

ANALOG GPS TRANSLATOR

MODEL 7371



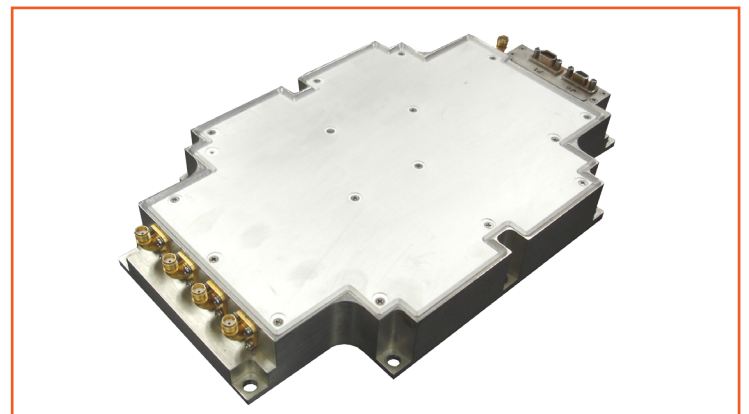
SUPPLYING HIGH PERFORMANCE FLIGHT INSTRUMENTATION, RF/MICROWAVE ASSEMBLIES, POWER AMPLIFIERS, IFF AND DATA ACQUISITION SYSTEMS FOR SEVERE ENVIRONMENTS.

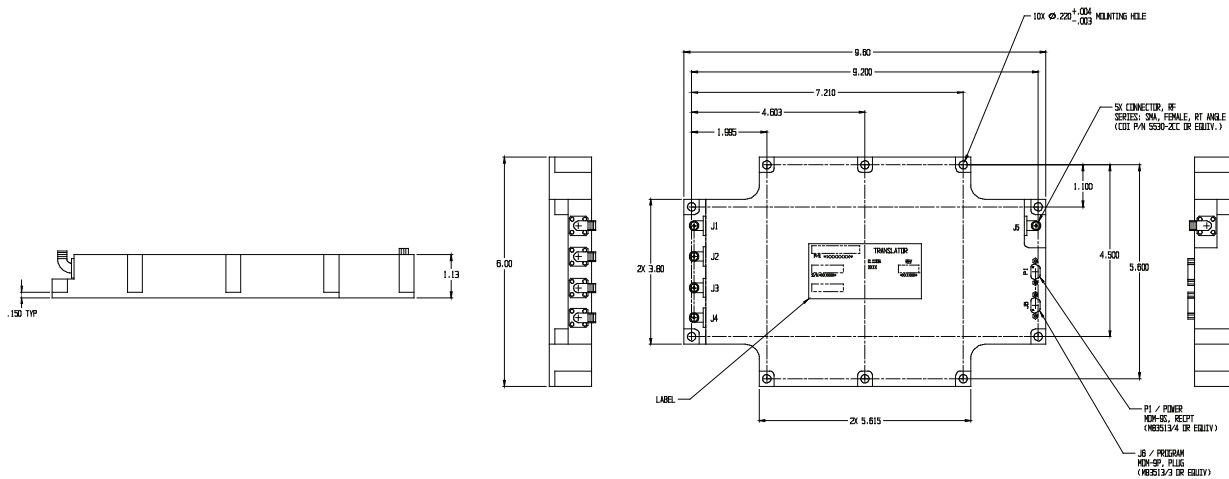
DESCRIPTION

The Ultra Electronics Herley 7371 Analog GPS Translator is intended for installation into high-dynamic missiles, weapon systems and targets. The Translator accepts Standard Positioning Service and Precise Positioning Service signals at L1 and L2 frequencies at its four (4) 50 Ohm inputs (J1, J2, J3, and J4) and translates the signals, without frequency inversion, to S-band output frequencies. The Translator output consists of Channel 1, Channel 2, Channel 3, and a Pilot Carrier all in a coherent frequency relationship. Channel 1 is comprised of the combined L1 signals from J1 and J3, time-shared with the combined L1 signals from J2 and J4. Channel 2 is comprised of the individual time-shared L1 signals from J1, J2, J3, and J4. Channel 3 is comprised of the individual time-shared L2 signals from J1, J2, J3, and J4. The pilot carrier is amplitude modulated for antenna identification. The Translator output may be programmed to a choice of two (2) pilot frequencies with a plug attached to connector J6.

FEATURES

- Utilizes Current Technology
- Translates GPS L-Band to S-Band
- Three Channel Unit
- All Internal LOs and Pilot AM Signal are coherent
- Capable of sourcing 95mA at 15 VDC on each RF input port
- Hermetically sealed





ELECTRICAL

- Input Voltage Range: +23.5 VDC to +33.5 VDC
- Input Current: < 4.4 A
- DC Power: ≤120 W (+28 VDC)
- Noise Figure: ≤8 dB
- Inputs:
 - 1575.42 MHz [L1]
 - -108 dBm to -84 dBm (C/A Code)
 - -111 dBm to -84 dBm (P(Y) Code)
 - 1227.60 MHz [L2]
 - -114 dBm to -84 dBm
- Output Frequencies: Pilot Plug Selectable (2232 or 2275 MHz)
 - Chan 1 BW - 2.2 MHz @ Pilot + 1.92 Mhz
 - Chan 2 BW - 8.0 MHz @ Pilot + 6.295 MHz
 - Chan 3 BW - 8.0 MHz @ Pilot + 6.450 MHz
- Output Levels: Pilot ≥ +27 dBm min
 - Channel 1 ≥ +36 dBm (PSD)
 - Channel 2 + 3 ≥ +36 dBm (PSD)
 - Combined: 10 watts nominal
- -30 dBc Bandwidths:
 - Channel 1 ≤ ±2.12 MHz
 - Channel 2 (3) ≤ ±5.7 Mhz

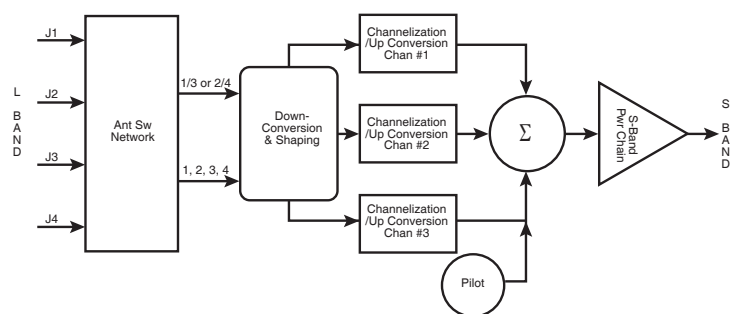
PHYSICAL

- Size: 9.0 x 6.0 x 1.26 inches (22.86 x 15.24 x 3.20 cms)
- Weight: 3.5 lb
- RF Connectors: SMA Female
- DC Power Connector: M83513 Socket
- Pilot Frequency Selection Connector: M83513 Plug

ENVIRONMENTAL

- Temperature, Operating: +10 to +71 °C
- Temperature, Storage: -40 to +85 °C
- Altitude: > 210,000 ft
- Humidity: 100% without condensation
- Random Vibration: 8.9 grms all axes
- EMI: Per MIL-STD-461E

GPS Translator Functional Block Diagram



CONNECTOR LEGEND	
CONNECTOR	FUNCTION
J1	RF INPUT 1
J2	RF INPUT 2
J3	RF INPUT 3
J4	RF INPUT 4
J5	RF OUTPUT
J6	INTERFACE
P1	OC POWER

P1 POWER	
PIN	FUNCTION
1	+23.5- 33.5 VDC
2	+23.5- 33.5 VDC
3	+23.5- 33.5 VDC
4	NC
5	NC
6	DC RETURN
7	DC RETURN
8	DC RETURN
9	NC

J6 INTERFACE	
PIN	FUNCTION
1	FREQ SELECT
2	CH1 SELECT
3	CH2 SELECT
4	CH3 SELECT
5	PILOT SELECT
6	FS (434 Hz)
7	SIGNAL RETURN
8	SIGNAL RETURN
9	2FS (868 Hz)



making a difference

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