels)  
3G 1080p: approx 1.0 us (145 pixels)

### Timing Reference Input

Sources: Selectable from frame-supplied external reference REF1 or REF2 or any of four SDI video inputs. Timing source provides output PLL common timing  
External Reference Signal: SMPTE 170M/318M "Black Burst"  
SMPTE 274M/296M "Tri-Level"  
Return Loss: >35 dB up to 5.75 MHz

### AES-3id Audio Input/Output

Capacity: Up to 8 BNC ports (user selectable as input or output). Practical capacity determined by Rear I/O Module used.  
Physical Interface: BNC per AES3-id  
Input Level: 0.2 to 2 Vp-p  
Output Level: 1.0 Vp-p  
Impedance: 75Ω  
Return Loss: >15 dB up to 6.144 MHz  
Input SRC Range: 32 to 96 kHz  
Input SRC Performance: >130 dB THD+N

## 9374-EMDE • Quad-Stream SDI – AES – MADI Embedder/De-embedder

### SPECIFICATIONS (cont.)

#### MADI (AES10-2003) Input/Output

Number of Inputs/Outputs: 1 BNC Input, 1 BNC Output  
 Supported Sample Rate: 48 kHz only  
 Input/Output Impedance: 75Ω  
 Input Data Rates: 125 Mbps  
 Input Level: 0.15 – 0.6 Vp-p  
 Output Level: 0.3 – 0.6 Vp-p  
 Output Jitter: 0.1 UI

#### Analog Audio Confidence Monitor Output

Channel Complement: L and R, user-assigned sources direct from any input channel or mixed channels comprising a 2-channel mix  
 Output Type: 2-channel unbalanced, consumer line-level

### ORDERING INFORMATION

**9374-EMDE** Quad-Stream SDI - AES - MADI Embedder/De-embedder

**9374-EM** Quad-Stream SDI - AES - MADI Embedder

**9374-DE** Quad-Stream SDI - AES - MADI De-embedder

**RM20-9374-C** 20-Slot Frame Rear I/O Module (Standard Width) (4) 3G/HD/SD-SDI Input BNCs, (4) 3G/HD/SD-SDI Output BNCs, (1) MADI BNC Input, (1) MADI BNC Output

**RM20-9374-E** (Discontinued – No longer available) 20-Slot Frame Rear I/O Module (Double Width) (4) 3G/HD/SD-SDI Input BNCs, (4) 3G/HD/SD-SDI Output BNCs, (8) AES I/O BNCs, (1) MADI BNC Input, (1) MADI BNC Output, (2) Stereo Unbalanced Analog Audio Outputs (RCA)

**RM20-9374-F-DIN** 20-Slot Frame Rear I/O Module (Double Width) (4) 3G/HD/SD-SDI Input BNCs, (4) 3G/HD/SD-SDI Output BNCs, (8) AES I/O (DIN 1.0/2.3), (1) MADI BNC Input, (1) MADI BNC Output, (2) Stereo Unbalanced Analog Audio Outputs (RCA), (2) RS-485 COMM ports

**RM20-9374-F-DIN** 20-Slot Frame Rear I/O Module (Double Width) (4) 3G/HD/SD-SDI Input BNCs, (4) 3G/HD/SD-SDI Output BNCs, (8) AES I/O (HD-BNC), (1) MADI BNC Input, (1) MADI BNC Output, (2) Stereo Unbalanced Analog Audio Outputs (RCA), (2) RS-485 COMM ports

**+LTC** LTC In/Out Option

**+GAIN** Output Gain Controls Option