

CODAN Digital Microwave Radio

-  [Download Digital Microwave Radio 8800 series Reference Manual \(1.7 MB\)](#)
-  [Download Digital Microwave Radio 8800 series Installation Handbook \(330 KB\)](#)
-  [Download Digital Microwave Radio MINet Overview \(160 KB\)](#)
-  [Download Digital Microwave Radio MINet Management Software User Guide \(1.1 MB\)](#)

Digital Microwave Radio CODAN 8800 - 7 GHz to 38 GHz



The CODAN Digital Microwave Radio (DMR) provides 16 E1 (1 transmission on an indoor unit and outdoor unit hardware platform) 7 GHz to 38 GHz.

This lightweight and rugged DMR delivers an exceptionally high performance in protected configurations, the CODAN 8800 offers 100% redundancy and uses advanced signal processing techniques.

The CODAN 8800 series digital microwave radios complies with the international standards for safety, EMC and

The product is software scalable and can be configured either locally or remotely. For large network roll-outs, installation and commissioning by technical staff at a remote location.

All CODAN equipment is backed by a three year warranty and CODAN worldwide support network.

Key features

- **Adaptive Reed-Solomon Forward Error Correction (FEC) provides a high grade of service through**
- **Continuous Phase Modulation is robust and gives exceptional performance in high interference environments**
- **Adaptive Receiver Intermediate Frequency Control substantially reduces adjacent channel rejection**
- **Automatic Transmit Power Control (ATPC) and Remote Transmitter Power Control (RTPC) parameters**
- **CODAN MINET, the Windows® based element manager, controls and monitors the network configuration**
- **CODAN MINET can control data transmission capacity and firmware upgrades throughout the network**
- **100% equipment redundancy is featured in Hot Standby and Space Diversity configurations. Redundancy**

Data interfaces

Interface requirements	Data Interface Units (DIU) Type						
	4 E1BNC	16 E1, E3 RJ 45	16 E1, E3 SCSI	16 DS1, DS3 RJ 45	16 DS1, DS3 SCSI	4xLAN (Plus 4E1)	4xLAN (Plus4DS1)
2/4 E1 (75 Ω)	+						
2/4 E1 (120 Ω)						+	
2/4/8/16 E1 (120 Ω)		+	+				
2/4/8/16 E1 (75 Ω)			+				
E3 (75 Ω)		+	+				
2/4 DS1 (100 Ω)							+
2/4/8/16 E1 (100 Ω)				+	+		
DS3 (75 Ω)				+	+		
4x10/100						+	+
EOW	+		+			+	+
RS232	+	+	+	+	+	+	+
SNMP NMS	+	+	+	+	+	+	+

External I/O	+	+	+	+	+	+	+
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Digital Microwave Radio Network Management

CODAN MINET is an intuitive, network management system with enhanced monitoring and diagnostic tools. It p radio terminals. Reporting of alarm status and statistical performance data further enhances CODAN MINET cap

Because MINET is based on a standard SNMP platform it can be easily integrated with HP Open View.

The software enables proactive management of all links in a network from either single or multiple operator cons

Any Ethernet LAN attached management station running CODAN MINET can also be used to conveniently man; cascading between IDU are standard features.

All radio links are easily controlled from the management station by either in-band or out-of-band signalling. IP R simultaneous management of all links from a single console. Inclusion of Trivial File Transfer Protocol (TFTP) ca

With MINET definable alarm mapping capability, users can customize link and external alarm reporting criteria.

Digital Microwave Radio Redundant Operation

The 8800 series digital microwave radio supports 100% redundancy in a 2RU solution with either single or dual ;

Redundancy switching decisions are conditioned by parameters such as:

- Link Status (fault condition)
- User Definable Receive Signal Level
- BER performance

The controlling algorithm provides hitless switching between the main and standby receiver paths. Space and fre

A single antenna configuration requires the installation of an RF splitter. The splitter is optionally available as eith

- an asymmetric split of 1.8 dB for the main branch and 6.5 dB split for the standby branch;
- a symmetrical 3 dB split for both main and standby branches.

Technical specifications

System Parameters		7-8 GHz		10.5 GHz	13 GHz	15 GHz
		ETSI	FCC	ETSI	ETSI	ETSI
Frequency range		7.1-8.5 GHz		10.5-10.7 GHz	12.75-13.25 GHz	14.40-15.35 GHz
Tx-Rx duplex frequency		7.1-7.9 GHz 154 MHz 161 MHz 245 MHz	7.7-8.5 GHz 119 MHz 126 MHz 311.32 MHz	65 MHz 91 MHz	266 MHz	315 MHz 420 MHz 490 MHz 644 MHz
RF interface		Slip fit, WR112 aperture		Slip fit, WR90 aperture	Slip fit, WR62 aperture	Slip fit, WR62 aperture
System gain for BER=10 ⁻³	4E1 (4 DS1) 8E1 (8 DS1) 16E1 (16DS1)	115 dB 112 dB 109 dB	114 dB 111 dB 108 dB	114 dB 111 dB 108 dB	113 dB 110 dB 107 dB	111 dB 108 dB 105 dB
Link ID security codes		10 000 programmable codes		10 000 programmable codes	10 000 programmable codes	10 000 programmable codes
Transmitter						

Tx output power		+24 dB	+27 dB	+27 dB	+25 dB
Software controlled output power adjustment range		35 dB in 1 dB steps	35 dB in 1 dB steps	35 dB in 1 dB steps	35 dB in 1 dB steps
Tx mute level		< -45 dB	< -45 dB	< -45 dB	< -45 dB
Frequency stability		±5 ppm	±5 ppm	±5 ppm	±5 ppm
Transmitter IF		400 MHz	400 MHz	400 MHz	400 MHz
Receiver					
Frequency stability		±5 ppm	±5 ppm	±5 ppm	±5 ppm
Receiver IF		140 MHz	140 MHz	140 MHz	140 MHz
Sensitivity BER=10 ⁻³	4 E1/DS1	-87 dB	-86 dB	-87 dB	-86 dB
	8 E1/DS1	-84 dB	-83 dB	-84 dB	-83 dB
	16 E1/DS1	-81 dB	-80 dB	-81 dB	-80 dB
Sensitivity BER=10 ⁻⁶	4 E1/DS1	-84 dB	-83 dB	-84 dB	-83 dB
	8 E1/DS1	-81 dB	-80 dB	-81 dB	-80 dB
	16 E1/DS1	-78 dB	-77 dB	-78 dB	-77 dB
Maximum RF input level		0 dB	0 dB	0 dB	0 dB

Mechanical

IDU dimensions (1+0)	44.5mm (1RU) x 430mm x 305mm 1.75" x 19" x 12" (H x W x D)
IDU dimensions (1+1)	89mm (2RU) x 430mm x 305mm 3.5" x 19" x 12" (H x W x D)
IDU weight (1+0)	4.6 kg (1+1) 9.2 kg (1+0) 10 lb (1+1) 20 lb
ODU dimensions (1+0)	230mm x 175mm 9" x 6.9" (Dia x H)
ODU dimensions (1+1)	230mm x 400mm 9" x 16" (Dia x H)
ODU weight (1+0)	4.9 kg (1+1) 11.3 kg (1+0) 10.8 lb (1+1) 25.6 lb

Environmental

Altitude	4500m AMSL (15000 ft)
IDU temperature range	-10°C to +45°C
IDU relative humidity	Up to 95% at +40°C
ODU temperature range	-55°C to +55°C
ODU relative humidity	Up to 100% all weather

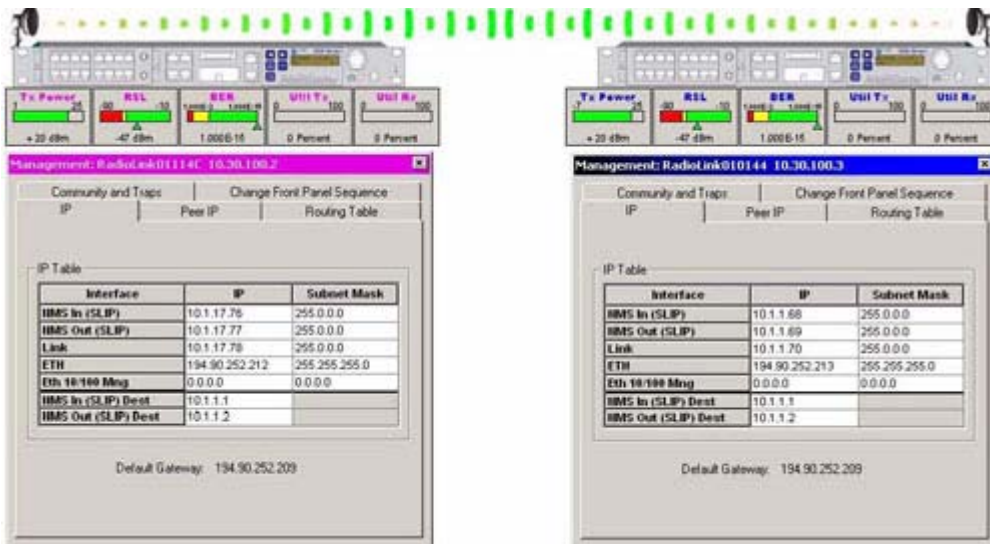
IDU/ODU connection

Single 50 Ω coaxial cable of up to 300 meters (1000 ft) for each outdoor unit

Power requirements

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Power source	±22 to 60 V DC
Power consumption	43W (1+0) 86W (1+1)



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http://digital-microwave-radio.at-communication.com/en/at/digital_microwave_radio_8800.html