

Digital Microwave Radio

7700 series

The 7700 series Digital Microwave Radio (DMR) is a compact and light weight unit ideal for rapid installation in modern, medium and long haul point-to-point links in terrestrial communications networks.

The product range is extremely flexible and can be configured to support low to medium capacity applications from 2 to 34 Mbps and is available in RF bands of 7/8, 10.5, 13 and 15 GHz. Digital interfaces supported are E1, E2 and E3. The flexible digital interface, based on SIM cards, enables deployment at any point in the digital communications network.

KEY FEATURES

- high reliability
- ease of deployment
- direct mount
- ease of upgrade
- simplicity of configuration and setup
- common spares holding
- ease of maintenance
- 3 year warranty
- ODU IP66 rated

The 7700 uses well proven QPSK modulation, which gives robust and reliable communications, and provides a high degree of spectrum efficiency. The terminals are frequency synthesised allowing short delivery times and user channel selection in the field. The system is configured to operate from either a -48 V or +24 V DC supply. With dual supply inputs, users can maintain backed-up power supply systems without taking the radio off line.

Sub assembly commonality across capacity and frequency ranges reduces the number of spare modules required. This, in turn, reduces the cost of ownership of a network constructed with 7700 series DMRs.

Configuration and setup

A simple VT100 or Windows™ interface provides access to the in-built supervisory and configuration system. Codan also supplies, free of charge, the proprietary TAPS software to provide users with a simple graphical interface to monitor the local terminal and other radios in the network.

Installation

The cost-effective modular construction enables a split indoor/outdoor configuration, eliminating the burden of high-cost wave guide and dehydrators. A single interfacility cable connects the indoor and outdoor units in a nonprotected system.

Commissioning can be completed with a voltmeter and a computer terminal. This means simple training for installers, and fast and easy commissioning.

The compact outdoor unit is designed to directly mount to the antenna. Optionally, the outdoor unit can be provided with a simple pole mounting kit and is then connected to the antenna by a small section of flexible waveguide. The waveguide can be purchased from Codan as an option.

A full range of antenna sizes and an optional high-power amplifier guarantee high availability performance over the most demanding paths. An all indoor installation is also available.



Digital Microwave Radio 7700 series
—indoor and outdoor units

ADDITIONAL FEATURES

Warranty

The Digital Microwave Radio 7700 series comes with a 3 year warranty.

Hot standby, space diversity and frequency diversity

Redundant, nonredundant, space diversity and frequency diversity configurations are supported by a single indoor unit. The standard chassis is supplied ready for hot standby or diversity. To upgrade, a user only needs to add an additional plug-in modem and power supply board.

To complete the upgrade to hot standby an additional outdoor unit, interfacility cable and direct to ODU RF branching unit are added to the outdoor assembly.

To complete the upgrade to diversity an additional outdoor unit, interfacility cable and antenna are mounted at the appropriate height above or below the first antenna.

Engineering orderwire

The 7700 offers an additional engineering orderwire communications channel. This

uses DTMF dialling to selectively call individual terminals in a network so that operators can contact remote terminals easily.

Serial data card

Up to two serial cards can be added as options to the 7700, carrying RS232 or RS422 up to 19200 bps.

Future enhancements

The 7700 product range will soon be expanded with the addition of 16/32 QAM modulation.

SPECIFICATIONS

Frequency bands of operation

Model	Frequency range (GHz)
7700-F7.2	7.110 to 7.425
7700-F7.5	7.425 to 7.900
7700-F8	7.725 to 8.725
7700-F10	10.500 to 10.680
7700-F13	12.75 to 13.25
7700-F15	14.4 to 15.35

Digital interfaces

4 x E1
8 x E1
16 x E1
1 x E2
2 x E2
4 x E2
1 x E3 plus E1 wayside

Channel spacing

4E1	8E1	16E1
1E2	2E2	4E2
		1E3 + 1E1
7 MHz	14 MHz	28 MHz



7700 Multiplex Card fitted with 16 x E1 SIM cards



Typical installation of 7700 Outdoor Unit



7700 Outdoor Unit



7700 rear view showing plug in tributary interface module

OPTIONS AND ACCESSORIES

The following options and accessories are available:

- hot standby
- space diversity
- frequency diversity
- all indoor mount
- engineering orderwire
- serial data card
- high-power amplifier
- low-power (13 GHz only)
- front panel access for tributary interface
- plug-in tributary interface connector
- AC power supply
- antennas
- flexible waveguide
- interfacility cable
- MINet—advanced network management software
- SNMP interface—advanced network management software

Equipment descriptions and specifications are subject to change without notice or obligation

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