

VRD2 Diversity Video/Audio/Data Receiver

UHF, L-Band, S-Band, C-Band

Ultra Compact Diversity Receiver. Ideal for Covert Operations, UAVs, and UGVs!



AMP's VRD2 Series 7.4 cubic inch diversity video receivers offer high quality diversity reception with many advanced features including miniature packaging, low power consumption, low noise figure, and video inversion. All receivers utilize a robust machined aluminum chassis and high quality connectors designed to withstand harsh environments.

VRD2 Series receivers feature a proprietary voting circuit that ensures reception of the strongest signal at all times. Innovative circuit designs are utilized to reduce power consumption for significantly longer battery life and to reduce noise figure for substantially more range and better video quality.

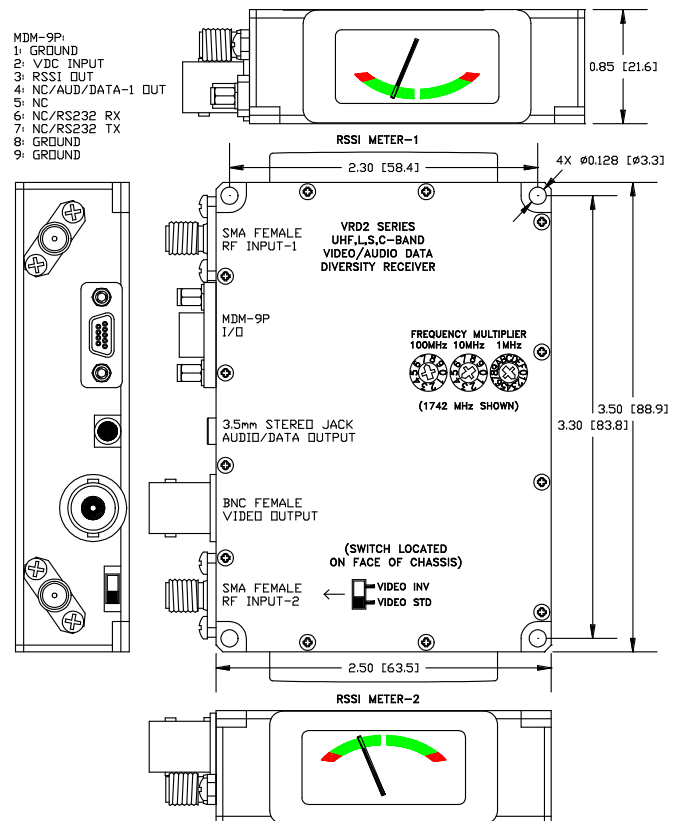
Receiver carrier frequency may be selected locally with BCD rotary switches, remotely with RS232 interface, and locally/remotely with a programmable binary switch. A slide switch allows selection between standard (positive) and inverted (negative) video. Received signal strength is indicated with dual local displays (LCD meter or LED bar) and an output pin on the I/O connector.

If your application requires video and audio or data reception, VRD2 receivers are optionally configured with an audio, RS232, or TTL data subcarrier with dual outputs for driving auxiliary devices.

VRD2 Series receivers are ideal for UAV, UGV, Military, and other applications requiring high quality diversity video reception in a compact, rugged package.

Design Features:

- 7.4 Cubic Inch Package (2.5" x 3.5" x 0.85")
- Weighs <6 oz.
- Low Current Draw (Longer Battery Life)
- Low Noise Figure (More Range)
- Full Frequency Band Channelized
- Three Frequency Selection Modes (BCD Switches, RS232, Programmable Switch)
- Dual L/S-Band (1.7-1.85 GHz and 2.2-2.5 GHz)
- Video Inversion (Slide Switch Control)
- NTSC or PAL Video (Bandwidth & De-Emphasis)
- Optional Audio, RS232, or TTL Data Subcarrier
- Dual Received Signal Strength Indication (Local Displays and Connector Pin)
- J-STD-001D Class 3 Assembly (Medical/Aerospace)



** NOTES:

- 1) NC = No Connection
- 2) Models with no subcarrier have 3.5mm Jack omitted



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AMP VRD2 Series Diversity Video/Audio/Data Receiver

RF Characteristics

Frequency Range (Specify): (Other Ranges Available)	UHF: 340.0 – 399.9 MHz Lower L-Band: 1435 – 1535 MHz Upper L-Band: 1700 – 1850 MHz S-Band: 2200 – 2399 MHz ISM S-Band: 2400.00 – 2499.75 MHz Dual L/S-Band: 1700–1850/2200–2500 MHz C-Band: 4400 – 4999 MHz Public Safety C-Band: 4940 – 4990 MHz	Steps: 100 kHz Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 250 kHz Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other
Frequency Selection (Specify):	Fixed or Channelized (Full Band - BCD Rotary Switches, RS232 Remote Control, and Programmable Binary Switch)	
Maximum RF Input:	+10 dBm Without Damage	
Input Impedance:	50 Ω Nominal, VSWR 1.5:1 Maximum	
Noise Figure:	UHF, Dual L/S: 4.5 dB Typical L/S/C-Band: 4.0 dB Typical ISM S-Band: 2.5 dB Typical	
Image Rejection:	UHF/L/S/Dual: 60 dB Minimum C-Band: 50 dB Minimum	
Signal Strength Output: Voting Characteristics:	0.3 Vdc @ -90 dBm to 5.0 Vdc @ -20 dBm, Monotonic, Dual RSSI RSSI-based, >150 kHz Voting Rate	

LO/IF Characteristics

LO Stability:	± 4 ppm Over -20°C to +70°C	
IF Frequency:	UHF: 140 MHz	L/S/C-Band, Dual: 480 MHz
IF Bandwidth:	UHF: 18 MHz	L/S/C-Band, Dual: 20 MHz
Harmonic and Spurious Level:	-50 dB Maximum	

Video Characteristics

Modulation Type:	Analog FM	
Modulation Sense:	Standard (Positive) or Inverted (Negative), Slide Switch Selectable	
Frequency Response (Specify):	10 Hz to 3.5 MHz (Monochrome), 4.2 MHz (NTSC), or 5.0 MHz (PAL), ± 1.5 dB	
De-Emphasis:	525-Line (NTSC) or 625-Line (PAL)	
Output Level:	1 Vpk-pk / ± 4 MHz @ Crossover Frequency, into 75 Ω Load	
Output Impedance:	75 Ω Nominal, Unbalanced	

Audio/Data Subcarrier Characteristics

Subcarriers (Specify):	None or One	
Subcarrier Type (Specify):	Audio, RS232 Data, or TTL Data	
Subcarrier Frequency (Specify):	4.83, 5.8, 6.0, 6.2, 6.5, 6.8, 7.2, 7.5, 8.3, 8.5, or 8.59 MHz, or Custom	
Modulation Type:	Analog FM, Positive Sense	
Frequency Response:	100 Hz to 10 kHz ± 1.5 dB (Audio) or 100 bps to 48 kbps (Data)	
De-Emphasis:	75 μ sec NTSC or 50 μ sec PAL (Audio) or None (Data)	
Output Level:	-10 dBV Line / 100 kHz pk-pk @ 1 kHz Rate into 600 Ω Load (Audio) or RS232/TTL / 150 kHz pk-pk Deviation (Data)	
Output Impedance:	600 Ω Nominal, Unbalanced (Audio) or 300 Ω (Data)	

Power Requirements

Input Voltage:	+9 to +16 Vdc, Reverse Polarity Protected
Current Draw:	350 mA Maximum

Mechanical

Material:	CNC Machined T6061-T6 Aluminum	
Finish (Specify):	Nickel Plated or Black Plated	
Dimensions:	2.50" W x 3.50" L x 0.85" H	
Weight:	6 oz. Maximum	
RSSI Display (Specify):	LCD Analog Bar Meter or LED Light Bar	
Connectors:	RF Inputs: SMA Female, Dual	
	Video Output: BNC Female	
	Audio/Data Output: 3.5mm Stereo Jack (If Applicable)	
	DC Supply, Audio/Data Out, RSSI, RS232: MDM-9P	

Environmental

Temperature (Operating):	-20°C to +70°C
Acceleration:	100 g, 3 Axes
Altitude:	Unlimited
Humidity:	Up to 95% @ Any Temperature Forming Frost or Condensation