KENWOOD

ATLAS®
P25 Mission Critical

4500 Base Station

VHF, UHF, and 700/800 MHz

Making Safe, Simple™

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

The ATLAS 4500 Multimode Base Station offers market-leading analog and P25 Phase 1 and Phase 2 TDMA 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, and 700/800 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 operates in Analog/P25 Conventional, P25 Trunked and Linear Simulcast mode
- Smallest P25 Phase 2 base station in the industry packaged in an ultra compact 2RU size chassis maximizing rack space usage
- Supports dynamic P25 Phase 1 and P25 Phase 2 mixed mode operation
- AC or DC power input
- P25CAP Compliant
- Supports P25 voice and data capability

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
- 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 700/800 MHz

ATLAS 4500 Base Station Specifications

General	VHF	UHF	700 / 800 MHz
Mounting	19" rack or shelf		
Dimensions (Hx Wx D)	3.5 x 19 x 17.9 in. (89 x 483 x 455 mm)		
Weight	24.25 lbs. (11 kg)		
Operating Temeperature Range	-22°F to +140°F (-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	480W (Rx and Tx at 100 W) | 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		

Transmitter	VHF	UHF	700 / 800 MHz
Frequency Range	136-174 MHz	380-520 MHz	763-776 MHz, 850-870 MHz
RF Power Output	5-100 Watts		
Electronic Switching Bandwidth	Full Bandwidth		
Duty Cycle	100%		
Output Impedence	50 Ω		
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 [-22°F to +140°F (-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, 11KOF3E
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
Modulation	FM, C4FM, H-DQPSK		

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 [-22°F to +140°F (-30°C to +60°C)]	0.5 PPM		
Analog Adjacent Channel Rejection (TIA603D)	72 dB		
Digital Adjacent Channel Rejection (Selectivity)	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	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 Ω		
Modulation	FM, C4FM, H-CPM		

Standards Compliance	
EFJohnson's stations comply with the following standard specifications:	
P25 Digital Operation	TIA-102.CAAB-D
P25 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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