

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Emerson / Motorola AIOMIO* at our website: ***Click HERE***

Specification Sheet

QUANTAR DATA BASE STATION 800 MHz / 900 MHz

MOTOROLA
intelligence everywhere™



THE QUANTAR DBS PROVIDES THE VITAL CONNECTION BETWEEN LANDLINE AND RADIO COMMUNICATION ENVIRONMENTS.

HIGH PERFORMANCE DATA TRANSMISSION

The QUANTAR DBS is designed to support high speed, reliable data communications in Private DataTAC. Key features include:

A solid-state transmitter designed to support up to 19.2 kbps data transmission for 800 MHz and 9.6 kbps data for 900 MHz, provides full power in 10 milliseconds. Transmitter power is configurable.

• Frequent transmitter keying required by busy networks is easily handled. Configurable transmitter power permits communication coverage to be customized for mobile and portable terminals.

Radio Signal Strength Information (RSSI) is available, which is a measure of the strength of signals received from mobile or portable data terminals in the network.

• RSSI allows the network controller to choose the optimum transmitter to communicate to a specific terminal and determine which transmitters may be used simultaneously without harmful interference. Hundreds of data terminals may be supported on a single channel.

Data sent to mobile or portable data terminals is converted to the correct protocol for over-the-air transmission. Data received from mobile or portable data terminals is corrected for errors before being forwarded through the network.

• Protocol conversion in the base station eliminates reprogramming the host computer to use a protocol compatible with the network. Error correction maintains data integrity.

Full duplex operation over a 4 wire Type 5 or 3002 grade telephone line.

• Full duplex operation optimizes data throughput.

MAXIMUM FLEXIBILITY IN A COMPACT DESIGN

The QUANTAR DBS features a software intensive design with 12.5 or 25 kHz programmable channel spacing for 800 MHz and 12.5 kHz for 900 MHz.

• The software-intensive design allows for easier upgrades and system migrations.

The electronic components for the QUANTAR DBS are housed in a standard EIA 19" rack mount chassis. The base station with modem and radio frequency peripherals can be housed in a 30 inch cabinet.

• Compact dimensions utilize expensive site space efficiently.

A switching power supply functions over a wide range of voltages and frequencies.

• The station is adaptable to meet a variety of needs and changing requirements.

UNMATCHED RELIABILITY AND SERVICEABILITY

The QUANTAR DBS provides reliable solid state performance and continuous duty cycle operation. Battery reverting is available in the event of a site power failure. Functionally separate modules – Field Replaceable Units (FRU) – allow most maintenance and repair work to be done quickly and easily in the field, reducing costly downtime. Comprehensive diagnostics, self-testing, and alarm reporting provide up-to-date information to ensure the station operates in optimum condition.

• The QUANTAR DBS contributes to maximum system up-time.

800 MHz QUANTAR Data Base Station

GENERAL SPECIFICATIONS

Data Protocols	RD-LAP 9.6 and 19.2
Number of Frequencies	1; Synthesized
Modulation	4 level FSK
Channel Spacing	25 kHz
Temperature Range	–30°C to +60°C
Antenna Connectors	2: Transmit and Receive; Type N Female
Power/Band Option	X250, X750
RF Power Output	20-6 watts, 100-25 watts

RECEIVER:

Frequency	806-825 MHz
IF Frequencies	73.35 MHz and 450 kHz
Adjacent Channel Rejection	70 dB
Receiver Bandwidth	19 MHz
Sensitivity	0.30µV (12 dB SINAD); 0.42µV (20 dBQ)
Static Bit Error Rate 1%	–110 dBm
Frequency Stability	±0.0001%/External Reference (optional) over temperature and voltage range
Intermodulation Rejection	85 dB
Spurious and Image Response	100 dB
Distortion	3% (measured at 1000 Hz @ 60% RSD)
FM Hum & Noise	50 dB nominal (at 1000 Hz, 60% RSD with 750µs de-emphasis)
RF Input Impedance	50 Ω

INPUT POWER:

AC Power	90-264 Vac, 47-63 Hz
Optional DC/DC Converter (positive or negative ground)	12 Vdc (20 watt station) or 24 Vdc (100 watt station)
Operation Battery Revert	12 Vdc (20 watt station) or 24 Vdc (100 watt station) Output power may be reduced up to 3 dB in battery revert to maximize battery life

TRANSMITTER:

Frequency	851-870 MHz
Electronic Bandwidth	Full sub-band (reduced when duplexer option added)
Output Impedance	50 Ω
Frequency Stability	±0.0001%/External Reference (optional) External Reference/0.1 PPM over temperature and voltage range
Intermodulation Attenuation	50 dB
Maximum Deviation	RD-LAP 19.2: ±5.6 kHz; RD-LAP 9.6 ±3.9 kHz
Spurious & Harmonics	80 dB
FM Hum & Noise	50 dB nominal (300-3000 Hz bandwidth, 60% RSD with 750µs de-emphasis)
Distortion	<2% measured at 1000 Hz @ 60% RSD

ENCLOSURES:

30˝ Indoor	30 x 22 x 20 inch (762 x 559 x 508 mm); 66 lbs (30 kg)
46˝ Indoor	46 x 22 x 20 inch (1168 x 559 x 508 mm); 75 lbs (34 kg)
60˝ Indoor	60 x 22 x 20 inch (1524 x 559 x 508 mm); 102 lbs (46 kg)

FCC DATA:

Rules Part	90
Emission Designator	RD-LAP 9.6: 16K0F1D (12.5 kHz channel) RD-LAP 19.2: 20K0F1D (25 kHz channel)
US Type Acceptance	20 watt Transmitter: ABZ89FC5775 100 watt Transmitter: ABZ89FC5776 Receiver: ABZ89FR5757
Canada Type Approval	109194195C

Power Output	Operation State	AC Line	Battery Revert		DC/DC Converter (Positive or Negative Ground)			
			12 VDC Nominal* X30 Option	24 VDC Nominal* X30 Option	12 VDC X121 Option	24 VDC X112 Option	48 VDC X113 Option	60 VDC X113 Option
20W (800 MHz)	Standby	50	40	N/A	55	N/A	50	50
	Transmit	130	105	N/A	140	N/A	125	130
100W (800 MHz)	Standby	55	N/A	45	N/A	60	50	50
	Transmit	400	N/A	335	N/A	440	390	395

** Full rated RF power is only available for terminal voltages of 13.5 to 15 V (12 VDC x 30 option) and 27 to 30 V (24 VDC x 30 option) at the station.*

900 MHz QUANTAR Data Base Station

GENERAL SPECIFICATIONS

Data Protocols	RD-LAP 9.6
Number of Frequencies	1; Synthesized
Modulation	4 level FSK
Channel Spacing	12.5 kHz
Temperature Range	–30°C to +60°C
Antenna Connectors	Transmit and Receive, Type N Female
Power/Band Option	X660
RF Power Output	100-25 watts

RECEIVER:

Frequency	896-902 MHz
IF Frequencies	73.35 MHz and 450 kHz
Adjacent Channel Rejection	70 dB
Receiver Bandwidth	6 MHz
Sensitivity	0.30µV
Static Bit Error Rate 1%	0.30µV
Frequency Stability	External Reference/0.1 PPM
Intermodulation Rejection	85 dB
Spurious and Image Response	100 dB
Distortion	≤3% (measured at 1000 Hz @ 60% RSD, 1 kHz)
FM Hum & Noise	1000 Hz tone @ 60% RSD 45 dB nominal
RF Input Impedance	50 Ω

INPUT POWER:

AC Power	90-264 Vac, 47-63 Hz
Optional DC/DC Converter (positive or negative ground)	24/48/60 Vdc (100 watt station)
Operation Battery Revert	24 Vdc (100 watt station) Output power may be reduced up to 3 dB in battery revert to maximize battery life

TRANSMITTER:

Frequency	935-941 MHz
Electronic Bandwidth	6 MHz
Output Impedance	50 Ω
Frequency Stability	External Reference/0.1 PPM
Intermodulation Attenuation	50 dB
Maximum Deviation	±2.5 kHz
Spurious & Harmonics	80 dB
FM Hum & Noise	300 to 3000 Hz bandwidth, 60% FDS 45 dB nominal
Distortion	≤2% measured at 1000 Hz @ 60% RSD

ENCLOSURES:

30˝ Indoor	30 x 22 x 20 inch (762 x 559 x 508 mm); 66 lbs (30 kg)
46˝ Indoor	46 x 22 x 20 inch (1168 x 559 x 508 mm); 75 lbs (34 kg)
60˝ Indoor	60 x 22 x 20 inch (1524 x 559 x 508 mm); 102 lbs (46 kg)

FCC DATA:

Rules Part	90
Emission Designator	RD-LAP 9.6: 10K0F1D (12.5 kHz channel)
US Type Acceptance	100 watt Transmitter: ABZ89FC5767 Receiver: ABZ89FR5768
Canada Type Approval	109194195C

Power Output	Operation State	AC Line	Battery Revert		DC/DC Converter (Positive or Negative Ground)			
			12 VDC Nominal* X30 Option	24 VDC Nominal* X30 Option	12 VDC X121 Option	24 VDC X112 Option	48 VDC X113 Option	60 VDC X113 Option
100W (900 MHz)	Standby	70	N/A	55	N/A	75	65	65
	Transmit	410	N/A	340	N/A	450	395	395

** Full rated RF power is only available for terminal voltages of 13.5 to 15 V (12 VDC x 30 option) and 27 to 30 V (24 VDC x 30 option) at the station.*



MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Trademark Office. All other product or service names are the property of their respective owners.
©Motorola, Inc. 2003. (0304) VPS

Specifications subject to change without notice.

R3-11-1009A

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP