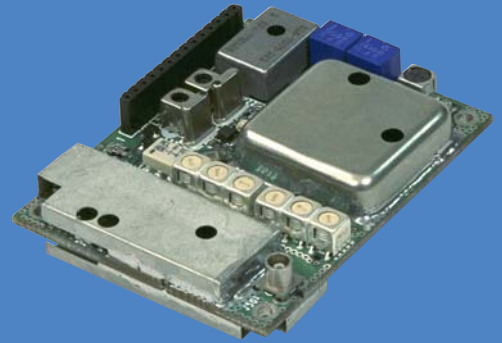


# DM-3475

## HIGH SPEC TRANSCIVER OEM DATA UHF MODULE

UHF 380–512 MHz



**THE 3475 DATA MODULE** was designed to provide a reliable OEM wireless solution for applications requiring a traditional RF link in their communications product. With the DM-3475, Dataradio gives a technology foundation for OEMs to build dependable wireless data communication functionality with the support and flexibility to meet market demands.

**FLEXIBILITY** New opportunities are opening for wireless data communications. The DM-3475 provides the foundation for maximum performance across a wide variety of applications.

**PERFORMANCE** The DM-3475 gives you the capabilities you need today to match your product's quality and features. With Dataradio, you can be assured the dependability will last throughout your product's life-cycle from beginning to end.

**INTEGRATION AND DESIGN SUPPORT** Dataradio provides the technical support to ensure a smooth integration of our Trusted Wireless Data DM-3475 into your OEM solution. The DM-3475's Developer's Kit helps your integration process by providing all the components you need to qualify your product. With our trusted 2-year warranty, look to Dataradio for your OEM solution.

### DM-3475 GENERAL TECHNICAL SPECIFICATIONS

Channel Bandwidth	12.5 kHz	20 kHz	25 kHz
Frequency Range	380-512 MHz (over 8 bands)		
Frequency Control	Synthesized		
Mode of Operation	Simplex or half-duplex		
Supply Voltage	7.5 VDC $\pm$ 20%		
Regulated Supply Voltage	5 VDC $\pm$ 5%		
Operating Temperature	-30° to +60°C (-22° to + 140° F)		
RF Input/Output	MCX jack		
Power and Data Interface	14-pin in-line socket, 100 mil center		
Dimensions	2.83" L x 2.19" W x 0.613 H (7.18 cm L x 5.56 cm W x 1.56 cm H)		
Weight	2.01 oz. (57.0 g)		

## RECEIVER

RF Input Impedance	50 ohms		
Receiver Attack Time <sup>1</sup>	< 7 ms		
Adjacent Channel Selectivity	-60 dB	-70 dB	-70 dB
Intermodulation Rejection	≥-65 dB per ETSI EN300 086 v1.2.1		
Spurious and Image Rejection	≥70 dB per ETSI EN300 086 v1.2.1		
FM Hum and Noise			
psophometrically weighted	-40 dB	-45 dB	-45 dB
Sensitivity <sup>2</sup>			
psophometrically weighted	≤ -114 dBm @ 12 dB SINAD, 1 kHz tone		
Conducted Spurious	≤ - 57 dBm per ETSI EN300 086 v1.2.1		
Modulation Distortion			
psophometrically weighted	≤3% @ -47 dBm		
Modulation Output			
1kHz tone at standard deviation	1 kHz tone at Standard Deviation: 250-350 mVrms ± 5%		
Modulation Frequency Response	Referenced to 1.0 kHz: 12.5 kHz Ch: +1/-3 dB DC to 2.5 kHz 20.0 kHz Ch: +1/-3 dB DC to 4.0 kHz 25.0 kHz Ch: +1/-3 dB DC to 4.8 kHz		
Minimum Load Impedance	≤ 10 k W		
RSSI Range	≥ 0.60 V to ≤ 2.60 V DC output from -120 to -60 dBm		

## TRANSMITTER

RF Output Power at 7.5 volts	Adjustable 500 mW to 2 watts
RF Output Impedance	50 W
Duty Cycle	50% transmit (30 sec max transmit)
Attack Time <sup>1</sup>	≤7 ms
Spurious and Harmonic Emission	-36 dBm
IM Attenuation	≥40 dB per ETSI EN300 113-1 v1.5.1
FM Hum and Noise	
psophometrically weighted	≤-40 dB(12.5 kHz), ≤-45dB (20/25 kHz)
Transmit Current	≤1000 mA @ 7.5 VDC and 2.0 Watts
Modulation Distortion	≤3% standard deviation, 1 kHz tones
Modulation Input Impedance	>40 k W
Modulation Flatness using the onboard DAC)	±1.5 dB DC to 5 kHz ref to 1 kHz (programmable to ±1.0 dB
Modulation Sensitivity (-130 model)	180-520 mVrms to produce 3.0 kHz deviation with a 1 kHz tone

<sup>1</sup> Dependent on synthesizer loading implementation

<sup>2</sup> Measured using a wideband data port on transceiver. If external audio filtering is used, better results may be obtained.

## FREQUENCY BANDS

Band 1:	380-403 MHz
Band 2:	403-422 MHz
Band 3:	419-435 MHz
Band 4:	435-451 MHz
Band 5:	450-470 MHz
Band 6:	464-480 MHz
Band 7:	480-496 MHz
Band 8:	496-512 MHz

## MECHANICAL LAYOUT

