

4ft 65° XXX MultiServ™ 8-Port Antenna
2x698-787MHz / 2x824-894MHz / 2x1710-2400MHz / 2x1710-2400MHz

- Provides 8 antenna Ports in a slim-line form factor
- Optimized Azimuth patterns for Min Inter-Sector Interference
- Industry leading Minimal Wind-Load design

- 700, 850, PCS, AWS & WCS bands in one antenna
- AISG & 3GPP compliant internal remote electrical tilt (RET)

The Quintel MultiServ™ Multiband 8 Port Antenna with patented QTilt™ technology uniquely delivers four independent services in a single slim-line antenna. This enables existing antenna network sites to be upgraded constraint free to add new services such as LTE for 700, 850, PCS, AWS and WCS bands with the replacement of one antenna. The QS4658-3 also provides 4x 1710-2400MHz ports as two side-by-side (CLA-2X) arrays, each array having independent tilt to support independent service, or for connection to 2T4R/4T4R service.

Electrical Characteristics	2x Ports 1&2	2x Ports 3&4	2x Ports 5&6 2x Ports 7&8			
Operating Frequency (MHz)	698-787	824-894	1710-2400 1710-2400			
	698-787	824-894	1710-1780	1850-1990	2110-2180	2300-2400
Azimuth beamwidth ¹	68°	65°	75°	77°	67°	58°
Elevation beamwidth ¹	19°	15°	7.7°	7.0°	6.5°	6.0°
Gain ¹ (dBi)	12	12.5	15.2	14.7	16.0	16.0
Polarization	±45°	±45°	±45° ±45°			
Electrical down-tilt range	2°-10°	2°-10°	2° – 10° 2° – 10°			
Upper SLL (20° > mainbeam) ¹	-16dB	-15dB	-15dB	-15dB	-15dB	-15dB
Front to Back Ratio(180°±10°) ¹	≥26dB	≥29dB	≥27dB	≥27dB	≥27dB	≥27dB
Port to Port isolation ¹	≥30dB	≥28dB	≥30dB	≥30dB	≥30dB	≥30dB
Return loss (VSWR)	14dB(1.5)	14dB(1.5)	14dB(1.5)	14dB(1.5)	14dB(1.5)	14dB(1.5)
Squint ¹	<±3°	<±3°	<±3°	<±3°	<±4°	<±3°
Tracking ¹	<±2.5dB	<±3.5dB	<±3dB	<±3dB	<±3dB	<±3dB
X Polar Discrimination (at 0°)	>16dB	>20dB	>20dB	>20dB	>20dB	>20dB
Power handling (per port)	500 watts	500 watts	250 watts			
PIM (3 rd Order) (2x43dBm)	>153dBc	>153dBc	>153dBc			

¹ Typical Performance across frequency and Downtilt.



Mechanical Characteristics

Dimensions	L 52"(1320mm) x W 12"(304mm) x D 9.6"(245mm)
Weight (excl mounting brackets)	68.0lbs (30.8kg)
No. of Connectors	8x 7/16 DIN Female Long Neck
Max Wind Speed	150mph (67m/s)
Equivalent Projected Area ²	Front: 1.9ft ² (0.18m ²) Side: 3.8ft ² (0.35m ²)
Wind Load ² @160km/h (45m/s)	Front: 222N (50.0 lbs), Side: 423 (95.1 lbs)
Operating Temperature	-40°C to +65°C

² Equivalent Projected Area and Wind Load derived from windtunnel measurements. Equivalent Projected Area assumed C_d=1

Fully Integrated RET Characteristics

AISG Standards	V1.1, V 2.0 and 3GPP
Factory Default	AISG 2.0
Surge immunity	IEC 61000-4-5:2005 4KV(AISG PIN)
Device Type	SRET Type 1
AISG Data rate	9.6 kbps
No of connectors	1in, 1out
Connector type	IEC 60130-9 (Ed 3.0)
MTBF	36,000 Operational moves



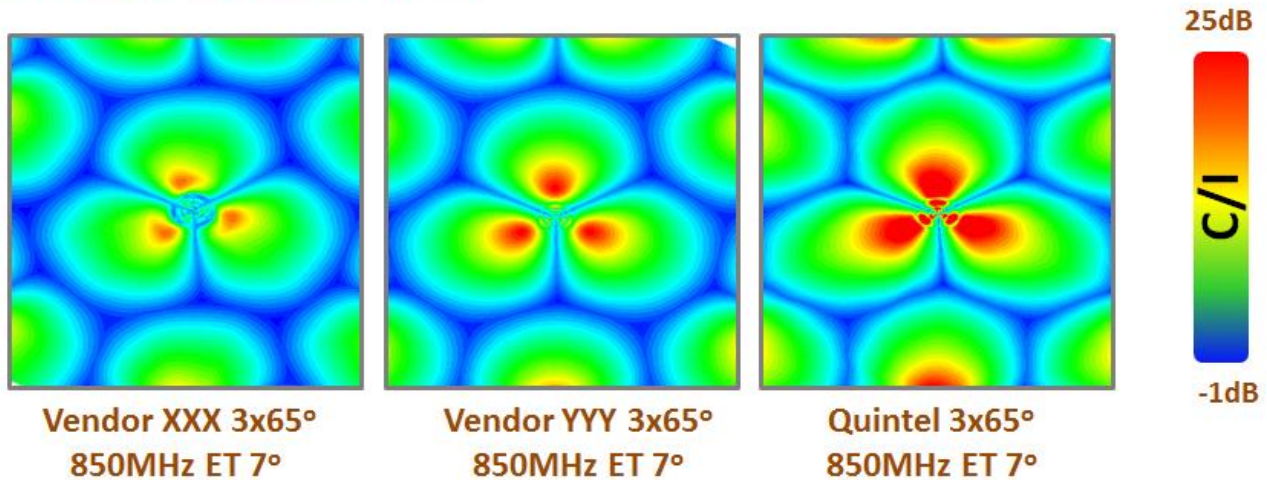
All specifications are subject to change without notice. Please contact your Quintel representative for complete information.

The Quintel MultiServ™ Multiband 8 Port Antenna is an ideal solution for independently optimizing multiple services when rapidly introducing new technologies. Technology agnostic, each pair of ports provides flexibility for existing and future technologies such as CDMA/EVDO, GSM/EDGE, UMTS/HSPA, and LTE and advanced 2T4R and 4T4R MIMO implementations at high-bands.

The tilt of each service is controlled independently via internal RET actuators compliant to AISG1.1, AISG2.0 and 3GPP protocols. The QS4658-3 provides a total of 4 independent tilts 1x(698-787MHz) + 1x(824-894MHz) + 1x(1710-2400MHz) Left array + 1x(1710-2400MHz) Right array.

Azimuth Patterns Optimized for C/I

All Quintel Antennas have market leading Sector Power Ratio (SPR) at Low-Band resulting in the least Inter-Sector Interference



A particularly powerful characteristic of all Quintel Antennas is that our Azimuth patterns have been optimized with network design and deployment in mind. The 3dB Azimuth beamwidth is ~65° as with most Base Station Antennas, but we have optimized how the pattern rolls-off and where the sidelobes emerge such that there is minimal Inter-Sector Interference when 3x sectors are deployed. This means for interference limited networks, where LTE traffic is high, our antennas have been shown to deliver 25% higher capacity.

About Quintel

Quintel is a leading innovator in the design, development, and delivery of network-efficient antenna solutions for wireless operators worldwide. The company's products enable global wireless operators to independently deploy and optimize multiple air interfaces or services on a single standard antenna platform. Quintel is the only antenna maker whose products can increase a wireless network's capacity and provide additional services, without increasing the number or size of antennas. Quintel is headquartered in Rochester, New York with additional offices throughout North America and Europe. More information about Quintel is available at www.quintelsolutions.com.

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