ATLAS®

P25 Mission Critical

4500 Station

VHF, UHF 700 and 800 MHz

The smallest, fully software definable IP based linear base station operating in P25 Phase 1 and P25 Phase 2 The smallest, fully software definable IP based linear base station operating in P25 Phase 1 and P25 Phase 2

The ATLAS 4500 Multimode Station offers market-leading analog and P25 mixed-mode capabilities in a robust, reliable, and compact form factor. Designed and built to exceed industry standards and specifications, it is available in a range of frequency bands including VHF, UHF, 700, and 800 MHz.

FLEXIBLE ARCHITECTURE

- Leverages a common hardware platform to support 12.5 kHz Analog, 12.5kHz FDMA P25 Phase I and 6.25 kHz P25 Phase 2 TDMA and operate in Analog/P25 Conventional, P25 Trunked and Simulcast mode.
- Smallest P25 Phase 2 base station in the industry packaged in an ultra compact 2RU size chassis maximizing rack space usage
- AC or DC power input.

EASE OF USE AND MAINTAINABILITY

- Modular architecture allows flexible expansion of sites and seamless scalability of the system
- Interactive front panel design displays status and diagnostics for rapid troubleshooting
- Flexible upgrades of software

ADVANCED NEXT GENERATION DESIGN AND PERFORMANCE

- Improved multi band receiver design provides higher sensitivity along with very high intermodulation immunity for congested prime site locations.
- The high power ultra linear ultra compact RF power amplifier uses new state of the art digital and RF techniques and components that greatly simplify operation
- Full spectrum coverage in VHF, UHF and 7/800 MHz

ATLAS 4500 Multimode Station

SPECIFICATIONS

GENERAL	VHF	UHF	700 / 800 MHz
Mounting	19" rack or shelf		
Dimensions (Hx Wx D)	3.5" x 19" x 17.9" (89 x 483 x 455mm)		
Weight	24.25 lbs. (11 kg)		
Operating Temeperature Range	-30°C to +60°C		
Power Requirements	AC: 90-264 VAC, 47-63 Hz or DC: 24-58 VDC positive or negative ground.		
Power Consumption	100W Tx 480W | 40 W Rx (C4FM) / 230 W Rx (LSM)		
RF Interconnects	TX:N Female, RX: N Female		
Channel Spacing	12.5 kHz		
FCC Compliance	Parts 15 and 90		
Modulation	TX: C4FM, H-DQPSK (Linear and Linear Simulcast), RX: C4FM,H-CPM, FM		
TRANSMITTER	**VHF**	**UHF**	**700 / 800 MHz**
Frequency Range	136-174 MHz	380-520 MHz	763-776 MHz,850-870 MHz
RF Power Output	1-100 Watts		
Electronic Switching Bandwidth	Full Bandwidth		
Duty Cycle	100%		
Output Impedence	50 Ohms		
Spurious Emissions	90 dB		
Harmonic Emmisions	90 dB		
Modulation Fidelity	<3%		
Intermodulation Attenuation	40 dB, 80 dB With External Isolator		
Audio Response	As per TIA		
Analog Audio distortion	<2%		
Frequency Stability (-30°C to +60°C)	± 1.0 PPM (Internal) ± 0.1 PPM (External Ref: GPS Synchronized)		
Digital Emission Designator	8K10F1E, 8K10F1D, 9K80F7E		
Analog Emission Designator	11K0F3E	11K0F3E	16K0F3E, 14K0F3E, 11K0F3E
Analog FM Hum & Noise (S/N Ratio)	45 dB		
Maximum Deviation (Analog)	± 2.5 kHz	± 2.5 kHz	± 5 kHz
Maximum Deviation (Digital)	± 3110 Hz	± 3110 Hz	± 3110 Hz
RECEIVER	**VHF**	**UHF**	**700 / 800 MHz**
Frequency Range	136-174 MHz	380-520 MHz	792-825 MHz
Analog Sensitivity: 12dB SINAD	-119 dBm	-119 dBm	-119 dBm
Digital Sensitivity: for 5% BER	-119 dBm	-119 dBm	-119 dBm
Signal Displacement Bandwidth	± 1 kHz		
Frequency Stability (-30°C to +60°C)	0.5 PPM		
Analog Adjacent Channel Rejection (TIA603D)	72 dB		
Digital Adjacent Channel Rejection	60 dB		
Intermodulation Rejection	82 dB		
Spurious and Image Response Rejection	90 dB		
Audio Response	+1, -3 dB From 6 dB Per Octave De-Emphasis; 300-3000 Hz Referenced To 1000 Hz At Line Output		
Analog Audio distortion (at 1000 Hz)	2%		
Digital Audio distortion (at 1000 Hz)	As per TIA		
Analog Hum & Noise (TIA)	45 dB		
Digital Hum & Noise (TIA)	As per TIA		
RF Input Impedence	50 Ohms		

STANDARDS COMPLIANCE	
EFJohnson's stations comply with the following standard specifications:	
P25 Digital Operation	TIA-102.CAAB-D
Digital Phase 2 (TDMA) Operation	TIA-102.CCAB-A
Analog FM Operation	TIA 603-D
EMI/EMC	NTIA Manual Chapter 5
PSTN Line Isolation	FCC Part 68 (USA)

EF Johnson Technologies, Inc.
1440 Corporate Drive, Irving, TX 75038-2401
Phone: 800.328.3911 • efjohnson.com

a JVCKENWOOD Company