KENWOOD

ATLAS®
P25 Mission Critical

# 4200 Base Station

VHF, UHF, 700 and 800 MHz

*Making Safe, Simple™*

Compact scalable IP based simulcast station that simplifies deployment and support while reducing lifetime ownership costs.

The ATLAS 4200 Multimode Simulcast Station/Repeater offers market-leading simulcast capabilities for analog and P25 Phase 1 mixed mode 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

- Support for analog and P25 Phase 1 conventional simulcast and P25 trunked simulcast operation
- Synchronized timing throughout the network is enabled with an integrated time synchronization interface and GPS receiver input
- Integrated simulcast manager provides launch time for all repeaters of a simulcast channel
- P25 and analog voting functionality implemented with an integrated voter comparator
- Compact 2RU form factor maximizes rack space usage

## Ease Of Use And Maintainability

- Intuitive configuration programming interface to enable quick and trouble-free installation
- Interactive front panel design displays status and diagnostics for rapid troubleshooting
- Flexible upgrades of software

## Advanced Next Generation Design And Performance

- Built for continuous duty cycle operation with ruggedized modules, boards, and components
- High efficiency power amplifier heatsink design maximizes heat dissipation and equipment longevity
- Low current consumption in transmit and receive modes
- Supports external high stability frequency reference to achieve ±0.1 ppm frequency accuracy

# ATLAS 4200 Multimode Base Station Specifications

| General | VHF | UHF | 700 MHz | 800 MHz |
|---|---|---|---|---|
| Mounting | 19" rack or shelf | | | |
| Dimensions (HxWxD) | 3.5 x 19 x 14 in. (89 x 483 x 356 mm) | | | |
| Weight | 20 lbs. (9 kg) | | | |
| Temperature Range | -22°F to +140°F (-30°C to +60°C) | | | |
| Input Voltage | 13.8VDC ±10% | | | |
| Power Consumption | 100 W Tx - 220 W \| 15 W Rx | | 100 W Tx - 300 W \| 15 W Rx | |
| Frequency Resolution | 12.5 kHz | | | |
| FCC Compliance | Parts 15 and 90 | | | |

| Transmitter | Analog | Digital | Analog | Digital | Digital | Analog | Digital |
|---|---|---|---|---|---|---|---|
| Frequency Range | 135-160, 148-174 MHz | | 370-400, 400-435, 435-470, 455-490 MHz | | 769-775 MHz | 851-869 MHz | |
| RF Output Power | 2 W - 100 W | | | | | | |
| Duty Cycle | 100% | | | | | | |
| Output Impedance | 50 Ohms | | | | | | |
| Spurious Emissions | 100 dB | | | | | | |
| Harmonic Emissions | 100 dB | | | | | | |
| Maximum Deviation | ± 2.5 kHz | ± 3110 Hz | ± 2.5 kHz | ± 3110 Hz | ± 3110 Hz | ± 5 kHz | ± 3110 Hz |
| Audio Response | As per TIA | | | | | | |
| Audio Distortion | 2% | N/A | 2% | N/A | N/A | 2% | N/A |
| Emission Designators | 11K0F3E | 8K10F1E, 8K10F1D | 11K0F3E | 8K10F1E, 8K10F1D | 8K10F1E, 8K10F1D | 16K0F3E, 14K0F3E | 8K10F1E, 8K10F1D |
| Hum & Noise (TIA) | 45 dB | N/A | 45 dB | N/A | N/A | 50 dB | N/A |
| Frequency Stability [-22°F to +140°F (-30°C to +60°C)] | ± 0.1 PPM/2 Yr (with external reference standard) | | | | | | |

| Receiver | Analog | Digital | Analog | Digital | Digital | Analog | Digital |
|---|---|---|---|---|---|---|---|
| Channel Spacing | 12.5 kHz | | | | | 25, 12.5 kHz | 12.5 kHz |
| Frequency Range | 135-160, 148-174 MHz | | 370-400, 400-435, 435-470, 455-490 MHz | | 799-805 MHz | 806-824 MHz | |
| Sensitivity: 12dB SINAD | -119 dBm | N/A | -119 dBm | N/A | N/A | -119 dBm | N/A |
| Sensitivity: for 5% BER | N/A | -119 dBm | N/A | -119 dBm | -119 dBm | N/A | -119 dBm |
| Selectivity | 72 dB | 60 dB | 72 dB | 60 dB | 60 dB | 78 dB | 60 dB |
| Signal Displacement Bandwith | ± 1 kHz | | | | | | |
| Frequency Stability [-22°F to +140°F (-30°C to +60°C)] | ± 1.0 PPM | | | | | | |
| Intermodulation Rejection | 82 dB | | | | | | |
| Spurious & Image Rejection | 90 dB | | | | | | |
| Audio Response (1000 Hz ref.) | As per TIA | | | | | | |
| Audio Distortion (at 1000 Hz) | 2% | As per TIA | 2% | As per TIA | As per TIA | 2% | As per TIA |
| Hum & Noise (TIA) | 45 dB | As per TIA | 45 dB | As per TIA | As per TIA | 50 dB | As per TIA |
| RF Input Impedance | 50 Ohms | | | | | | |

| Standards Compliance | |
|---|---|
| EFJohnson's stations comply with the following standard specifications: | |
| P25 Digital Operation | TIA 102.CAAB-D |
| Analog FM Operation | TIA 603-D |
| EMI/EMC | NTIA Manual Chapter 5 |
| PSTN Line Isolation | FCC Part 68 (USA) |



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