

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 Temperature 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	
<i>EFJohnson's stations comply with the following standard specifications:</i>	
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)

All specifications are subject to change without notice. Please check the website for the latest version.  
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