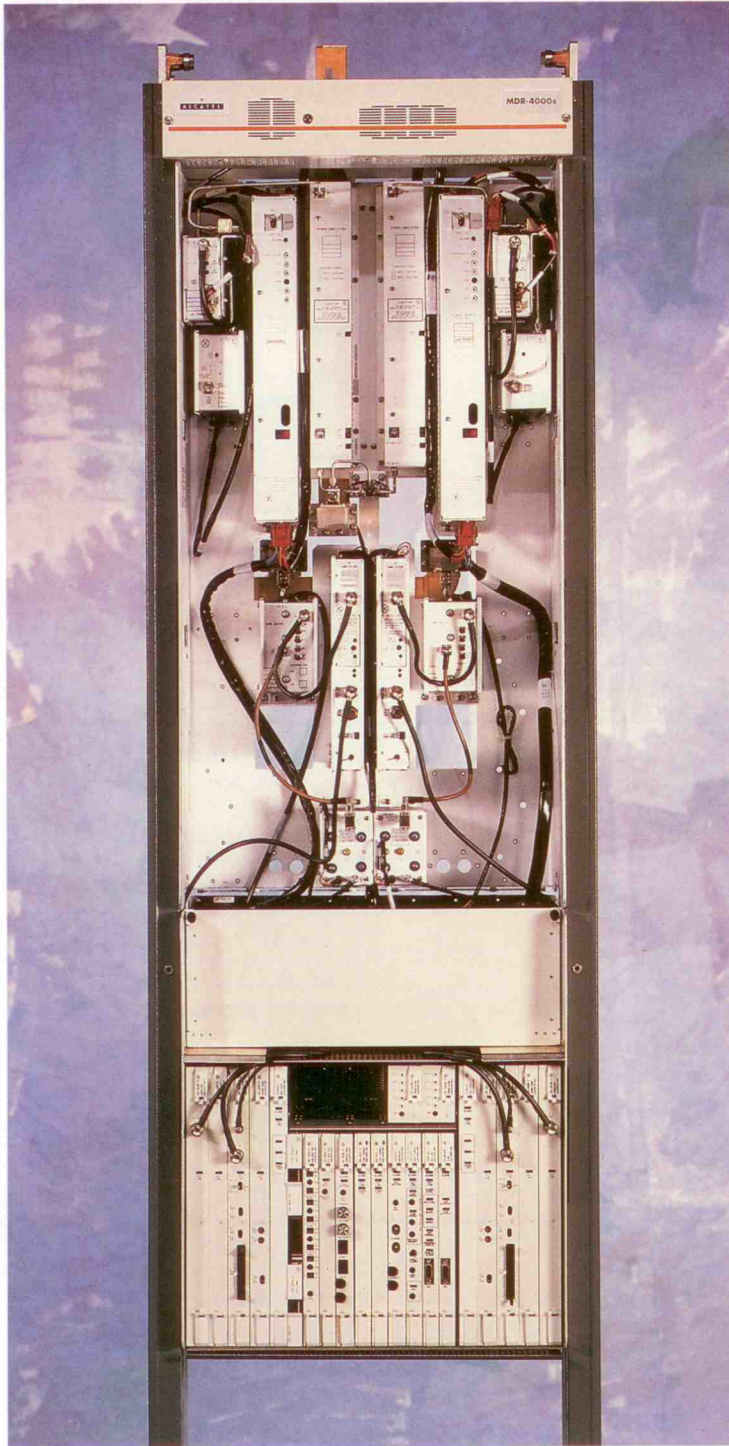


# L6-GHz High-Capacity Synchronous Radio

MDR-4X06s

## 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
  - From 2 to 3 STS-1s
  - From 1 to 3 STS-1s
- ▼ 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



▼  
**ALCATEL**  
NETWORK SYSTEMS

# Technical Summary

	MDR-4106s-D	MDR-4206s-D	MDR-4306s-D
Frequency Band (GHz).....	5.9–6.4 GHz	5.9–6.4 GHz	5.9–6.4 GHz
Emission Designator.....	10MOD7W	20MOD7W	30MOD7W
Nominal Emission Bandwidth (MHz).....	10	20	30
Capacity/RF Channel.....	1xSTS-1	2xSTS-1	3xSTS-1
Capacity/RF Channel (Mb/s).....	52	104	155
Wayside DS1 Lines Capacity.....	1	2	3
Modulation.....	128 TCM	128 TCM	128 TCM
Data Efficiency (b/s/Hz).....	5.9	5.9	5.9
Data Rate (Mb/s).....	59.003	117.999	176.995
System Gain (BER 10 <sup>-3</sup> ) <sup>1,2</sup>			
Standard SSPA (dB).....	106.5	103.5	101.0
High Power (dB).....	110.5	107.5	105.0
Transmit Frequency Stability.....	0.001%	0.001%	0.001%
Transmitter Power Output <sup>1</sup>			
Standard SSPA (dBm).....	29.5	29.5	29.5
High Power (dBm).....	33.5 SSPA	33.5 SSPA	33.5 SSPA
Receiver Threshold (BER 10 <sup>-3</sup> ) <sup>1,2</sup>			
Typical (dBm).....	-77.0	-74.0	-71.5
Guaranteed (dBm).....	-74.5	-71.5	-69.0
Receiver Threshold (BER 10 <sup>-6</sup> ) <sup>1,2</sup>			
Typical (dBm).....	-74.5	-71.5	-69.0
Guaranteed (dBm).....	-72.0	-69.0	-66.5
Dispersive Fade Margin BER 10 <sup>-3</sup> (dB) <sup>4</sup> .....	58/56	50/48	46
Power Consumption (watts) <sup>3</sup>			
Hot-standby Terminal.....	305	315	320
1+1 Freq. Div. Terminal.....	335	340	350

STS-1 Interfaces	ANSI T1X1.4/91-004R3
Line Rate (Mb/s)	51.84±20 ppm
Line Code	B3ZS
Impedance (ohms)	75
DS3 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

<sup>1</sup>Typical as measured at antenna port of branching circulator (includes branching losses).

<sup>2</sup>Hot-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.

<sup>3</sup>Nominal without APC active (full transmit power), standard PA.

<sup>4</sup>Higher 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.