

BASE STATION/REPEATER

CASCADE



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Codan's Cascade is a next-generation P25 base station/repeater integrated system-in-a-box. This all-inclusive package features a modular design allowing for two 100W P25 repeaters mounted inside a 4RU subrack complete with P25 DFSI network interface and power supply.

KEY FEATURES

- Remote programming and diagnostics allow for system flexibility
- Designed for small-to-medium markets to help build affordable networks
- System-in-a-box solution providing voting, simulcast, and P25 trunking network control
- Ultimate solution for controlling system redundancy
- Remote site monitoring allows operators to always be aware of their system's health and operations

BUILT-IN CONTROLLER

It's never been easier or more affordable to build your own network. Each Cascade repeater contains a built-in network and is upgradeable for simulcast/voting.

REMOTE PROGRAMMING AND DIAGNOSTICS

Integrated into the Cascade repeater are the networking control modules that allow for remote monitoring via web browser. Cascade's diagnostics, alarming, and logging functions are built-in, allowing for a wide range of system health parameters to be monitored remotely.

OPEN STANDARDS INTERFACE

Only open P25 standards are used for external interfaces to a Cascade network, including DFSI (Voice and Data). Built around standards requirements from FCC, TIA, IC, ETSI and ACMA, the Cascade repeater provides the extremely high performance expected from a Public Safety LMR system.

Cascade is available as a base station or repeater, or base station/repeater combination. Cascade can be configured for operation in VHF frequency bands. The standard Cascade configuration comes with a 10-100 W power output, 48V DC power inputs, and P25 DFSI interface.

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SPECIFICATIONS

RECEIVER

Frequency Band	148 to 174 MHz
Channel Spacing	6.25, 12.5 kHz
Channel Step Size	1.25 kHz
Frequency Switching Range	Full Band
Reference Sensitivity (12 dB SINAD & 5% BER)	≥ -120 dBm
Adjacent Channel Rejection	≥ 60 dB
Conducted Spurious Output Power (Analog)	≤ -95 dBm (9 kHz to 1 GHz)
Intermodulation Rejection	≥ 80 dB
Hum & Noise Ratio	*N/A (≥ 45 dB)
L.O. Frequency Stability	≤ 0.5 ppm
Audio Distortion (Analog)	*N/A (≤ 2%)
Audio Output Level (600 Ω Balanced)	*N/A (Max -8 dBm)
Operating Temperature	-30 to +60°C
Supply Current	≤ 200 mA

TRANSMITTER

Frequency Band	148 to 174 MHz
Channel Spacing	6.25, 12.5 kHz
Channel Step Size	1.25 kHz
Frequency Switching Range	Full Band
RF Output Power	10 to 100 W (in 1 W Steps)
Duty Cycle	100%
Undesired Emissions (Conducted Spurious)	≤ -90 dBc
Undesired Emissions (Adjacent Channel Power Ratio)	≥ 60 dB (Analog), ≥ 65 dB (Digital)
Intermodulation Attenuation	≥ 55 dB (Analog), ≥ 65 dB (Digital)
FM Hum & Noise Ratio	*N/A (≥ 45 dB Analog)
Carrier Frequency Stability	≤ 0.5 ppm
Audio Distortion (Analog)	*N/A (≤ 2%)
VSWR Protection	Any (with fold-back)
Operating Temperature	-30 to +60°C
Standby Current	≤ 250 mA @ -48 V (no fan)
Transmit Current	≤ 7.25 A @ -48 V (@ 100 W with fans)
Emission Designators	8K10F1D, 8K10F1E, 8K10F1W, 8K10F7W, 8K70D1D, 8K70D1E, 8K70D1W, 8K70D7W, 9K80D7D, 9K80D7E, 9K80D7W, 11K0F3E

Values noted are typical. Equipment descriptions and specifications subject to change without notice or obligation.