

ESR1 Encrypted Video/Audio/Data Receiver

**Encrypted Video Receiver in a Small Package.
Ideal for Covert Operations, UAVs, and UGVs!**



Design Features

- 10.5 Cubic Inch Package (3.5"x2.5"x1.2")
- Integrated AMP DVA or Micro-View/AudioLock II Decryption
- Programmable Encryption Key
- Full Frequency Band Channelized
- 3 Frequency Selection Modes
- Supports Composite Video (NTSC or PAL)
- Received Signal Strength Indication (Chassis Display and Remote Query)
- 12V Auxiliary Supply
- J-STD-001D Class 3 Assembly (Medical/Aerospace)

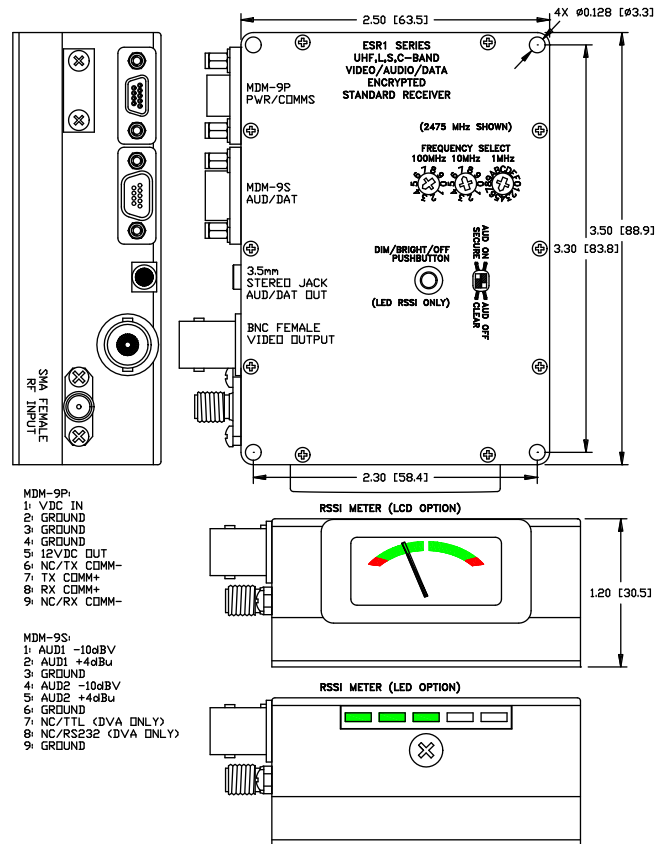
ESR1 Series

AMP's ESR1 Series 10.5 cubic inch encrypted video receivers offer high quality reception with many advanced features, including miniature packaging, low power consumption, AMP's DVA (Digital Video over Analog) or Micro-View/AudioLock II Decryption, and low noise figure. Encryption keys may be programmed for maximum security.

ESR1 receivers feature innovative circuit designs to reduce power consumption for significantly longer battery life and to reduce noise figure for more range. Lower noise figure improves video quality and reduces the required transmitter output power thereby reducing transmitter battery requirements.

Receiver carrier frequency may be selected locally with BCD rotary switches, remotely, and locally/remotely with a programmable binary switch. Slide switches allow selection between encrypted/clear video and audio on/off. Received signal strength is indicated with a local display (LCD meter or LED bar) and via remote query. If equipped with LED displays, intensity is controlled by a local pushbutton switch.

ESR1 encrypted video receivers are ideal for law enforcement, surveillance, UAV, UGV, Military, and other applications requiring high quality video reception in a compact, rugged package.



Advanced Microwave Products
 8748 Technology Way
 Reno, NV 89521
 Phone: (775) 345-9933
 E-mail: sales@advmw.com
 Web: www.advmw.com

RF Characteristics

Frequency Range (Specify):	UHF:	340.0-399.9 MHz	100 kHz Channels
(Other Ranges Available)	Lower L-Band:	1435-1535 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
	Dual L/S-Band:	1700-1850/2200-2499 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/Programmable Switch/Local BCD		
Maximum RF Input:	+10 dBm Without Damage		
Input Impedance:	50Ω Nominal, VSWR 2:1 Maximum		
Noise Figure:	< 3 dB		
Image Rejection:	> 60 dB		
Signal Strength Output:	Local Display and Remote Query		

LO/IF Characteristics

LO Stability:	±5 ppm Over -20°C to +60°C
IF Frequency:	UHF: 153.6 MHz, L/S: 374 MHz, C: 480 MHz
IF Bandwidth:	17 MHz Nominal
Harmonic and Spurious Level:	-25 dB Maximum

Video Characteristics

* See AMP DVX1 Datasheet for Additional DVA Video Specifications

Decryption (Specify):	AMP DVA or Micro-View/AudioLock II, Locally and Remotely Bypassable
Decryption Key:	256 bits, Remotely Programmable
Modulation Type:	Analog FM, Positive Sense
Frequency Response (Specify):	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 Characteristics

* See AMP DVX1 Datasheet for Additional DVA Audio Specifications

Decryption:	AMP DVA or Micro-View/AudioLock II
Channels (Specify):	0 or 2 (stereo) , Local and Remote On/Off Control
Frequency Response:	30 Hz to 12.5 kHz (DVA) or 7 kHz (Micro-View/AudioLock II), +1/-3 dB
Output Level:	-10 dBV and +4 dBu Line into 10 kΩ Load
Output Impedance:	100Ω Nominal, Unbalanced (Audio) or 300 Ω (Data)

Data Characteristics - DVA Only. Not Available with Micro-View/AudioLock II (Default 9600 Baud, other Rates Programmable)

* See AMP DVX1 Datasheet for DVA Data Specifications

Configuration Interface Characteristics

Interface Type:	Two-Way UART
Signaling Type (Specify):	RS232, RS485, 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 (Typical at 12V):	390mA
Auxiliary Supply Output:	+12 Vdc, 0.5 A Current Limit

Mechanical

Material:	CNC Machined T6061-T6 Aluminum	
Finish (Specify):	Nickel Plated or Gold Iridite	
Dimensions:	2.50" W x 3.50" L x 1.20" H	
Weight:	6 oz. Maximum	
RSSI Display (Specify):	LCD Analog Bar Meter or LED Light Bar - Local Enable and Intensity Control (LED)	
Connectors:	RF Input:	SMA Female
	Video Output:	BNC Female
	DC Supply, 12V Out, Comms:	MDM-9P
	Audio Output, Data Output	MDM-9S
	Audio Output:	3.5mm Stereo Jack

Environmental

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