



Q-Series Portable Satellite Antenna Terminals (PSATs) Extremely Rapid Deployment

Government organizations and military units require durable, portable terminals for quick connectivity in remote and often harsh environments. DataPath developed the Q-series PSATs to provide reliable, high-performance satellite communications capabilities when your mission calls for rapid, easy-to-use connectivity on the go. The unique QCT90 design has only two pieces, a tri-pod and terminal which just “click and fold” to ensure both rapid deployment and stowing. The advantage of eliminating cable connections and loose parts cannot be underestimated for critical missions.

The Q-series is based on the same type of optimized antenna design as the successful C-series product family. The antenna shape optimizes three different aspects; it’s quick and easy to pack/unpack, it’s the largest possible antenna surface in a compact package and its robust carbon fiber design provides wind stability and the ability to survive rough handling.

It is rugged and tested according to Mil-std-810G without compromising a neat, sleek design. Military users as well as industrial designers were part of the development to make sure that the operator is put in the center of the design. The QCT Controller on the backside of the reflector can hold various modems and provides a unique pointing experience via a touch screen GUI supported by dual GNSS, with audio feedback, beacon receiver and modem EbNo.

The transceivers are modular and can be changed without tools when a different frequency band is needed. The controller can be quickly changed if a different modem is required.

ONLY TWO PARTS PACK INTO ONE AIRLINE CHECKABLE CASE

Easy transport and deployment

INTUITIVE GUI FOR ACCURATE ASSISTED MANUAL POINTING

Establish connection in less than five minutes with minimal training

L-BAND INTERFACE & INTEGRATED MODEMS

Adaptability to changing requirements throughout the terminal’s lifecycle

MEETS MIL-STD810G STANDARDS

Withstands rugged military use, including wind-drag, rain, dust and other environmental hazards

FIELD-SWAPPABLE X, KU & KA BAND TRANSCEIVERS

Flexibility to operate on multiple satellite networks, including Inmarsat GX, and reduces sparring with shareable replacement units



SPECIFICATIONS

	QCT90							
Transceiver Config. (Polarization acronym)	X-16W CCrP	App30b-15W LCrP	Ku-15W LCrP	Mil Ka-8W CCrP	Com Ka-10W CCrP	Com Ka-10W LCoP	X-40W CCrP	Ku-40W LCrP
Reflector	0.9 x 0.59 m (35.4 x 23.2 in)							
Antenna Positioning	The QCT Controller (mounted on the backside of the reflector) provides a superior assisted manual pointing by GUI and hardware through GNSS, electronic compass and inclinometer							
Azimuth Range	360°, fine adjust +/-20°							
Elevation Range	10° to 90° (on leveled surface, but can be tilted for lower Elevation angles)							
Operating Temp.	-32°C to +55°C (-26°F to +131°F)							
Storage Temp.	-40°C to +71°C (-40°F to +159°F)							
Operational Wind	Max 72 km/h (45 mph) with integrated windstays							
Power	90-264 VAC, 45-66 Hz or 11-36 VDC						90-264 VAC, 45-66 Hz	
Certification compliance	SkyNet, Eutelsat, Intelsat, Sicral, Athena Fidus, SES and Inmarsat GX Type Approval (Comm Ka); CE Certification according to 1999/5/EC R&TTE and MIL-STD-810G; ARSTRAT / WGS certification planned.							
Packaged Dimension & Weight	95 x 51 x 48 cm (37.4 x 15.4 x 18.9 in) ≤32 kg (70 lb) including hard transit case (depending on configuration)							
Transmit Freq. (GHz)	7.9-8.4	12.75-13.25	13.75-14.5	30.0-31.0	29.0-30.0	29.0-30.0	7.9-8.4	13.75-14.5
Transmit LO (GHz)	6.95	11.8	12.8 / 13.05	29.0	28.05	28.05	6.95	12.8 / 13.05
Receive Freq. (GHz)	7.25-7.75	10.7-11.45	10.7-12.75	20.2-21.2	19.2-20.2	19.2-20.2	7.25-7.75	10.7-12.75
Receive LO (GHz)	6.3	9.75/10.35	9.75/10.35 /11.05	19.2	18.25	18.25	6.3	9.75/10.35 /11.05
EIRP, Min @ midband (dBW)	45.6 @PLin30	50.4 @ P1dB	50.4 @ P1dB	52.2 @PLin30	53.9 @PLin20	53.9 @PLin20	47.9 @PLin30	53.5 @ PLin26
G/T @ 20° EL [dB/K]	12,9 (typ)	17,5 (typ)	17,5 (typ)	18.2 (typ)	18.2 (typ)	18.2 (typ)	12,9 (typ)	17,5 (typ)
Avg Power excl Options	194W AC	179W AC	179W AC	137W AC	125W AC	125W AC	300W AC	288W AC
Available Options:	Options Description							
Integrated Beacon	Integrated beacon receiver that makes fine-tuning of pointing possible without modem (e.g. L-band version)							
Audible Guidance	Audible guidance (high/low pitch tone) during fine-tuning with Beacon receiver							
Integrated modems (in QCT Controller box)	Available: L-band (use of external modems), iDirect 950mp, Comtech DMD1050TS, Teledyne Q-Lite. Available with lead time: Newtec MDM3310, Datum M7L and SKYWAN 5G mini. Available with longer lead time: Any other modem that fits the QCT Controller envelope.							

Notes:

Polarization acronyms: CCrP - Circular Cross Pol, CCoP - Circular Co Pol, LCrP - Linear Cross Pol, LCoP - Linear Co Pol

PLin30 defined as spectral re-growth (OQPSK, 1 symbol rate offset) -30dBc, PLin26 as -26dBc etc.

P1dB is only used for GaAs designs and can not be measured for GaN designs (where Spectral re-growth is used as a linearity metric)