



Features

- Multiple frequency bands: 2, 4, 5, 6, upper 6, 8, and 11 GHz
- Capacities of 1, 2, and 3 DS3s
- In-service capacity upgrades
- Most effective multipath countermeasures available
- Industry-high dispersive fade margin
- Four 64-kb/s digital service channels
- Forward error correction
- Hitless receiver switching
- Integral optional M13 muldem
- DS1 drop and insert
- Automatic power control

Table 1-2 Physical, Environmental, and Electrical Characteristics

ITEM	CHARACTERISTIC																		
<div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">NOTE</div> <p>Unless otherwise specified, performance values are typical at +25°C. Guaranteed performance values are 0° to +50°C.</p>																			
1. Size																			
a. Nondiversity	20.5 X 12.6 X 84 in.																		
b. Space Diversity	20.5 X 14.0 X 84 in.																		
2. Weight	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">TERMINAL</td> <td style="width: 50%;">REPEATER</td> </tr> <tr> <td>250 lb approx.</td> <td>260 lb approx.</td> </tr> </table>	TERMINAL	REPEATER	250 lb approx.	260 lb approx.														
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250 lb approx.	260 lb approx.																		
3. Service Conditions	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">OPERATING</td> <td style="width: 50%;">NONOPERATING</td> </tr> </table>	OPERATING	NONOPERATING																
OPERATING	NONOPERATING																		
a. Ambient Temperature	0° to +50°C -40° to +70°C																		
b. Relative Humidity (without condensation)	5 to 95% 5 to 95%																		
c. Altitude	-100 to 15000 ft -100 to 40000 ft																		
d. Vibration and Shock	Normal storage and handling																		
e. Duty Cycle	Continuous, unattended																		
4. Power Requirements																			
a. Voltage	-20.5 to -28 V dc, or -41.5 to -56 V dc																		
b. Battery Options	Separate A- and B-battery inputs for redundant power sources or single power source																		
c. Power Consumption (watts) for Basic Hot-Standby (HS) or Frequency Diversity 1:N (FD) Rack with One Audio Channel, No Fault Alarm (1 DS3)	<table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;"><u>2 - 5 GHz</u></td> <td colspan="2" style="text-align: center;"><u>6 - 8 GHz</u></td> <td colspan="2" style="text-align: center;"><u>11 GHz</u></td> </tr> <tr> <td style="text-align: center;"><u>HS</u></td> <td style="text-align: center;"><u>FD</u></td> <td style="text-align: center;"><u>HS</u></td> <td style="text-align: center;"><u>FD</u></td> <td style="text-align: center;"><u>HS</u></td> <td style="text-align: center;"><u>FD</u></td> </tr> <tr> <td style="text-align: center;">240</td> <td style="text-align: center;">260</td> <td style="text-align: center;">270</td> <td style="text-align: center;">300</td> <td style="text-align: center;">280</td> <td style="text-align: center;">325</td> </tr> </table>	<u>2 - 5 GHz</u>		<u>6 - 8 GHz</u>		<u>11 GHz</u>		<u>HS</u>	<u>FD</u>	<u>HS</u>	<u>FD</u>	<u>HS</u>	<u>FD</u>	240	260	270	300	280	325
<u>2 - 5 GHz</u>		<u>6 - 8 GHz</u>		<u>11 GHz</u>															
<u>HS</u>	<u>FD</u>	<u>HS</u>	<u>FD</u>	<u>HS</u>	<u>FD</u>														
240	260	270	300	280	325														
w/ High-Power TWT	N/A N/A 300 320 325 350																		
w/ Additional Options:	(same for all)																		
Service Shelf (fully equipped)	12																		
Quad Diversity	15																		
2 DS3 Capacity	34																		
3 DS3 Capacity	45																		
One DMX-3003N Muldem (fully equipped)	20																		
A second DMX-3003N Muldem (fully equipped)	18																		

Table 1-2 Physical, Environmental, and Electrical Characteristics (cont)

ITEM	CHARACTERISTIC
5. Transmitter Characteristics	
a. RF Frequency Range	Refer to table 1-4.
b. RF Frequency Stability	Refer to table 1-4
c. RF Power Output	Refer to table 1-4.
d. Emission Designator	Refer to table 1-4.
e. Modulation Type	Refer to table 1-4.
f. Modulation Capacity	Refer to table 1-4.
g. Occupied Spectrum	Refer to table 1-4.
h. Data Rate (Mb/s)	Refer to table 1-4.
i. Efficiency (b/s/Hz)	Refer to table 1-4.
j. Intermediate Frequency	70 MHz \pm 2.5 kHz
k. IF Level	-5 dBm \pm 1 dB
l. LO Frequency	fo \pm 70 MHz
6. Receiver Characteristics	
a. Intermediate Frequency	70 MHz \pm 2.5 kHz
b. IF Level	-5 dBm \pm 1 dB
c. LO Frequency	fo \pm 70 MHz
d. Receive Noise Figure	Refer to table 1-5.
e. Dispersive Fade margin	Refer to table 1-5.
f. Receive Carrier Level	
Maximum (BER at 1×10^{-3})	-17 dBm
Nominal	-29 dBm
g. Residual BER	1×10^{-12}
h. Carrier Recovery	-80 dBm maximum
i. Clock Recovery	-80 dBm maximum
j. Blue Signal Insert	-75 dBm nominal
k. Clock Acquisition Time (after 120 s loss of signal)	450 ms typical
l. Eye Closure Threshold	10^{-6} BER approximately