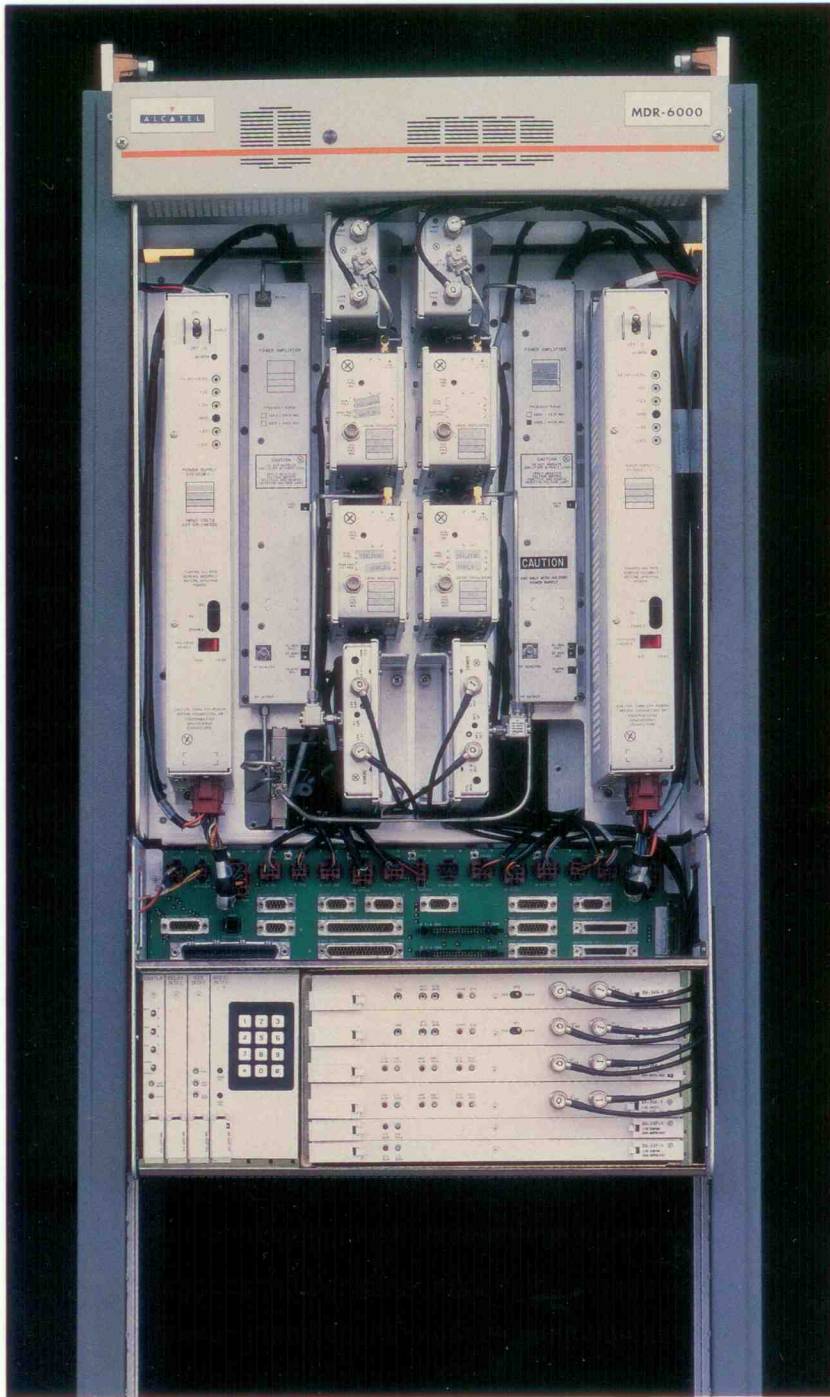


8-GHz Digital Radio

MDR-6X08



Features

- ▼ Capacities to fit your needs:
 - 2, 4, 8, 12 and 16 DS1s
 - Expand with no price penalty
- ▼ In-service capacity upgrades
- ▼ State of the art modulation choices
 - 32 TCM for maximum system gain
 - 128 TCM for maximum spectrum efficiency
- ▼ Digital filtering ensures superior frequency coordination characteristics
- ▼ Error-free receiver switching
- ▼ Extensive performance monitoring
- ▼ Time domain equalizer *standard*
- ▼ Automatic power control *standard*
- ▼ Two year warranty

▼
ALCATEL
NETWORK SYSTEMS

Technical Summary

	MAXIMUM SYSTEM GAIN				
	<u>MDR-6508-2</u>	<u>MDR-6508-4</u>	<u>MDR-6508-8</u>	<u>MDR-6508-12</u>	<u>MDR-6508-16</u>
Frequency band (GHz)	7.125 - 8.5	7.125 - 8.5	7.125 - 8.5	7.125 - 8.5	7.125 - 8.5
RF channel bandwidth (MHz)	1.25	2.5	3.75	5.25	7.0
Capacity/RF channel (DS1s)	2	4	8	12	16
Modulation (TCM)	32	32	32	32	32
System gain (BER = 10 ⁻⁶) (dB) ^{1, 2}	115	112	109	107	106
Transmitter power output (dBm) ¹	28	28	28	28	28
Optional power outputs (dBm) ¹	15	15	15	15	15
Receiver threshold (BER = 10 ⁻⁶) (dBm) ¹	-87	-84	-81	-79	-78
Maximum RSL for 10 ⁻³ BER (dBm)	-10	-10	-10	-10	-10
Dispersive fade margin	68	64	55	52	50
Threshold/Interference					
Cochannel (dB)	28	28	28	28	28
Adjacent channel (dB)	-8	-8	-8	-8	-8

	MAXIMUM SPECTRAL EFFICIENCY				
	<u>MDR-6708-2</u>	<u>MDR-6708-4</u>	<u>MDR-6708-8</u>	<u>MDR-6708-12</u>	<u>MDR-6708-16</u>
Frequency band (GHz)	7.125 - 8.5	7.125 - 8.5	7.125 - 8.5	7.125 - 8.5	7.125 - 8.5
RF channel bandwidth (MHz)	0.8	1.25	2.5	3.75	5.0
Capacity/RF channel (DS1s)	2	4	8	12	16
Modulation (TCM)	128	128	128	128	128
System gain (BER = 10 ⁻⁶) (dB) ^{1, 2}	111	108	105	103	102
Transmitter power output (dBm) ¹	28	28	28	28	28
Optional power output (dBm) ¹	15	15	15	15	15
Receiver threshold (BER = 10 ⁻⁶) (dBm) ¹	-83	-80	-77	-75	-74
Maximum RSL for 10 ⁻³ BER (dBm)	-10	-10	-10	-10	-10
Dispersive fade margin	71	67	58	55	53
Threshold/Interference					
Cochannel (dB)	34	34	34	34	34
Adjacent channel (dB)	-8	-8	-8	-8	-8

Power Requirements

Input voltage	±19 V dc to ±56 V dc
Typical power consumption per T/R	130 watts

Mechanical Dimensions and Interfaces

Size	33.25 x 19.0 x 14.5 in.
Weight (Hot-standby terminal)	150 lb.
RF In/Out	UG-51
DS1 In/Out	Two 37 pin D-type (one xmtr, one rcvr)
Orderwire handset	Standard telephone handset jack

Environmental

Ambient temperature	
Specification compliant	0° to 50°C
Operating without failure	-20° to 70°C
Storage	-40° to 80°C
Relative humidity	5 to 95% noncondensing
Altitude	
Operating	-350 to 16,500 ft
Nonoperating	-350 to 40,000 ft
Duty	Continuous, unattended

NOTE: These specifications are subject to change without notice.

¹Typical as measured at the antenna port of branching circulator (includes branching losses) for nonstandby and hot-standby/space diversity configurations. Hot-standby configurations will have 1 dB less receiver threshold on the A side and 10 dB less receiver threshold on the B side.

²System gain reduced by 3 dB between 8.4 and 8.5 GHz.