Paragon 3

Base Station Controller for Private Networks

The Dataradio Paragon 3 Digital Base Station delivers 128 kbps in a 50 kHz wideband channel at 700 MHz, and 64 kbps in a 25 kHz channel over UHF and 800 MHz. Each Paragon 3 Base Station controller is equipped with a standard IP router and dual Ethernet 10/100BaseT interfaces. Add a second core router anywhere within your network if you need a fault tolerant network.

Each Paragon 3 can be completely reprogrammed remotely through your LAN and backhaul lines. Most of your network maintenance can be carried out from a single location. A real-time operating system and flash file system make upgrades seamless and hassle free. Add an optional Network Management system and take full advantage of both offline and online diagnostics. The built-in Base Station Monitor reports network performance and health status information.

Dataradio's patented Parallel Decode® technology uses a space-diversity, smart combining receiver system to virtually eliminate multi-path fading problems. With Parallel Decode technology, network administrators will notice an increase in RF network performance by up to 10 dB. The end result is a significant boost in network performance and double the effective coverage area.

Interoperation and interoperability are accomplished using any IP v4 compliant application. It simply plugs right in giving you the flexibility to expand your system to include other public safety agencies based within your community or with surrounding communities. Plus, the Paragon utilizes AES 128-bit encryption to ensure system data is transferred securely keeping mission-critical information safe from unwanted intrusion.

To make the most efficient use of your bandwidth, the Paragon 3 Base Station utilizes "stateless" data compression and protocol reduction. Stateless data compression compresses both UDP and TCP packets transparently and with minimal effort. Dataradio Paragon 3 comes with a one-year warranty. Extended plans are available

High Speed

Long Range

Ruggedized

Safe/Secure

Diversity

Connectivity

CalAmp ®

Paragon 3 Specifications

General

Frequency Range

	UHF	700 MHz	800 MHz
TX	403 – 512	763 – 775	851 – 869
RX	403 – 512	793 – 805	806 – 824

Channel Bandwidth
12.5 and 25 kHz for UHF
50 kHz for 700 MHz
NPSPAC and 25 kHz for 800 MHz

Frequency Increment
6.25 kHz

Mode of Operation
Full-Duplex, 100% Duty Cycle

Receiver Sensitivity

Data Rate (kbps)	UHF		700 MHz	800 MHz	
	12.5 kHz	25 kHz	50 kHz	NPSPAC	25 kHz
16	-109	–	–	-115	–
24	-106	–	–	-109	–
32	-100	-109	–	-103	-106
43.2	–	-106	–	–	-104
48	–	-103	–	–	-100
64	–	-97	-105	–	-94
96	–	–	-99	–	–
128	–	–	-93	–	–

† All values in the table are expressed in dBm and are for 1% Packet Error Rate (PER) at carrier frequency

Transmitter

	UHF	700 MHz	800 MHz
Output Power (W)	20 to 100	35 to 70	20 to 70
Spurious (dB)	> 63		

Supported Protocols
Dataradio Proprietary E-DBA with OOB AAVL Support, Ethernet/IP (Any protocol running over IP, such as ICMP, IGMP, TCP, UDP, SNTP, etc.), IP Fragmentation, ARP, IP Directed Broadcast, IP Limited Broadcast, IP Multicast Relay, DHCP Client and Server, NAT, RIPv2

Data Encryption
AES 128-bit

Management
HTTP embedded web server for setup and help, SNMP

Physical

Ethernet Host Connector
Dual RJ-45, Auto MDIX 10/100 BaseT

Serial Interfaces
Dual EIA-232F DE9 Female DCE (300 to 115,200 bps)

Supply Voltage
120 VAC (6 A Max., 60 Hz)

Display (6 Bi- or Tri-Color status LEDs)
PWR, RX, TX, STATUS, ETH0, ETH1

Cabinet Size
22.06" (W) x 75.82" (H) x 27.06" (D) (56.03 x 192.58 x 68.73 cm)

Chassis
Aluminum shelf, steel rack cabinet

Environmental

Operating Temperature
-4° to +140°F (-20° to +60 °C)

Storage Temperature
-22° to +158°F (-30° to +70 °C)

Agency Approvals
FCC, IC

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