



ANTENNA WAVEGUIDE PORT

A SIDE

B SIDE

XMTR

I/O COND

RCVR

RCVR

I/O COND

XMTR

POWER SUPPLY

DISTRIBUTION UNIT

ALARM/SWITCH

POWER SUPPLY

**MDR-3418 Hot-Standby
(Rack-Mounted)**

Technical Summary

Radio	FCC Identification Number	FCC Internal Identifier
MDR-3118A	JF6-8816	300136
MDR-3118A-HP	JF6-9207	TBD
MDR-3218	JF6-8503	300124
MDR-3218-HP	JF6-9208	TBD
MDR-3418	JF6-8501	300123
MDR-3418-HP	JF6-9209	TBD

Frequency Range

MDR-3118A and MDR-3218	MDR-3418
17.70 to 18.14 GHz	17.70 to 18.14 GHz
18.58 to 18.82 GHz	19.26 to 19.70 GHz
18.92 to 19.16 GHz	
19.26 to 19.70 GHz	

	MDR-3118A	MDR-3218	MDR-3418
RF channel bandwidth	10 MHz	10 MHz	40 MHz
Emission designator	6M30F7W	10M0F7W	40M0F7D
Data rate	6.312 Mb/s	12.624 Mb/s	44.736 Mb/s
Transmit frequency stability	0.001%	0.001%	0.001%

Transmitter			Receiver			
	MDR-3X18	MDR-3X18-HP		MDR-3118A	MDR-3218	MDR-3418
Maximum transmit power ¹	23 dBm	30 dBm	Maximum receive carrier level	0 dBm	0 dBm	0 dBm
Typical power output ²	20 dBm	28 dBm	IF frequency	140 MHz	140 MHz	140 MHz
Typical power output (hot-standby) ²	19 dBm	27 dBm	Receiver threshold ^{2,3}			
			BER = 10 ⁻³	-86 dBm	-80 dBm	-76 dBm
			BER = 10 ⁻⁶	-83 dBm	-77 dBm	-73 dBm
			Threshold/Interference			
			Cochannel	23 dB	23 dB	23 dB
			Adjacent channel	0 dB	0 dB	0 dB

System

	MDR-3118A	MDR-3218	MDR-3418
System gain ^{2,3}			
BER = 10 ⁻³	106 dB	100 dB	96 dB
BER = 10 ⁻⁶	103 dB	97 dB	93 dB
	MDR-3118A-HP	MDR-3218-HP	MDR-3418-HP
System gain ^{2,3}			
BER = 10 ⁻³	114 dB	108 dB	104 dB
BER = 10 ⁻⁶	111 dB	105 dB	101 dB

Power Requirements

Primary input voltage	-21 to -56 V dc
Power consumption	62 W per T/R

Mechanical Dimensions and Interfaces

Packaging options

Outdoor enclosures (house all electronics)	
1 T/R	24.4 X 16.5 X 14.9 in. (HxWxD)
2 T/R	24.4 X 25.3 X 16.9 in. (HxWxD)
Indoor rack-mountable wraparound	
1 or 2 T/R	24.5 X 10.25 in. (HxD) mounts in a standard 19-in. EIA rack

Cabinet weights

Outdoor enclosures	
1 T/R	55 lb
2 T/R	95 lb
Indoor rack-mountable wraparound	
1 T/R	40 lb
2 T/R	60 lb

Interfaces

DS3 (MDR-3418)	BNC (f)
DS1 (MDR-3118A, MDR-3218)	Screw terminals
Power	Screw terminals
Alarms (relay contact closures)	Screw terminals
RF	WR-42 with UG-595/U flange
Orderwire	4-wire modular phone jack
Service channel	BNC (f)
Transmitter in (Test Tone)	-43 dBm
Receiver out (Test Tone)	-28 dBm