

# CDR1 DVB-T COFDM Video Receiver

*Excellent Digital Video Receiver for Urban Multipath Environments!*



## Design Features

- 45 Cubic Inch Package (4.50"x6.75"x1.50")
- Low Power Draw
- Full Frequency Band Channelization
- Local & Remote Frequency and Configuration Selection
- 6/7/8 MHz DVB-T Bandwidths
- Optional 1.25/2.5 MHz Bandwidths
- MPEG2 and MPEG4 Compression
- QPSK/16QAM/64QAM Modulation
- AES 256 Bit Encryption
- Diversity Antenna Configuration
- Supports Composite Video (NTSC or PAL)

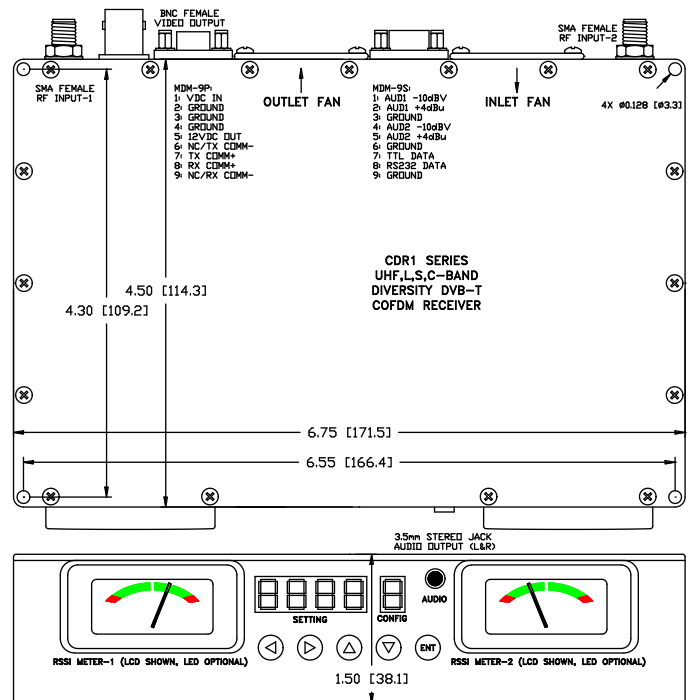
## CDR1 Series

AMP's CDR1 Series COFDM DVB-T video receivers are designed for secure, high quality video reception in high multipath and urban environments.

The CDR1 has low power draw, excellent sensitivity, and features such as full frequency band channelization, MPEG2 or MPEG4 video decoder, DVB-T or narrow or ultra-narrow bandwidth settings, QPSK or 16QAM or 64QAM modulation, stereo audio, and auxiliary data channel.

Frequency may be selected locally with front panel buttons or remotely. Eight pre-programmed COFDM configurations are also locally selectable with a front panel button.

CDR1 receivers are designed to withstand harsh environments and are ideal for law enforcement, surveillance, UAV, UGV, military, and other applications requiring high quality video receiver in a compact, rugged package.



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## RF Characteristics

|                                |  |                 |                  |
|--------------------------------|--|-----------------|------------------|
| Frequency Range (Specify):     | UHF:   | 340.0-399.9 MHz | 100 kHz Channels |
| (Other Ranges Available)       | Lower L-Band:  | 1435-1500 MHz   | 1 MHz Channels   |
|                                | Upper L-Band:  | 1700-1850 MHz   | 1 MHz Channels   |
|                                | Lower S-Band:  | 2200-2399 MHz   | 1 MHz Channels   |
|                                | Upper S-Band:  | 2400-2499 MHz   | 1 MHz Channels   |
|                                | Full S-Band:   | 2200-2499 MHz   | 1 MHz Channels   |
|                                | Lower C-Band:  | 4400-4900 MHz   | 1 MHz Channels   |
|                                | Upper C-Band:  | 4900-4999 MHz   | 1 MHz Channels   |
|                                | Full C-Band:   | 4400-4999 MHz   | 1 MHz Channels   |
| Frequency Selection (Specify): | Full Band Channelized - Remote Control Only or Remote/Local Control                    |                 |                  |
| Frequency Stability:           | ±10ppm Over -20°C to +60°C   |                 |                  |
| Input Impedance:               | 50 Ω Nominal, VSWR 2:1 Maximum   |                 |                  |
| Maximum RF Input:              | -10 dBm Without Damage   |                 |                  |
| Noise Figure:                  | 3 dB Maximum   |                 |                  |
| Image Rejection:               | 50 dB Minimum  |                 |                  |
| Signal Bandwidth (Specify):    | 6/7/8 MHz (DVB-T), 2.5 MHz (Narrow), 1.25 MHz (Ultra-Narrow) - Configuration Dependent |                 |                  |
| Signal Strength Output:        | Local Displays and Remote Query  |                 |                  |
| Configuration:                 | Diversity Antenna  |                 |                  |

## COFDM Video/Audio Characteristics

|                           |   |  |  |
|---------------------------|---|--|--|
| Modulation Type:          | QPSK or 16QAM or 64QAM - Configuration Dependent                            |  |  |
| Output Impedance:         | 75 Ω Nominal, Unbalanced  |  |  |
| Video Decoding:           | MPEG2 (DVB-T, Narrow) or MPEG4 (Ultra-Narrow)                               |  |  |
| Frame Rate:               | 30 FPS (NTSC) or 25 FPS (PAL)   |  |  |
| Horizontal Resolution:    | 480 Pixel   |  |  |
| COFDM Carriers:           | 2K DVB-T or Approximately 400 Narrow/Ultra-Narrow - Configuration Dependent |  |  |
| Guard Interval:           | 1/4 to 1/16, Configuration Dependent  |  |  |
| Latency:                  | <100 msec to approx 500 msec, End to End - Configuration Dependent          |  |  |
| Decryption (Specify):     | ABS 32-bit or AES 256-bit   |  |  |
| Audio Channels (Specify): | Zero or Two (Stereo)  |  |  |
| Audio Bandwidth:          | 4 kHz to 16 kHz, Configuration Dependent                                    |  |  |
| Audio Output Level:       | -10 dBV and +4 dBu Line, into 10 k Ω Load                                   |  |  |
| Audio Output Impedance:   | 100 Ω Nominal, Unbalanced   |  |  |

## COFDM Auxiliary Data Channel Characteristics

|                           |                         |  |  |
|---------------------------|-------------------------|--|--|
| Interface Type:           | One-Way UART            |  |  |
| Signaling Type (Specify): | RS232/3.3V TTL or RS422 |  |  |
| Supported Data Rates:     | 9600 Baud               |  |  |

## Configuration Interface Characteristics

|                            |  |  |  |
|----------------------------|--|--|--|
| Interface Type:            | Two-Way UART   |  |  |
| Signalling Type (Specify): | RS232, RS422, or 3.3V TTL                                      |  |  |
| Interface Parameters:      | 9600/8/1/None/None (Baud/Data Bits/Stop Bits/Parity/Handshake) |  |  |

## Power Requirements

|                        |  |   |  |
|------------------------|--|---|--|
| Input Voltage:         | +11 to +16 Vdc, Reverse Polarity Protected |   |  |
| Current Draw:          | UHF: 1.0A, Typical @ 12 Vdc                | All Other Bands: 1.2A, Typical @ 12 Vdc |  |
| Monitor Supply Output: | +12 Vdc, 0.5A Current Limit                |   |  |

## Mechanical Characteristics

|                         |   |                   |  |
|-------------------------|---|-------------------|--|
| Material:               | CNC Machined T6061-T6 Aluminum          |                   |  |
| Finish (Specify):       | Nickel Plated or Gold Iridite           |                   |  |
| Dimensions:             | 4.5" W x 6.75" L x 1.5" H               |                   |  |
| Weight:                 | <26 oz.                                 |                   |  |
| RSSI Display (Specify): | LCD Analog Bar Meters or LED Light Bars |                   |  |
| Connectors:             | RF Inputs:                              | SMA Female        |  |
|                         | Video Output:                           | BNC Female        |  |
|                         | DC Supply, 12V Out, Comms:              | MDM-9P            |  |
|                         | Audio and Data Output                   | MDM-9S            |  |
|                         | Audio Output:                           | 3.5mm Stereo Jack |  |

## Environmental Characteristics

|                          |   |  |  |
|--------------------------|---|--|--|
| Temperature (Operating): | -20°C to +60°C  |  |  |
| Acceleration:            | 100 g, 3 Axes   |  |  |
| Altitude:                | Unlimited   |  |  |
| Humidity:                | Up to 95% @ Any Temperature Forming Frost or Condensation |  |  |