



NX 60 Series

DTXM Radio Modem

NXDN™ Data Protocol

THE WIRELESS CONNECTION

Features

- Ultra Narrow Band (6.25 kHz)
Narrow Band (12.5 kHz)
- 4800 bps Ultra Narrow Band
9600 bps Narrow Band
- Broadband TX/RX Design:
- 26 MHz VHF
- 28 MHz 220 MHz
- 20 MHz UHF
- Frequency Ranges:*
- 136-174 MHz VHF
- 217-245 MHz**
- 380-400 MHz**
- 400-430 MHz UHF**
- 450-470 MHz UHF
- Compact Size (only 3.6" L x 2.3" W x 1.0" H)
- Compatible with Kenwood
Transparent Data Mode
- Frequency Stability Standard @ 1.0 ppm
- Ultra Fast TX/RX Attack Times
- Controlled Envelope™ TX Keying
- RS-232 Interface
- Meets FCC and IC (Canada) Standards**
- Programmable Electronic Settings
and Adjustments
- Programmable High/Low Output Power
- SMD Component Design
- Custom Frequency Ranges Available
- Designed and Manufactured in the USA



The 60 series NXDN™ radiomodem is the next generation in the high performance DTXM Wireless Modem family. The NXDN DTXM is protocol compatible with the NXDN data protocol and is compatible with Kenwood's Transparent Data Mode. The radiomodem will support over-the-air data rates of 9600 bps in a 12.5 kHz channel or 4800 bps in a 6.25 kHz channel (separate models).

High specifications permit integration into systems demanding the utmost performance in congested frequency environments and is ideal for use in systems where reformatting compliant narrow band frequencies have been assigned, and where the robust NXDN data protocol is desired. The complete modem and transceiver occupies the same small foot print, 3.6"L x 2.3"W x 1.0"H, as previous DTXM models and DTX+ transceivers. This results in a small, compact package that is easy to integrate into new systems or retrofit into existing systems.

Direct modulation with low distortion and low group delay result in a low bit-error rate (BER) for enhanced system integrity and reliability. The NXDN radiomodem retains the same Swift Lock™ synthesizer loading algorithm as previous DTXM's and the DTX+ transceiver for transmit and receive attack times of 10ms or less for high-speed data throughput. Controlled Envelope™ keying reduces adjacent channel "keyclicks" resulting in spectrum-friendly operation.

If dependability, reliability, and low-cost are important factors in selecting your RF data requirements, call Ritron at **800-USA-1-USA** (800-872-1-872).



**Need embedded
Telemetry Transceivers?**
**Ask about our NXDN
Digital and Analog Voice
Transceivers.**

*Contact Ritron with your specific frequency band requirement.

**Certain models listed have not been approved by the FCC.

DTXM Radio Modem

NXDN™ Data Protocol

Programmable Analog and
NXDN Digital RF transceivers
and radio modems for integrator
and embedded OEM applications.

AVAILABLE MODELS*

DTX Modem Module

Model	Frequency
DTXM-160-0-NX	136-174 MHz
DTXM-260-0-NX	217-245 MHz
DTXM-360-NX	340-360, 360-380, 380-400 MHz
DTXM-460-G-NX	400-420 MHz
DTXM-460-0-NX	450-470 MHz

Various power and voltage options are available.

Please contact the Ritron Sales Department for your specific requirements.

DTXM SPECIFICATIONS

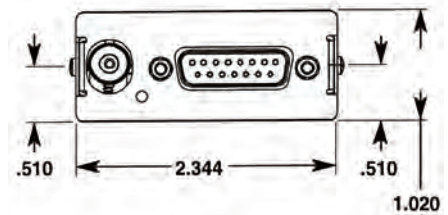
GENERAL	VHF	220 MHz	UHF
FCC IdentifierPending.....		
Industry Canada IdentifierPending.....		
Baud Rate (over-the-air)			
Ultra Narrow Mode	4800 bps	4800 bps	4800 bps
Narrow Mode	9600 bps	9600 bps	9600 bps
Number of Channels	2	2	2
TX/RX Spacing (w/in frequency range)	26 MHz max.	28 MHz max.	20 MHz max.
Mode of Operation	Simplex/Half Duplex	Simplex/Half Duplex	Simplex/Half Duplex
Channel Increment (Synthesizer step size)	2.5 kHz	2.5/3.125 kHz	5/6.25 kHz
Emissions Bandwidth			
Ultra Narrow Mode	4.0 kHz	4.0 kHz	4.0 kHz
Narrow Mode	8.0 kHz	8.0 kHz	8.0 kHz
Frequency Stability (-30° to +60° C)	1.0 ppm	1.0 ppm	1.0 ppm
Supply Voltage (VDC)	7.5 or 11-16	7.5 or 11-16	7.5 or 11-16
RF Input/Output Connector	BNC	BNC	BNC
Power/Data Interface	15 pin sub D	15 pin sub D	15 pin sub D
Operating Temperature	-30° to +60° C	30° to +60° C	-30° to +60° C
Maximum Dimensions (L x W x H)	3.6 x 2.3 x 1.0	3.6 x 2.3 x 1.0	3.6 x 2.3 x 1.0
Weight	6 oz	6 oz	6 oz
TRANSMITTER			
Operating Bandwidth	26 MHz	28 MHz	20 MHz
RF Output Power	1-6 watts	1-6 watts	1-3/6/9 watts
Duty Cycle	5%-100 %	5%-100 %	5%-100 %
RF Load Impedance	50 ohms	50 ohms	50 ohms
Transmitter Attack Time:	<10 ms	<10 ms	<10 ms
Spurious and Harmonics:	<-25 dBm	<-25 dBm	<-25 dBm
FM Hum and Noise			
6.25 kHz channel operation	>35 dB	>35 dB	>35 dB
12.5 kHz channel operation	>40 dB	>40 dB	>40 dB
Current Drain			
1 watt	<1.0 A	<1.0 A	<1.0 A
6 watt	<2.4 A	<2.4 A	<2.4 A
RECEIVER			
Operating Bandwidth	26 MHz	28 MHz	20 MHz
Sensitivity (10-5 BER)	<0.28 uV	<0.28 uV	<0.28 uV
RF Input Impedance	50 ohms	50 ohms	50 ohms
Adjacent Channel Selectivity			
+/- 6.25 kHz w/ultra narrow IF	>45 dB	>45 dB	>45 dB
+/- 12.5 kHz w/narrow IF	>60 dB	>60 dB	>60 dB
Spurious and Image Rejection	>60 dB	>60 dB	>60 dB
Intermodulation Rejection	>67 dB	>67 dB	>67 dB
FM Hum and Noise			
6.25 kHz channel operation	>35 dB	>35 dB	>35 dB
12.5 kHz channel operation	>40 dB	>40 dB	>40 dB
Conducted Spurious	<-57 dBm	<-57 dBm	<-57 dBm
Receive Attack Time	<10 ms	<10 ms	<10 ms
RSSI Squelch Attack Time	<5 ms	<5 ms	<5 ms
Receive Current Drain	<120 mA	<120 mA	<120 mA

INPUT/OUTPUT CONNECTOR

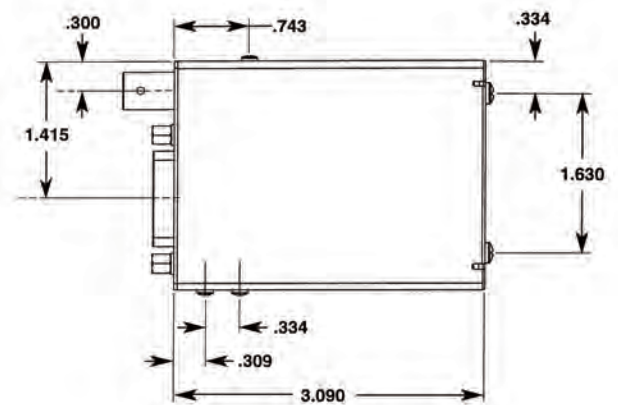
Pin #	Description	Pin #	Description
1	Audio In	8	RD
2	Audio Out	9	TD
3	Speaker	10	CTS
4	A/B	11	DSR
5	N/C	12	Test (PTT)
6	Power Supply	13	Carrier Detect
7	N/C	14	RTS
		15	GND

Note: RD, TD, CTS, DSR and RTS are at RS-232 levels.

*Not all models may be currently available. Contact factory for details.



RF with Modem Board Module



Founded in 1977, Ritron, Inc. specializes in the design and manufacture of commercial and industrial-grade wireless voice and data communication equipment.



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