



6.7-GHz High-Capacity Digital Radio

MDR-4XU6e

Features

- ▼ Capacities to fit your needs:
 - 1, 2, and 3 DS3s
- ▼ In-service capacity upgrades
 - From 1 to 2 DS3s
 - From 2 to 3 DS3s
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- ▼ Wayside DS1 lines
- ▼ Superior dispersive fade margins
 - Standard decision-feedback time domain equalizer
 - Standard adaptive IF slope equalizer
- ▼ Forward error correction (64 QAM)
- ▼ Errorless receiver switching
- ▼ Link monitor channel
- ▼ 4 x 64 kb/s service channels
- ▼ Automatic transmit power control
- ▼ Regenerative repeater configuration
- ▼ Two-year warranty
- ▼ Upgradeable to SONET transport

▼
ALCATEL
NETWORK SYSTEMS

Technical Summary

	<u>MDR-41U6e-CN</u>	<u>MDR-41U6e-C</u>	<u>MDR-42U6e-A</u>	<u>MDR-42U6e-CN</u>	<u>MDR-43U6e-C</u>
Frequency band (GHz)	6.5-6.8	6.4-7.1	6.4-7.1	6.4-7.1	6.4-7.1
Emission designator	10MOD7W	10MOD7W	30MOD7W	20MOD7W	30MOD7W
Emission bandwidth (MHz)	10	10	30	20	30
Capacity/RF channel (Mb/s)	45	45	90	90	135
DS1 wayside line capacity	1	1	2	2	3
Modulation (QAM)	64	64	16	64	64
Data efficiency (b/s per Hz)	4.9	4.9	3.1	4.9	4.9
Data rate (Mb/s)	48.84	48.84	94.192	97.68	146.52
FCC identifier	JF6-8609	JF6-8909	JF6-8912	JF6-9101	JF6-8913
System gain ^{1,2} (BER = 10 ⁻³)					
Low-power SSPA (dB)	106.0	106.0	107.5	102.5	100.5
Standard SSPA (dB)	108.0	108.0	109.5	104.5	102.5
Medium-power SSPA (dB)	110.0	110.0	111.5	106.5	104.5
High-power (dB)	112.0	112.0	114.5	108.5	106.5
Transmit frequency stability	0.001%	0.001%	0.001%	0.001%	0.001%
Transmitter power output ¹					
Low-power SSPA (dBm)	27	27	28	27	27
Standard SSPA (dBm)	29	29	30	29	29
Medium-power SSPA (dBm)	31	31	32	31	31
High-power (dBm)	33	33	35	33	33
Receiver threshold ^{1,2}					
BER = 10 ⁻³					
Typical (dBm)	-79.0	-79.0	-79.5	-75.5	-73.5
Guaranteed (dBm)	-76.5	-76.5	-77.0	-73.0	-71.0
BER = 10 ⁻⁶					
Typical (dBm)	-76.5	-76.5	-76.0	-73.0	-71.0
Guaranteed (dBm)	-74.0	-74.0	-73.5	-70.5	-68.5
Dispersive fade margin (BER = 10 ⁻³) (dB)	60	58	51	50	46
Threshold/Interference					
Cochannel (dB)	34	34	27	34	34
Adjacent channel ³ (dB)	-10	-50	-43	-13	-28
Power consumption ⁴ (watts)					
Hot-standby terminal	255	255	260	265	270
Frequency diversity terminal	285	285	285	290	300

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

²Hot-standby configurations (without space diversity) will have 0.5 dB less receiver threshold and system gain on the A side, and 10 dB less receiver threshold and system gain on the B side.

³All IF amplifiers have 30 MHz bandwidth except MDR-41U6e-CN (10 MHz) and MDR-42U6e-CN (20 MHz). Special narrowband versions can be provided.

⁴Nominal without APC active (full transmit power), standard PA.

NOTE: These specifications are subject to change without notice.