

GPS Advanced Interference Suppression Unit (A-ISU)



Date Revised: 17 JAN 03

VENDOR DESCRIPTION

The A-ISU consists of a simple patch antenna and antenna electronics unit. The system provides suppression of interfering signals while allowing the GPS signals to pass with minimal attention. The system is configured for either L1 C/A code or L1&L2 P Code (Lm capable). The A-ISU operates at RF, thus enabling its use with any legacy or emerging GPS receiver. The application of the A-ISU with existing GPS receiver assets can provide in excess of 90 dB of overall system anti-jam protection.

The A-ISU is applicable to any platform or navigation payload which utilizes GPS. The A-ISU has been demonstrated in laboratory, anechoic chamber, and field tests. ERI's application of commercial off-the-shelf technology permits an affordable solution in today's value-conscious environment.



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Antenna Electronics Unit	
Input Frequency Range: 1575.42 ± 12 MHz and 1227.6 ± 12 MHz (Lm capable)	DC Power: 18-36 VDC
Interference Dynamic Range: -95 dBm to -40 dBm	Weight: < 1.7 lbs
Interference Waveform: Tone (CW), Pulsed, Swept, AWGN (24 MHz Additive White Gaussian Noise)	Dimensions: 7.70" x 4.25" x 1.30"
Interference Suppression: > 35 dB Tone, > 25 dB AWGN	Operating Altitude: to 30,000 ft
Interference Detection Threshold: > -95 dBm @ 0 dBi Antenna	Operating Temp.: -20°C to +70°C
Output Frequency Range: 1575.42 ± 12 MHz and 1227.6 ± 12 MHz	Relative Humidity: 90% non-condensing
GPS Signal Gain: 26 dB ± 3 dB (Standard, optional up to 42 dB)	Random Vibration: 0.008 g ² /Hz
Noise Figure: < 3 dB	Cooling: Convection
Interference Acquisition Time: 35 msec	Interface: Standard: RS-232, RS-422, (discrete) Jam Detect/RS-485 (optional)
Track Update time: 0.4 msec	

L ₁ Antenna	
Frequency Range: 1575.42 ± 12 MHz	Dimensions – 3.5" Dia. x .25" High
Antenna Gain: > 0 dBi (± 600 from zenith)	Weight – < 0.6 lbs.

L ₁ and L ₂ Antenna	
Frequency Range: 1575.42 ± 12 MHz and 1227.6 ± 12 MHz	Dimensions: 3.5" Dia. x .6" High (Standard)
Antenna Gain: > 0 dBi (± 600 from zenith)	Dimensions: 5.75" x 5.75" x 0.13" High (Low Observable)