



U6-GHz High-Capacity Synchronous Radio

MDR-4XU6s

Features

- ▼ True SONET transport
- ▼ Capacities to fit your needs:
 - 1, 2, 3 STS-1s
 - DS3 or STS-1 provisionable per port
- ▼ In-service capacity upgrades
 - From 1 to 2 STS-1s
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- ▼ Wayside DS1 lines
 - One per STS-1
- ▼ Automatic transmit power control
- ▼ Regenerative repeater configuration
- ▼ Errorless receiver switching
- ▼ 802.3 LAN (TL1) interfaces for intraoffice DCC connectivity
- ▼ BITS clock capability

Technical Summary

	MDR-41U6s-DN	MDR-41U6s-D	MDR-42U6s-D	MDR-43U6s-D
Frequency Band (GHz)	6.5 – 6.8 GHz	6.4 – 7.1 GHz	6.4 – 7.1 GHz	6.4 – 7.1 GHz
Emission Designator	10M0D7W	10M0D7W	20M0D7W	30M0D7W
Nominal Emission Bandwidth (MHz)	10	10	20	30
Capacity/RF Channel	1xSTS-1	1xSTS-1	2xSTS-1	3xSTS-1
Capacity/RF Channel (Mb/s)	52	52	104	155
Wayside DS1 Lines Capacity	1	1	2	3
Modulation	128 TCM	128 TCM	128 TCM	128 TCM
Data Efficiency (b/s/Hz)	5.9	5.9	5.9	5.9
Data Rate (Mb/s)	59.003	59.003	117.999	176.995
System Gain (Ber 10^{-3}) ^(1,2)				
Standard SSPA (dB)	106.5	106.5	103.0	101.0
High Power (dB)	110.5	110.5	107.0	105.0
Transmit Frequency Stability	0.001%	0.001%	0.001%	0.001%
Transmitter Power Output ⁽¹⁾				
Standard SSPA (dBm)	29.5	29.5	29.5	29.5
High Power (dBm)	33.5 SSPA	33.5 SSPA	33.5 SSPA	33.5 SSPA
Receiver Threshold (BER 10^{-3}) ^(1,2)				
Typical (dBm)	-77.0	-77.0	-73.5	-71.5
Guaranteed (dBm)	-74.5	-74.5	-71.0	-69.0
Receiver Threshold (BER 10^{-6}) ^(1,2)				
Typical (dBm)	-74.5	-74.5	-71.0	-69.0
Guaranteed (dBm)	-72.0	-72.0	-68.5	-66.5
Dispersive Fade Margin BER 10^{-3} (dB) ⁽⁴⁾	58	58/56	50/48	46
Power Consumption (watts) ⁽³⁾				
Hot-standby Terminal	305	305	315	320
1+1 Freq. Div. Terminal	335	335	340	350

STS-1 Line Interfaces:	ANSI T1X1.4/91-004R3
Line Rate (Mb/s)	51.84 ±20 ppm
Line Code	B3ZS
Impedance (ohms)	75
DS3 Line Interfaces	ANSI T1X1.4/91-004R3
Line Rate (Mb/s)	44.736 ±20 ppm
Line Code	B3ZS
Impedance (ohms)	75
Timing	
External Input	DS1 BITS clock
Frequency	1.544 MHz ±4.6 ppm
Format	RZ
Line Coding	B8ZS or Bipolar AMI
Pattern	All one's framed or PRBS
Internal Free-running Accuracy	±20 ppm
Output	1.544 MHz DS1 as above
Accuracy (Internal ref.)	±20 ppm
Accuracy (External ref.)	±4.7 ppm

¹Typical as measured at the antenna port of branching circulator (includes branching losses).

²Hot-standby configurations (without space diversity): 0.5 dB less receiver threshold and system gain on the A side and 10 dB less on B side due to 1:10 coupler.

³Nominal without APC active (full transmit power), standard PA.

⁴Higher value with IF amplifier bandwidth matching emission bandwidth and automatic slope equalization (ASE) enabled. Lower with 30 MHz IF and ASE disabled.

Preliminary – Subject to change without notice.