

DIGITAL MICROWAVE RADIO



Introduction

2Ghz Digital Microwave Radio(2 Mbps and 8 MBPS) is a compact power efficient point to point communication equipment, which is widely deployed as a backbone network for communication links. The equipment can be used in rural and semi-urban areas as a terminal or as regenerative type repeater, covering the entire frequency range of 2.0 ghz-2.5Ghz. Bands.

System Features

- Synthesized trans-receiver frequency control
- O-QPSK modulation.
- Built-in Test Equipment (BITE)
- Supervisory facilities provided to monitor the status of the system
- Order Wire with Remote supervisory facility permits monitoring of remote station from any site
- flexibility to configure either to 4*2 Mbps /1*8 Mbps
- Compact and modular in construction offering efficient, flexible & low cost transmission solution
- Front panel LCD display for configuration and monitoring
- MTBF : >52,000 hours
- Coverage is not a constraint for a clear line of sight

Operating Temperature : 0° C to 50° C

Redundancy

- In Hot standby Tx and Rx path switching is independent. Switching can be either automatic or manual

Power

- Power supply : -40 V to -60 V, (-48 V nominal)
- Power consumption :
 - < 100 W for 1+1 System

Standards

- As per CCITT and ITU-T& ITU-R Stds

TECHNICAL SPECIFICATIONS

- Capacity : E1 ,4xE1 or E2
- Channel Capacity : 120 Max
- Data Rate (Mbps): 4x2 Mbps /8Mbps
- Adjacent channel spacing: 7.0
- System gain (dB): > 112
- Modulation : OQPSK
- Demodulation: Coherent
- Insertion loss : Tx port to antenna port
 - <= 2.5.0 dB
- Tx-Rx isolation :90 dB or better

Transmitter specifications

- RF frequency range: (2.0-2.5)GHz
- RF power : +31 dBm. (nominal)
- RF output impedance : 50ohm (nominal)
- Spurious and harmonic o/p: -50 dB or better at the antenna port
- Frequency step: Settable in 3.5 MHz increments

Receiver Specifications

- RF frequency range : (2.0-2.5)GHz
- Overall noise figure <= 4 dB
- LO stability:± 20 ppm or better
- IF frequency:70 MHz
- AGC dynamic range : 45 dB min
- Decoding : De-scrambling