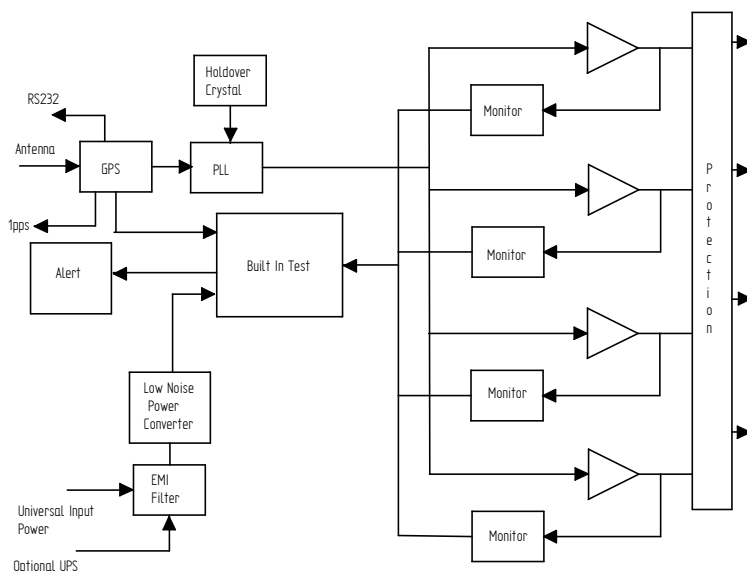


NR1110- GPS Locked OCXO



KEY FEATURES



The signal source is a GPS driven, mixed-signal phase lock loop generating a 10MHz sine output from an intrinsically low jitter voltage controlled crystal oscillator. The PLL output drives four independent output channels that are fault protected and monitored continuously. There is built in test circuitry throughout the design. All power supplies, oven status, antenna fault/open are monitored and are used to drive a status relay as well as indicators on the front panel. The power circuitry is a blend of high efficiency conversion followed by low noise linear converters.

Oven Stabilized Crystal

The OCXO provides temperature stability of 20ppb. Excellent aging is achieved through the use of overtone SC cut crystals.

Receiver

The 12 channel GPS receiver is a high correlator design that can perform very rapid sky searches for satellite signals even under very poor signal conditions.

Low Phase Noise

Typical phase noise

Offset	Typical	(dBc / Hz)
10		-110
100		-130
1k		-140
10k		-145

Technical specifications

10Mhz Sine	1 Vrms, 4 channel, 50 ohm- BNC	
RMS noise	10hz to 2Mhz 1.2 ps	
Temp Stability	±20ppb	
Daily aging	±2 ppb	
Yearly aging	±80ppb	
Receiver sensitivity	-155dBm	
PPS	30ns RMS accuracy, 3.3 volt logic	
Wander Generation	ETSI-PRC (30ns after 10000 seconds)	
AC input	90 to 250 vac, 50/60hz, IEC 320-C14	
Alert	20Vdc, 0.5 amp relay contacts- relay closed for normal condition, BNC	
Calculated MTBF	189,000 hours	

Environmental and Mechanical

Operating temperature	0 to 50C non-condensing	
Storage temperature	-40 to 70C	
Height	1RU (~1.73)	
Width	19 inch	
Depth	12 inch	
AC input	90 to 250 VAC, 50/60hz, less than 10 watts	
Weight	≈ 6.0 lbs	

Options

UPS ready	Adds circuitry to connect to custom UPS Source	U
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