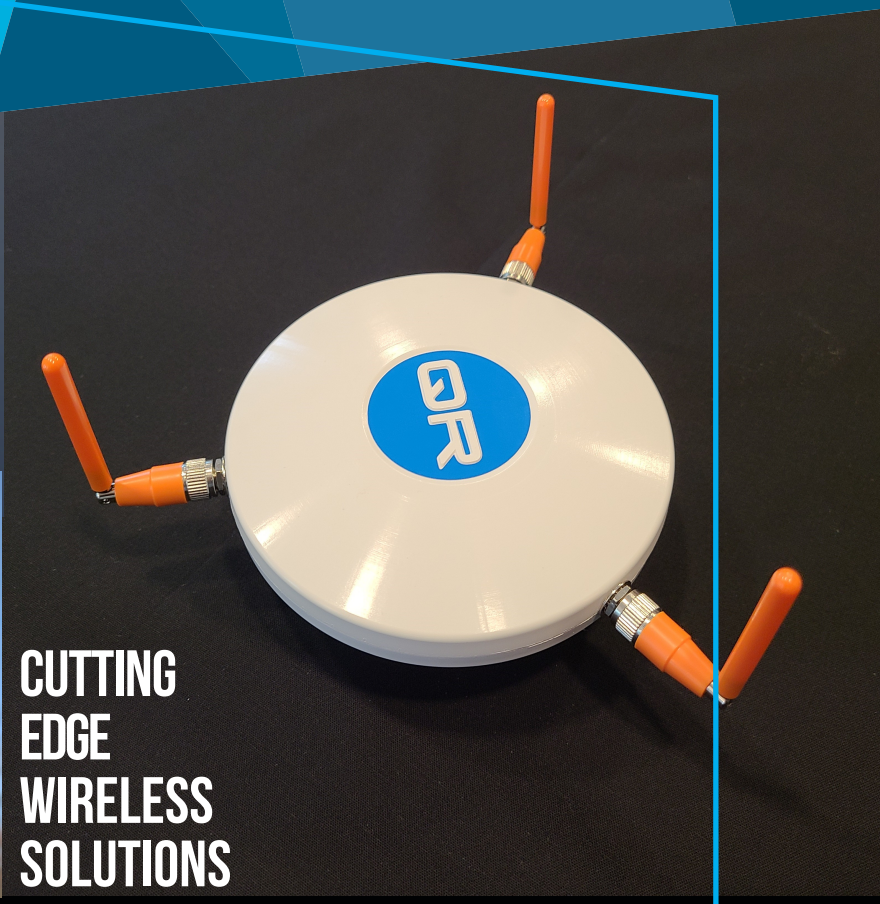
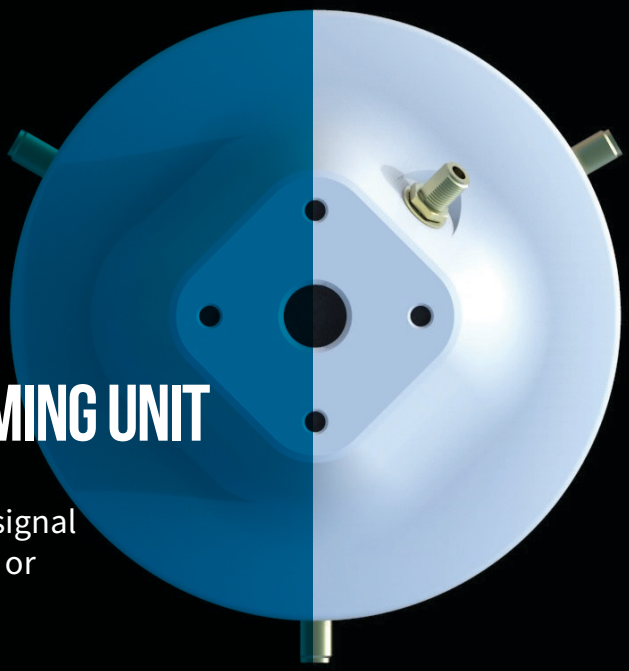
QUANTUM REVERSAL



CUTTING EDGE WIRELESS SOLUTIONS

QR100

GPS L1/L2 ANTI-JAMMING UNIT



Provides a robust RF link to GPS signal in a presence of an unintentional or intentional RF interference

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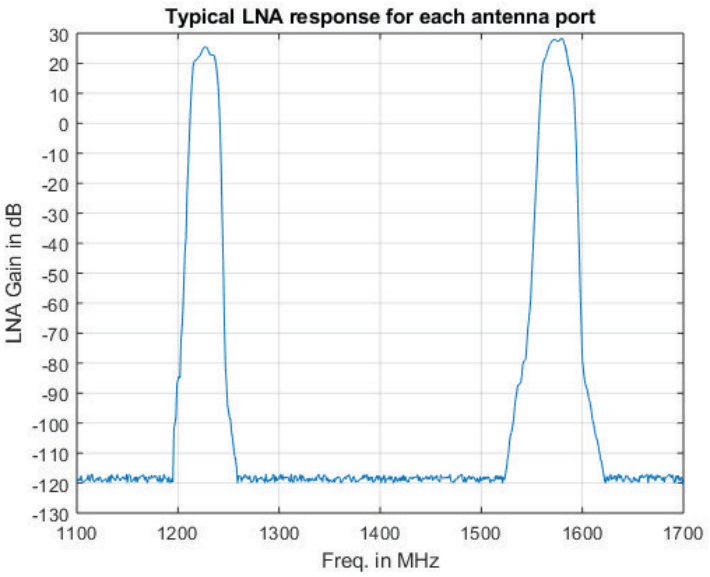
QR100 anti-jamming unit allows to mitigate an unintentional RF interference or jamming signal using a spatial domain of an antenna array reception pattern. Three passive antennas of customer choice can be connected to the QR100 unit using built-in SMA connectors. The unit default configuration (no jamming signal present) has a 120 deg phase gradient between antenna elements to maximize the reception of GPS right-hand circularly polarized (RHCP) signal. This feature allows to connect the unit to either RHCP type antennas or linearly polarized antennas. The default configuration of the unit is designed to connect to passive GPS antennas, provided that antennas are no DC grounded. Active GPS antennas may also be used. It is recommended that all three antennas are of the same type and LNA gain (in case of active antennas).

The GPS receivers have inherent anti-jamming capability of minor interference levels of up to 30 dB J/S due to de-spreading technique of extracting the GPS signal from the noise. The QR100 allows to extend this capability to medium and strong interference signal levels by adapting a deep null in the antenna array reception pattern towards the source of interference. This approach prevents the RF front end from saturation when exposed to high power sources or being in close proximity to medium power source locations. The anti-jamming algorithm is an adaptive algorithm that simultaneously performs nulling in both L1 and L2 bands without the need to know the unit's orientation or position.

Ideal for small platforms with limited DC power source

Immunity to interference and jamming

Designed for harsh environments



QR100 Product Specification

Ordering Options:

Electrical	Bandwidth	30 MHz (L1/L2)	Mechanical & Environmental	Mounting	4x M4 machine screws 3/8"-24 adapter
	In-Band Rejection (adaptive null depth)	-30 dB typical		Diameter/Height	116 mm /45 mm 134 mm (end of SMA connectors)
	Out-of-Band Rejection	**-120 dB @ ± 50 MHz**		Waterproof Level	IP67
	Number of antenna ports	3		Weight	220 grams 250 grams with whip antennas
	Antenna Ports type (side connectors)	SMA-jack		Operating Temp	-40° to +85° C
	LNA Gain	27 dB		Storage Temp	-65° to +90° C
	Noise Figure	3 dB typical		Connector types	SMA-jack
	Supply current	230 mA		DC power Input	Center Conductor (bottom SMA -jack connector)
	Power Supply Range	3.5-12 VDC		Vibration	Inquire
	Lightning	IEC61000-4-5 Level 4		Shock	Inquire
	Compliance	CE, FCC, WEE, RoHS		Attitude	Inquire