Legacy Product



6 GHz North American Standards

DVM6 XT

digital radio

Harris DVM XT point-to-point digital microwave radio family provides 4xDS1 to 16xDS1 capacity in the 6 GHz and 10 GHz U.S. FCC and Industry Canada frequency bands. With over 8000 DVM radio terminals in service in North America today, these exceptional radios offer High System Gain, Flexible System Design, Reduced Maintenance Costs, and Field-proven Reliability and Compatibility. DVM offers a wide choice of features ideally suited for private/public communication systems and cellular/PCS networks.

Expandable from 4, 8, 12, to 16xDS1, these DVM XT radios can be configured with dual protected terminals or a protected repeater in a single 7' rack, reducing cost and restoral time. The DVM radios also simplify network planning and expansion with a built-in system-wide card-level monitor and control system. A radio front panel craft interface tool allows trouble shooting of all network sites from any local site. And the optional Windows-based FarScan[™] provides total element management support.

The DVM radios provide flexibility with options for your ever evolving communications network including: Hot Standby protection for both radio and multiplexer; Low Transmitter Power for shorter paths; DVSII Service Channel for high quality voice/data orderwires, Space Diversity or Ring protection for optimal network designs; and Field Upgrade Kits for existing DVM-8T/ 12 radios to 16xDS1 capacity.

DVM radios are ideal for wireless communication services, including cellular/PCS radio systems, intercity PABX trunk connections, local area networks, voice/data distribution, and teleconferencing.



Legacy Product

System Characteristics

Frequency Ranges:

5925 - 6425 MHz, 6525 - 6875 MHz (FCC Part 101) (Industry Canada SRSP 306.4 for 12 DS1 and greater)

	8 DS1	16 DS1
RF Channel Bandwidth:	3.75 MHz	5.0 MHz
Modulation Type:	49 QPRS	225 QPRS
RF Transmission		
Efficiency:	4 b/s/Hz	6 b/s/Hz
Capacity:	8 DS1, 2 DS2	16 DS1, 4 DS2
	(192 VF Channels)	(384 VF Channels)

Transmitter Characteristics (Non-Protected)

Power Output: Guaranteed	8 DS1	16 DS1
RF Channel Bandwidth:	3.75 MHz	5.0 MHz
Low Power	+21 dBm	+21 dBm
High Power	+28 dBm	+28 dBm

Frequency Stability: ±0.001% (-30° to +55°C)

Intermediate Frequency: 70 MHz

Receiver Characteristics (Non-Protected)

Noise Figure: 5.5 dB	Maximum			
Sensitivity:	8 DS1 (3.75	MHz)	16 DS1 (5.0	MHz)
RF Channel Bandwidth:	Guaranteed	Typical	Guaranteed	Typical
10 ⁻⁶ BER Operating Point	-77.5 dBm	-79.0 dBm	-73.0 dBm	-74.5 dBm
10 ⁻³ BER Outage Point	-80.5 dBm	-82.0 dBm	-74.5 dBm	-76.0 dBm
Dispersive Fade Margin	:			
Typical @ 10 ⁻³ BER	ł	53 dB	60) dB
Receiver RF Overload:				
10 ⁻⁶ BER Operating Point -30 dBm				
Intermediate Frequency: Dual Conversion				
1st IF 135 MHz 2n	d IF 21.4 MI	Ηz		
Unfaded BER: Bette	r than 1 x 10 ⁻	10		

System Gain (Non-Protected)

BER 10⁻³ Outage Point:

	8 DS1 (3.75 MHz)		16 DS1 (5.0 MHz)	
RF Channel Bandwidth:	Guaranteed	Typical	Guaranteed	Typical
Low Power	101.5 dB	103.0 dB	95.5 dB	97.0 dB
High Power	108.5 dB	110.0 dB	102.5 dB	104.0 dB
Additional Branching Lo	osses: Tra	ansmit Pat	h Recei	ive Path
Non-protected Tx/Rx	C) dB	0 0	IB
HS Tx/Rx	1	dB	1.5	5/7.5 dB
Space Diversity Rx	1	dB	0 c	IB

Service Channel

Digital VersaT1ility™ Service Channel (DVSII)

Transmission Rate: 130 kb/s nominal

Transmission Capabilities: 2 VF and up to 4 data channels

Environment, Power, & Mechanical Characteristics

Ambient Temperature Range: (Requires no forced air cooling) Full Performance; 0° to +50°C Storage and Transportation; -40° to +65°C

Humidity: 95% at +40°C Altitude: 15,000 ft. (5000 m) AMSL

Auto Polarity Sensing Power Supply:

21 to 56 Vdc, positive or negative ground

			Low Pov	ver l	High Power
Single T Non-pre	ransmitter & Receiv otected Terminal	/er:	145 watt	S	170 watts
Dual Sin Non-pre	gle Transmitter & Re otected Repeater	eceiver:	285 watt	s :	335 watts
Hot Stan Protect	dby Transmitters 8 ted Receivers: ed Terminal	Dual	295 watt	s :	345 watts
Dual Hot Receiv	t-Standby Transmit ers: Protected Repe	ters & eater	550 watt	s (650 watts
Radio Ec	uipment:				
	Basic T/R	Power S	Supply	Inter	face Unit
Height;	444 mm/17.5 in.	133 mm	/5.25 in.	89 r	mm/3.5 in.
Width;	114 mm/4.5 in.	114 mm	/4.5 in.	229	mm/9 in.
Depth;	254 mm/10 in.	254 mm	/10 in.	254	mm/

Threshold-to-Interference (T/I) Ratio dB

(Degradation from BER = 1 de	3 at BE	R 10⁻⁰)		
	8T (49 QPRS)		16T (225 QPRS)	
	Like	CW	Like	CW
Co-channel (0 MHz)	29	29	32	32
Semi-adjacent (2.5 MHz)	27	27	30	30
Adjacent (3.75 MHz)	25	24	19	15
Adjacent (5 MHz)	-10	-13	4	-4

Regulatory Information

DVM6-8T (3.75 MHz) FCC Identifier	Low Power BCK9GKDVM6-8T-6	High Power BCK9GKDVM6-8T-5
Frequency Tolerance	±0.001%	±0.001%
Maximum Power Output	0.316 W (+25 dBm)	1.585 W (+32 dBm)
FCC Type Acceptance	April 10, 1996	April 10, 1996
Emission Designator	3M75D7W	3M75D7W
Transmission Bit Rate	13.1576 Mb/s	13.1576 Mb/s
DVM6-16T (5 MHz)		
FCC Identifier	BCK9GK DVM6-16T-2	BCK9GK DVM6-16T-1
Frequency Tolerance	±0.001%	±0.001%
Maximum Power Output	0.251 W (+24 dBm)	1.259 W (+31 dBm)
FCC Type Acceptance	April 9, 1996	April 9, 1996
Emission Designator	5M00D7W	5M00D7W
Transmission Bit Rate	25.7889 Mb/s	25.7889 Mb/s

Typical performance specifications given here apply to transmitters and receivers connected back-to-back and must be confirmed before they become applicable to any specific system, contract or order.



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