



Gemini G3-ADB™

Agile Dual-Band Mobile for Private Networks

The Dataradio Gemini G3-ADB operates in the private licensed 700 and 800 MHz spectrum. Designed specifically for government, public safety agencies and public utilities, this agile dual band (ADB) model integrates the necessary functionality for data-only vehicular installations.

The Gemini combines 700 and 800/NPSPAC in a single unit that offers seamless roaming across any combination of these channels.

Our patented Parallel-Decode technology, featuring dual receivers, and the use of HyperCode forward error correction, allow for greatest sensitivity especially in multi-path and fading environments. Equipped with a 12-channel GPS receiver, the Gemini can determine the position, speed and direction of the vehicle. This can then be reported on-board the vehicle and/or to a remote dispatcher.

Embedded web server provides browser access for status and configuration of network parameters. Since the unit firmware and reconfigurations can be reprogrammed over-the-air, maintenance and upgrades are greatly facilitated.

The Gemini comes with a one-year warranty. Extended warranty plans are available.

Key Features

- Parallel Decode with intelligent combining dual receivers
- Highly sophisticated and powerful HyperCode forward error correction
- Base hunt mechanism scans and measures RSSI
- Integrated GPS
- Triple IF filters
- On-line and off-line diagnostics
- AES 128-bit data encryption

Key Benefits

- Provides added decode sensitivity in multi-path and fading environments
- Maintains connectivity and throughput while in motion
- Provides seamless roaming between bases
- Supplies location info for AVL and for local mapping
- Supports a mix of channel bandwidth
- For real-time network performance statistics
- Additional cyber security for the data and the network

High Speed

Long Range

Ruggedized

Safe/Secure

Diversity

Connectivity

Gemini G3-ADB Specifications



Frequency Range	700 MHz		800MHz	
TX	787 - 788		809 - 824	
RX	757 - 758		854 - 869	
Channel Bandwidth	25 and 50 kHz		12.5kHz (IC) / NPSPAC (FCC) and 25 kHz	
TX/RX Separation	30MHz		45 MHz	
Frequency Increment	6,25 kHz			
Frequency Tolerance	± 1.0 ppm (± 0.4 ppm with AFC, Paragon4 base station required)			
Mode	Half-Duplex			
Receiver	25 kHz	50 kHz	12.5 kHz (IC) / NPSPAC (FCC)	25 kHz
			-115 dbm @ 16 kbps	
			-109 dbm @ 24 kbps	
	-107 dbm @ 32 kbps		-103 dbm @ 32 kbps	-108 dbm @ 32 kbps
	-103 dbm @ 43.2 kbps			-104 dbm @ 43.2 kbps
	-99 dbm @ 48 kbps		-100 dbm @ 48 kbps	
	-92 dbm @ 64 kbps	-103 dbm @ 64 kbps	-94 dbm @ 64 kbps	
		-98 dbm @ 96 kbps		
		-92 dbm @ 128 kbps		
Transmitter	700 MHz		800 MHz	
Output Power (W)	10 to 30		10 to 35	
Spurious (db)	> 75			
Number of Channels	32 Internally Stored (Over the Air Programmable)			
Supported Protocols	Ethernet/IP (Any protocol running over IP, such as ICMP, IGMP, TCP, UDP, SNMP, etc.), IP Fragmentation, ARP, IP Directed Broadcast, IP Limited Broadcast, Multicast, DHCP Server, NAT, RIPv2			
Management	HTTP embedded web server for setup and help, SNMP			
Physical				
GPS Connector	SMA			
Ethernet Host Connector	10/100 BaseT auto-MDIX, RJ-45			
Serial Interfaces	Dual EIA-232F DE9 Female DCE (300 to 115,200 bps)			
Antenna Connector	Dual TNC Female			
Supply Voltage	10.9 to 16.3 VDC (13.6 Nominal), Negative Ground			
Display (3 Bi-Colour status LEDs)	PWR/PGM, TX/RX, LNK/ACT			
Mechanical Dimensions	6.0" x 2.0" x 7.1" (15.2 x 5.1 x 18.0 cm)			
Weight	4.5 lbs (2.04 kg)			
Circuit Protection	15 Amp External Fuse			
Chassis	Rugged Die-Cast Aluminum			
Environmental				
Operating Temperature	-22 to +140 °F (-30 to +60 °C)			
Storage Temperature	-22 to +140 °F (-30 to +60 °C)			
Humidity	95% at 40 °C (104 °F) Non-Condensing			
Vibration	MIL 810E, Method 514.4, Procedure I (10)			
Shock	MIL 810E, Method 516.4, Procedures I, VI			
EMI	FCC Part 15-B			
Agency Approvals				
Approvals	FCC (Pending), UL (46A3)			

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