

QPatch™ 180° Coverage Antenna



Panoramic Performance

Higher-gain fixed antennas, with their attendant narrower beamwidths, are unable to receive targets over widely varying angles, frequently requiring installation of multiple fixed antenna systems. The QPatch™, with its full 180° of coverage, eliminates this issue, giving you simple, robust, worry-free data capture. Quasonix is... Reinventing Telemetry™.

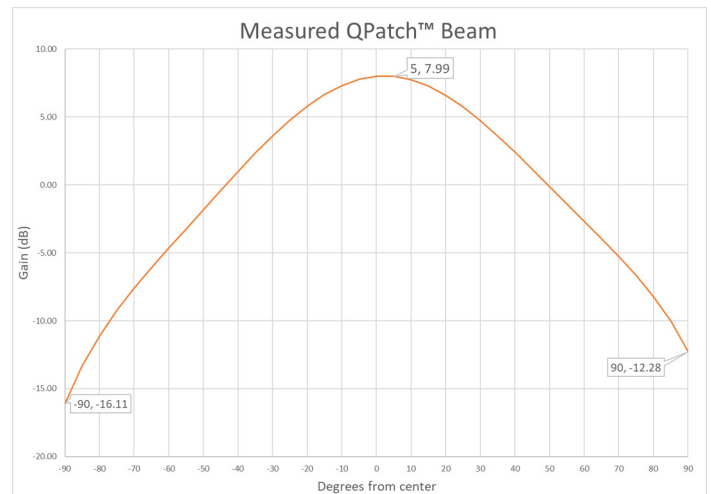
Surprising Sensitivity – QPatch accommodates reception from targets up to 50 miles away within line of sight (dependent on transmit power, mode, bit rate, and forward error correction). Gain on beam is +8 dBi. Built-in AGC limits in-band signal levels. Built-in filtered low-noise amplifiers (LNAs) provide optimal sensitivity and rejection of interference (primarily cellular), resulting in filtered LNA gain of greater than 40 dB.

Wide-Angle Coverage – QPatch offers extraordinary wide-beamwidth performance, covering 53 degrees at -3 dB and a full 180 degrees at -20 dB. This allows it to capture data not only from sources in front of the antenna but also off to the side, no steering required.

Rugged – Built for durability and to withstand the elements, such as marine environments. Includes grade 316 stainless steel components and internal RF lightning surge protection.

Easy Set-Up – With just two coaxial cables, QPatch can be controlled remotely from a receiver over 400 feet away. RF outputs are powered through the coaxial connection, eliminating extra power cabling and connectors. Bias Tees are located at the receiver input.

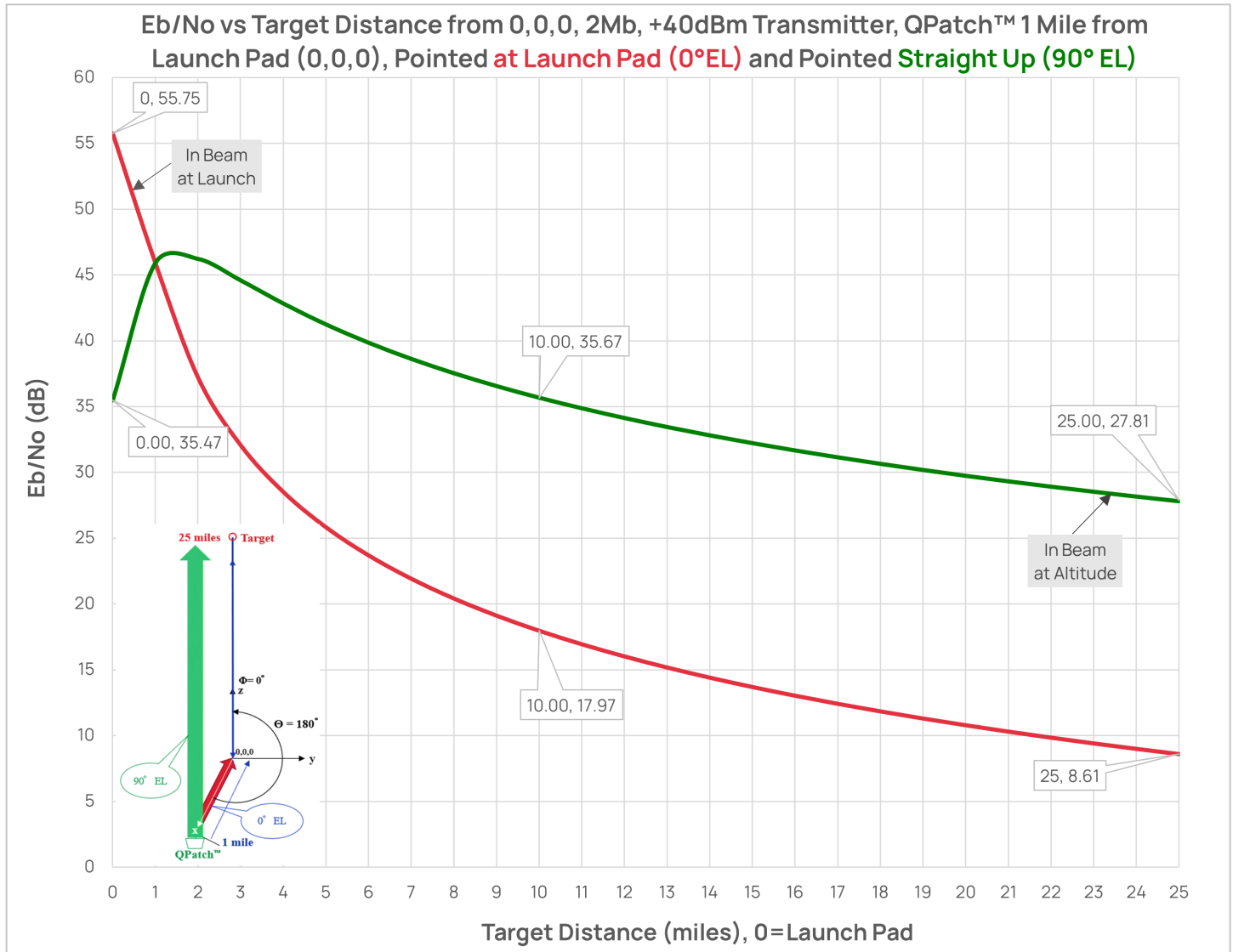
Supported by Quasonix – When you're using the latest technology, you want top-notch support. We've got that. The experts who design and build our products are here to help through all stages of deployment and use. In the case of QPatch, this includes providing pointing guidance for your specific operational scenario. (See next page for more information.)



QPatch Pointing

The Rules Have Changed

QPatch's 180-degree operational coverage allows the antenna to "see" to the side without the need to steer. As a result, the optimal pointing direction is usually pointing away from the closest point of a target. For example, if the QPatch™ is receiving data 1 mile from the launch pad of a rocket going straight up, the optimal pointing for the QPatch™ is NOT toward the launch pad but straight up.

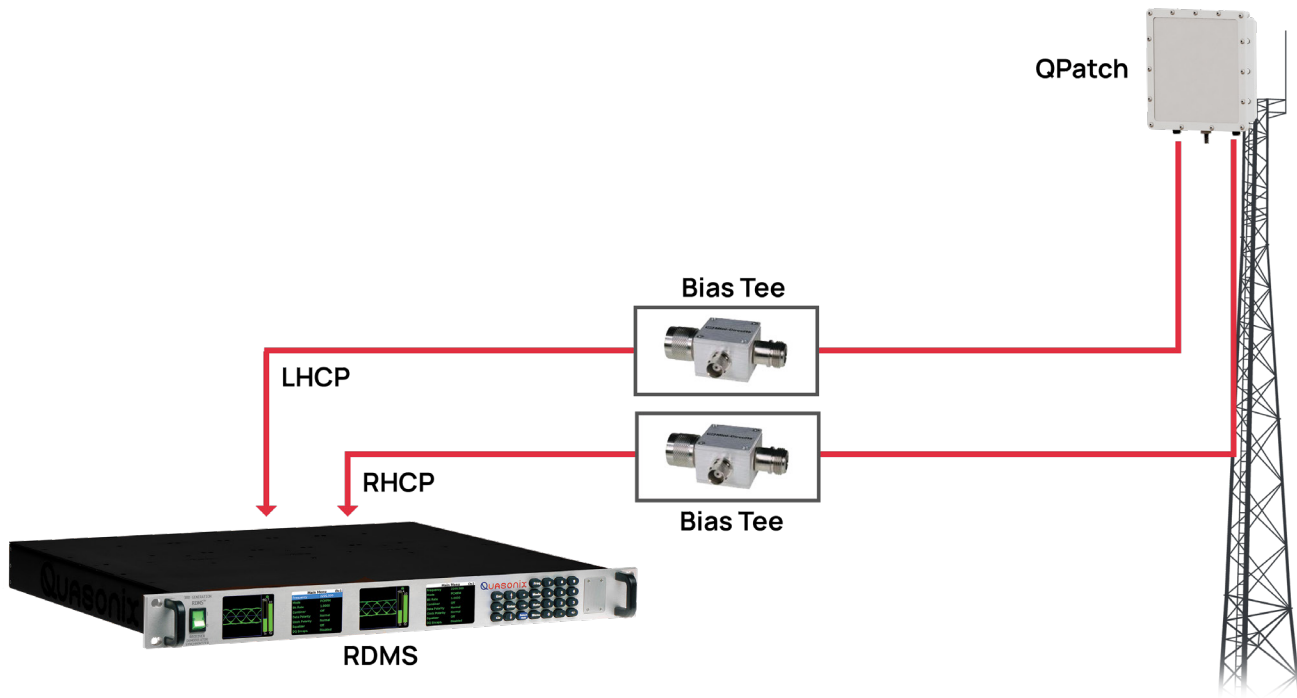


Here, we trade the 20 dB of excess gain at launch for 20 dB more gain at further ranges. Average and minimum gain over the duration of the launch are much higher.

Contact Us

Quasonix has developed an algorithm to predict the Received Eb/No across the entire flight path of the target. It compensates for the attenuation due to both the distances to the target and the direction of the target relative to the QPatch™ beam. Contact Quasonix for pointing guidance for your particular operational scenario.

System Diagram



Performance

Operating Frequency	2.2-2.3 GHz (Lower S) 2.3-2.4 GHz (Upper S) 2.2-2.4 GHz (Full S)
Polarization	Simultaneous Right Hand and Left Hand Circular
Gain	8 dBi, Combined
3 dB Beamwidth	53 degrees
Power	AC Adapter Power Supply, 100-240V~, 50-60 Hz

Physical

Size	8.75"x 8.75" x 2.5"
Weight	~8 lbs.

Environmental

Operating Temperature	-30°C to +55°C
Storage Temperature	-40°C to +71°C
Ingress Protection Rating	IP66 (NEMA 4X)

Ordering Information

QPatch Part Numbering

QSX-ANT-FPxx

xx – S0 – 2200 MHz – 2300 MHz, S1 2300 MHz – 2400 MHz, S2 2200 MHz – 2400 MHz

QPatch Installation Kit Part Numbering

QSX-AC-FPIC-xxx

xxx is cable length in feet. Length defined in 5-foot increments.

All cables have N-type connectors.

Kit includes: 2 coaxial cables, 2 bias tee modules with power cables, power supply with wall adapter, 2 lightning suppression modules.

Reinventing Telemetry™

With a razor-sharp focus on the aeronautical telemetry market and a team rich in talent, experience, and sheer determination, Quasonix is able to consistently design, develop, and manufacture what our customers regard as market-leading telemetry products.



QUASONIX

All Quasonix products are under U.S. Dept. of Commerce jurisdiction. Antennas are categorized as 5A991.
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