

# Over-the-Air 800 CDMA Network Repeater™

*1- and 2-Channel Channelized Repeaters for Filling Holes and Reducing Interference*

## BENEFITS

- ⇒ Lower CDMA deployment costs
- ⇒ Fills in CDMA holes around analog cell sites
- ⇒ Reduces analog interference at non-CDMA equipped cell sites
- ⇒ Channelized to only repeat and amplify one or two 1.25 MHz CDMA channels

## FEATURES

- ⇒ IS-95/97 compliant
- ⇒ High output power
- ⇒ "Fits-on-a-pole" cabinet; small, unobtrusive, aesthetically acceptable
- ⇒ Weathertight enclosure; can be mounted outdoors
- ⇒ Simple maintenance concept; field replaceable unit—gets you back on the air fast
- ⇒ Back-up power option
- ⇒ RepeaterNet™—User-friendly supervisory control and alarm network for OA&M
  - Windows® 95 (Craft)
  - Windows® NT (NMS)
  - Graphical User Interface
  - Regional Control for up to 128 Network Repeaters
  - Network Master for up to 128 Regional Controllers



*The Repeater Technologies OA800C NR*

## APPLICATIONS

When deploying an overlaid CDMA network in an analog system, not all cell sites are equipped with CDMA. Typically every other, or every third, cell has a CDMA base station. Because analog cells are not CDMA-equipped, some crucial, high-traffic areas are likely to be terrain-shadowed from the CDMA signal. Installing the Repeater Technologies OA800C Network Repeater at the analog site, or near the shadowed area, can ensure continuous CDMA coverage in these areas and enhance CDMA network performance.

The OA800C NR also reduces analog interference to CDMA Mobiles when Mobiles are close to (within 500 to 1,000 feet) an analog cell site.

This interference frequently occurs because cell sites are often located near major thoroughfares or Interstate highways.

The OA800C NR can provide a CDMA presence at an analog cell by repeating the neighboring CDMA cell site signal.

In other applications, the OA800C NR can provide CDMA coverage in buildings, tunnels, convention centers, or sports arenas that use digitally-incompatible, channel-translating repeaters.

Because the OA800C NR is small, inexpensive, easy to deploy, and requires minimal infrastructure support, it is an ideal, low-cost solution.

When installed at an analog cell site, the OA800C NR can quickly be deployed at a fraction of the cost of a full CDMA infrastructure channel. In addition, power supply options of the Repeater allow connection to cell site 24 VDC power, and the OA800C NR requires no additional T1/E1 facilities.

## OA800C NR—Technical Specifications

MODELS AND FREQUENCY RANGE (MHz)				
MODEL	CHANNEL BANDWIDTH	BAND	FORWARD	REVERSE
OA800C-A	1.25 MHz	A	869.0 – 880.0 & 890.0 – 891.5	824.0 – 835.0 & 845.0 – 846.5
OA800C-B	1.25 MHz	B	880.0 – 890.0 & 891.5 – 894.0	835.0 – 845.0 & 846.5 – 849.0

RF CHARACTERISTICS			
FORWARD RF OUTPUT POWER PER CARRIER AT THE ANTENNA PORT		GAIN (dB) ADJUSTABLE IN 2 dB STEPS	NOISE FIGURE
1-Channel	2-Channel		
+35 dBm	+32 dBm	55 – 85	7 dB maximum @ 85 dB gain

MECHANICAL / ELECTRICAL CHARACTERISTICS					
POWER CONSUMPTION	INPUT VOLTAGE OPTIONS	SIZE	WEIGHT	TEMPERATURE	ANTENNA CONNECTORS
275 Watts	90–255 VAC, 50-60 Hz or 24/48 VDC ±10%	16 H x 14 W x 11 D (inches) 406 H x 356 W x 280 D (mm)	45 lbs. or 20 kg	-30° to +50° C	Type N (f) 7/16 DIN (f) optional

ADDITIONAL CHARACTERISTICS					
Rho	DELAY	MAXIMUM INPUT SIGNAL (WITHOUT DAMAGE)	SPURIOUS RESPONSE	3 dB SAW FILTER BANDWIDTH	VSWR
	12 µsec maximum	+10 dBm	per IS 95/97	<1.25 MHz	<1.5:1

REPEATERNET ALARM, MONITORING, AND CONTROL		
ACCESS OPTIONS	GUI	FUNCTIONS
<ul style="list-style-type: none"> <li>RS-232 (local)</li> <li>POTS (dial-up)</li> <li>Wireless Modem</li> </ul>	<ul style="list-style-type: none"> <li>Windows® 95 (Craft)</li> <li>Windows® NT (Master)</li> <li>32-bit</li> <li>Point and click</li> <li>Pull-down menus</li> </ul>	<ul style="list-style-type: none"> <li>Summary Alarm</li> <li>Interrupt Reporting</li> <li>Definable Threshold</li> <li>Remote Control: Gain, Channel, and PA On/Off</li> </ul>

ALTERNATE POWER OPTIONS	
TYPE	DESCRIPTION
BUPS	2-8 hours of backup power without AC
Solar Power	PV (Photovoltaic) with regulated charging to batteries
Hybrid Solar and TEG	PV with thermal electric propane generation assistance
Hybrid Solar and MG	PV with propane or diesel generation assistance

INPUTS AND OUTPUTS			
LOCAL I/O	OUTPUT TYPE	LOCAL I/O	OUTPUT TYPE
Major Alarm	Form C Relay	Remote Control Relays (2)	Form C Relay
Digital Outputs (2)	Opto-Isolated TTL	External Battery Monitor	Analog (DC Volts)
Digital Inputs (2)	Opto-Isolated TTL		

LED INDICATORS
System Ready
Critical Alarm

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