The MRD 3187B Receiver Decoder is the industry’s only professional multi-format modular receiver decoder available today. Installed by more broadcast, cable, satellite, and telco service providers, and across a wider range of applications than any other multi-format receiver decoder. The MRD 3187B receiver decoder sets the standard for performance, scalable functionality and cost of ownership. The award winning architecture of the MRD 3187B adapts to changes well beyond most competitive receiver decoders, allowing hardware and software features to be upgraded in the field (often while still in the rack).

The MRD 3187B supports virtually any application by combining dual-channel processing capability with MPEG-2, MPEG4, 4:2:0, 4:2:2, SD, and HD video decoding. With the wide range of interfaces, the MRD 3187B adapts to contribution, distribution, or backhaul environment while allowing easy upgrade paths to future technologies. All of this makes the MRD 3187B receiver decoder the only choice for operators seeking a truly future-proof solution. The MRD 3187B expands the functionality of the award winning MRD 3187A receiver decoder by adding features such as DVB-CI and SCTE35/104 messaging support.

**KEY FEATURES**

- **Versatile Modular Platform**
  Preserve capital investments by purchasing only the functions required today, and seamlessly scale to the functionality needed tomorrow.

- **Future-Proof Interface Upgrades**
  As new technologies emerge for next generation contribution links, the MRD’s interface options and backplane routing architecture make the transitions simple and cost effective.

- **Wide Range of Inputs and Outputs**
  The MRD 3187B can support multiple inputs and outputs for seamless integration into a wide variety of system architectures.

- **Easy System Integration**
  The SNMP MIB is integrated with many of the industry’s most popular automation and network equipment management and monitoring systems.

- **Multiple Channel Processing**
  The MRD 3187B supports up to two video decoders and four audio decoders. These decoders can be configured as two completely independent receiver decoder systems to decode two separate channels. Or, they can be configured to process the same channel twice, providing an HD and SD output simultaneously from a HD source.

**APPLICATIONS**

- **Contribution Reception and Turn-Around**
  Receive network and live feeds via RF, ASI, or IP, and simultaneously demodulate, de-encapsulate, encapsulate, and/or decode to multiple formats of your choice for local processing and re-encode requirements.

- **Local Reception and Integration**
  Receive local content off-air or through fiber feeds and simultaneously provide compressed and decoded/down-converted outputs to feed your distribution network.

- **Backhaul and Interconnection**
  Easily convert transport streams from RF carriers, to serial transport streams, or to/from IP datagram’s to seamlessly transfer content through your network.

- **Advanced Digital Cue Tone Support**
  Retain commercial ad avails through the re-encode chain by receiving the SCTE35 messages, converting them to SCTE104 messages, and embedding them in the VANC of the SDI output.
SPECIFICATIONS
Multi-format SD/HD Modular Receiver Decoder MRD 3187B

The MRD 3187B receiver decoder solutions provide operators a choice of I/O options required today, and the flexibility to easily change in the future. The modular design of the MRD 3187B allows the operator to customize a compact, modular chassis with a variety of input and output modules.

Multi-Standard Video Decoding Support
The MRD 3187B is capable of decoding all MPEG2 and H.264 Transport Streams from Main Profile through High Level, including 4:2:0 and 4:2:2. Analog options include: NTSC/PAL and RGB/YPbPr. Digital video options include HD/SD-SDI.

Multi-Standard Audio Processing
The MRD 3187B has embedded, digital and analog audio outputs. Wide variety of supported audio codecs including: MPEG Audio, Dolby AC-3, Dolby-E, AAC and HE-AAC Audio. Audio can also be embedded in HD/SD-SDI.

RF INPUT CARD OPTIONS
ATSC Broadcast Input
  Single Input Port, 8VSB and 64/256 QAM-B  (8701A)
DVB-S/S2 Satellite Input
  Dual Input Ports, DVB-S QPSK, DVB-S2 QPSK, 8PSK  (8710A)
ASM Receiver Card
  Dual Input Ports (Turbo PSK, DVB-S PSK)  (8711)
  Dual Input Ports, QPSK, 17/64 QAM, 2K & 8K FFT Sizes  (8715)
  Dual Input Ports, QPSK, 1/144 QAM, 2K & 8K FFT Sizes  (8716)
  Quad Input Ports, DVB-S QPSK, DVB-S2 QPSK, 8PSK, Multistream, VCM, 16/32APSK  (8712)

SERIAL INPUT/OUTPUT CARD OPTIONS
ASI/SMPTE 310M Input and Output
  Selectable ASI or SMPTE 310M Card  (8702)

IP INPUT/OUTPUT CARD OPTIONS
MPEG over IP Input/Output
  Transmits and Receives Multiple Streams Simultaneously, Supports Pro-MPEG COP3 FEC, IGMPv2/v3, HRTP, and Null-Stripped VBR  (8725)
Dual MPEG over IP Input/Output
  Transmits and Receives Multiple Streams Simultaneously, Supports Pro-MPEG COP3 FEC, IGMPv2/v3, HRTP, and Null-Stripped VBR  (8727)

CONDITIONAL ACCESS OPTION
DVB Common Interface and BISS Descrambling Option
  Dual DVB-C CAM Slots, Multiple Program Descrambling, Support for All Major CAMs and Encryption Systems, BISS 1 & E  (8721)

Not Just A Receiver Decoder
The MRD 3187B receiver decoder enables operators to gain valuable information about the decoded video and audio signal. The video and audio bitrate, aspect ratio, native format, and other useful information can be viewed to verify the quality of the decoded signal.

Selected PSIP data can be decoded and viewed, allowing quick verification of PSIP data presence, as well as verification of the content of each PSIP table.

Complete Remote Operation
In addition to front panel control, the MRD provides remote configuration and monitoring capabilities through SNMP as well as the most intuitive web client in the industry. SNMP management can be done through Ethernet or RS232.

GENERAL PURPOSE CARD OPTIONS
GPIO Module Card  (8713)

VIDEO/AUDIO OUTPUT CARD OPTIONS
Analog Video Output
  Component or Composite Video Outputs, Configurable Component/RGBHV Output  (8706A)
Discrete Analog and Digital Audio Outputs
  Simultaneous Analog and AES Audio Outputs, Supports Two Stereo Pairs on both Analog and Digital Outputs  (8707A)
HD/SD-SDI, Component/Composite Video Output
  Two user selectable serial digital (SMPTE 259M, or SMPTE 292M) outputs and one component RGBHV or YPbPr/Composite NTSC & PAL output  (8708)
  HD/SD-SDI, Component/Composite Video Output
  Two user selectable serial digital (SMPTE 259M, or SMPTE 292M) outputs and one component RGBHV or YPbPr/Composite NTSC and PAL output. Can provide simultaneous HD & SD/SDI (must be used with the 8733)

DECODER CARD OPTIONS
MPEG2/MPEG4 4:2:0 SD/HD Decoder
  Single Video Program Decoder MPEG2/MPEG4, Two Audio Services Decoding/Downmix/Pass-through  (8732)
MPEG2 4:2:0 SD/HD Decoder
  MPEG2 only version of 8732 decoder  (8730A)
MPEG2/MPEG4 4:2:0 SD/HD Genlock Decoder
  Single Video Program Decoder MPEG2/MPEG4, Two Audio Services Decoding/Downmix/Pass-through, Genlock Black-and-Burst or Tri-Level Sync  (8734)
MPEG2 4:2:0 SD/HD Genlock Decoder
  MPEG2 only version of the 8734 decoder  (8731A)
MPEG2 4:2:0/4:2:2 SD/HD Genlock Decoder
  Simultaneous HD and Down-converted SD Outputs, Single Video Program Decode, Four Audio Services Decoding/Downmix/Pass-through, Genlock Black-and-Burst or Tri-Level Sync  (8733)