

## CASCADE BASE STATION/REPEATER

### ➤ FEATURES AT A GLANCE



- **Remote programming and diagnostics allow for system flexibility**
- **Designed for small-to-medium markets to help build affordable networks**
- **Fully integrated IP capable 100W infrastructure in compact 4RU package**
- **Vendor neutral, standards based operation**
- **Optimal for Voting, Simulcast and Trunked solutions**
- **Remote site monitoring allows operators to always be aware of their system's health and operations**

Cascade™ is Codan's latest P25 base station/repeater infrastructure platform that has been engineered from the ground up with a focus on IP-networked radio solutions. This all-inclusive package features two 100 W P25 repeaters mounted inside a 4RU subrack complete with network interface and power supply.

### FULLY INTEGRATED HARDWARE

The Cascade can be configured as a standalone base station or repeater, or as a conventional or trunked radio communications endpoint. The current Cascade configuration supports 2x P25 and Analog VHF transceivers in a 4RU housing, each with 10-100 W power outputs, 48V DC power inputs, and P25 DFSI interface.

### REMOTE PROGRAMMING & DIAGNOSTICS

Integrated into the Cascade repeater are the networking, voting, simulcast and trunked control modules that allow for remote monitoring via web browser. Cascade has full diagnostics, alarming, and logging functions built-in, allowing for a wide range of system health parameters to be monitored remotely. The Cascade unit connects to a network based controller for Voting and Simulcast/Multicast configurations, allowing total system management from a single web-based interface.

### OPEN STANDARDS INTERFACE

As part of Codan Radio Communication's commitment to open standard, vendor neutral operation, the Cascade has been 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.

## SPECIFICATIONS

### RX:

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)	$\geq -120$ dBm
Adjacent Channel Rejection	$\geq 60$ dB
Conducted Spurious Output Power (Analog)	$\leq -95$ dBm (9 kHz to 1 GHz)
Intermodulation Rejection	$\geq 80$ dB
L.O. Frequency Stability	$\leq 0.5$ ppm
Operating Temperature	-30 to +60°C
Supply Current	$\leq 200$ mA

### TX:

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 100W (in 1W Steps)
Duty Cycle	100%
Intermodulation Attenuation	$\geq 55$ dB (Analog), $\geq 65$ dB (Digital)
Carrier Frequency Stability	$\leq 0.5$ ppm
Modulation Fidelity	$\leq 2\%$
VSWR Protection	Any (with fold-back)

### GENERAL:

Standby Current	$\geq 300$ mA @ -48 VDC (no fan) [1 Ch]
Transmit Current	$\leq 7.25$ A @ -48 V (@ 100 W with fans) [1 Ch]
Operating Temperature	-30 to +60°C
Dimensions	19" x 6.925" x 18.7" (483 x 176 x 475 mm) [4 RU]
Weight	$\leq 44$ lbs (20 kg) [1 Ch], 62 lbs (28.1 kg) [2 Ch]

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

## CODAN RADIO COMMUNICATIONS

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