



NX 60 Series

DTX+ Transceiver Module

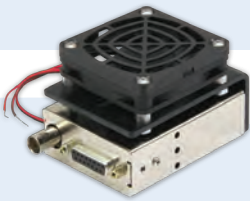
NXDN™ Digital/Analog Voice

THE WIRELESS CONNECTION

FEATURES

- Narrow Band (12.5 kHz) Analog Voice
- Very Narrow Band (6.25 kHz) Digital Voice
- Broadband TX/RX Design:
38 MHz@ VHF, 28 MHz@ 220 MHz,
20 MHz@UHF
- 6 Watt (VHF & 220MHz) and
3/6/10 (UHF) Models
- Limited NXDN Data Support
- Frequency Ranges: *
136 -174 MHz 400-430 MHz
217-245 MHz 450-470 MHz
380-400 MHz
- Compact Size: 3.6"l x 2.3"w x 1.0"h
- Frequency Stability Standard @ 1.0 ppm
- Ultra Fast TX/RX Attack Times
- Controlled EnvelopeSM TX Keying
- Dual Transmit and Receive Audio Paths
- Meets FCC and IC (Canada) Standards **
- Programmable Output Power
- SMD Component Design
- Custom Frequency Ranges Available
- Designed and Manufactured in the USA
- Optional Fan

Optional fan kit
permits continuous
duty operation.



Ideal for system integrators and OEM applications.

The 60-Series NXDN/Analog Voice Modules are ideal for any system that is using the 6.25 kHz NXDN protocol for digital voice and/or is currently using analog voice, but is contemplating a transition to NXDN digital. In addition to supporting NXDN digital voice, the modules can also support limited NXDN data messages. Although primarily a voice module, both analog and digital, the programming pin of the module's 15-pin connector does allow for limited data messages to be sent to and from the module for transmission/reception. As with all of the 60-Series modules, the NXDN versions are FCC/IC refarming compliant.

For high performance, reliable and cost-effective wireless data solutions, call Ritron at **800.USA.1.USA** (800-872-1872).

**Have an NXDN data requirement?
Ask about the DTXM NXDN data
protocol radiomodem.**



*Contact Ritron with your specific frequency band requirement.

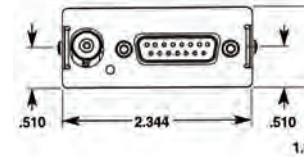
**Certain models listed have not been approved by the FCC.

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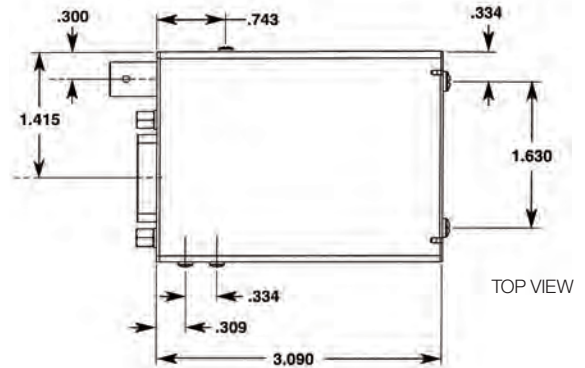
NXDN™ Digital/Analog Voice

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



FRONT VIEW

TRANSCIVER MODULE



TOP VIEW

DTX PLUS INPUT/OUTPUT CONNECTORS

PIN #	Name	Description
1	CS0	Channel Select low bit
2	CS1	Channel Select mid bit
3	CS2	Channel Select high bit
4	MIC IN	Microphone Input
5	CSN	High/Low Power or Channel 1/2
6	RAW Supply	Power Supply Input
7	AUX IN	Auxiliary Input
8	AUX OUT	Auxiliary Output
9	PGN IN/OUT	Programming I/O
10	RSSI	Receive Signal
11	RX MON	Monitor
12	AUDIO OUT	Audio PA Output
13	DCD	Carrier Detect
14	PTT RTS	Push-to-Talk
15	GND	Ground

AVAILABLE MODELS*			
DTX+ NX 60 Series			
Model	Frequency		
DTX-160-0-NX	136-174 MHz		
DTX-260-0-NX	217-245 MHz		
DTX-360-M-NX	380-400 MHz		
DTX-460-G-NX	400-430 MHz		
DTX-460-0-NX	450-470 MHz		
Various power and voltage options are available. Other frequency ranges possible.			
Please contact Ritron for your specific requirements.			
GENERAL	VHF	220 MHz	UHF
FCCPending.....		
Industry CanadaPending.....		
Number of Channels	8	8	8
TX/RX Spacing (w/in frequency range)	38 MHz max.	28 MHz max.	20 MHz max.
Mode of OperationSimplex/Half Duplex.....		
Channel Increment (Synthesizer step size)	2.5 kHz	2.5/3.125 kHz	5/6.25 kHz
Emissions Bandwidth			
Narrow Mode (Analog)	11 kHz	11 kHz	11 kHz
Very Narrow Mode (Digital)	4 kHz	4 kHz	4 kHz
Frequency Stability (-30° to +60° C)	1.0 ppm	1.0 ppm	1.0 ppm
Frequency Stability (-30° to +65° C)	1.5 ppm	1.5 ppm	1.5 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 +65° C	-30° to +65° C	-30° to +65° 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	VHF	220 MHz	UHF
Operating Bandwidth	38 MHz	28 MHz	20 MHz
RF Output Power	1-6 watts	1-6 watts	1-3/6/9 watts
Duty Cycle @ 25° C			
3 Watts	30%	30%	30%
6 Watts	20%	20%	20%
10 Watts	20%	20%	20%
With Optional Fan @ 4 Watts (up to 50° C)	100%	100%	100%
Key-Down Time (seconds) @ 25° C			
3 Watts	45 s	45 s	45 s
6 Watts	30 s	30 s	30 s
10 Watts	15 s	15 s	15 s
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 (12.5 kHz channel operation)	>45 dB	>45 dB	>45 dB
Current Drain @ 12VDC			
1 watt	<1.0 A	<1.0 A	<1.0 A
6 watt	<2.0 A	<2.0 A	<2.1 A
10 watt version (13.7 VDC supply)	N/A	N/A	<2.4 A
RECEIVER	VHF	220 MHz	UHF
Operating Bandwidth	38 MHz	28 MHz	20 MHz
Sensitivity (12 dB SINAD)	<0.25 uV	<0.25 uV	<0.25 uV
RF Input Impedance	50 ohms	50 ohms	50 ohms
Adjacent Channel Selectivity			
+/- 12.5 kHz	>60 dB	>60 dB	>60 dB
+/- 6.25 kHz	>45 dB	>45 dB	>45 dB
Spurious and Image Rejection	>60 dB	>60 dB	>60 dB
Intermodulation Rejection	>67 dB	>67 dB	>67 dB
FM Hum and Noise (12.5 kHz channel operation)	>45 dB	>45 dB	>45 dB
Conducted Spurious	<-57 dBm	<-57 dBm	<-57 dBm
Receive Attack Time	<10 ms	<10 ms	<10 ms
Squelch Attack Time	<5 ms	<5 ms	<5 ms
Receive Current Drain	<120 mA	<120 mA	<120 mA

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

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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PN DTX+NXDN Digital/Analog Voice 3/2017