

DSP85 Digital Repeater:

½ Watt

Product Applications

An in-building digital repeater is utilized to propagate over-the-air radio frequency signals from a local cell tower into buildings via a fiber or coax distributed antenna system (DAS). Once installed, a digital repeater provides the signal power necessary for wireless devices in the building to operate seamlessly.

Westell, formerly Cellular Specialties, Inc. (CSI), was the first company to introduce a digitally filtered repeater capable of passing all of the wireless service provider spectrum requirements utilizing high quality state-of-the-art DSP components. The Westell digital repeater line utilizes digital signal processing (DSP) technology to achieve the highest level of performance and flexibility available today. This product offers major benefits over traditional in-building repeaters including unlimited spectrum agility, sharp filtering, and state-of-the-art monitoring and control. Available in multiple frequency bands, and single-band and dual-band configurations, Westell has a digital repeater to suit any in-building application.

Repeater Line Overview

- Remote monitoring and control
- ½ watt power
- Single and dual band configurations available
- Modular units are flexible and lightweight
- Wall mount original series housing is sturdy and ideal for single and dual-band systems



DSP85-250, Rack Mount Modular Series

Ordering Details

Part Number:	Description:
CS10-443-409	DSP85-250-L7, D1:D1
CS10-510-401	DSP85I-250-P, D1:D1
CS10-514-403	DSP85I-250-C/P, D1:D1
CS10-515-403	DSP85I-250-C/P, D2:D1
CS10-851-400	DSP85I-250-C, D1:S2

Digital Software-Based Filter Technology

- High selectivity
 - DSP filter technology provides a higher standard of filter characteristics and excellent out-of-band rejection
- Spectrum agility
 - User-defined band edges
 - From full band to multiple sub-bands per technology
- Easily change filter combinations
 - Standard filter combinations on demand
 - Custom filters can be downloaded locally or remotely



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Repeater Features

Frequency:	
Cellular 850	X
PCS 1900	X
L7	X
Fan cooling	X
Gain	85
Power level	27 dBm
Chassis type	Rack/Wall

Electrical Specifications

	Single Band:	Dual Band:
Passband options	1 MHz - full band	1 MHz - full band
Linear output power, 1/2 watt (typical)	27 dBm	27 dBm
Noise figure @ max gain	5.0 dB	5.0 dB
Propagation delay	<2.5 microseconds	<2.5 microseconds
Gain adjustment range	30 dB, 0.5 dB steps	30 dB, 0.5 dB steps
VSWR	<1.5:1	<1.5:1
Spurious emissions	<-13 dBm	<-13 dBm

Mechanical Specifications

	Single Band:	Dual Band:
1/2 Watt Power Requirements	0.9 Amps @ 120 VAC / 0.5 Amps @ 230 VAC	1.5 Amps @ 120 VAC / 0.8 Amps @ 230 VAC
Dimensions:	19 x 18 x 3.5 in (2U) (approx.)	19 x 18 x 3.5 in (2U) (approx.)
Weight/Shipping Weight	17 lbs (approx.)	21 lbs (approx.)
Connectors	N-female	N-female
Operating Temperature	-10° to 50° C	-10° to 50° C

Specifications subject to change without notice



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