

**HP NX Series**

# HP Transceiver Module

## NXDN™ Digital/Analog Voice

THE WIRELESS CONNECTION



### FEATURES

- High Power Capability  
5- 30 Watts All Models
- Narrow Band (12.5 kHz)
- Very Narrow Band (6.25 kHz) Models
- Broadband TX/RX Design:  
38 MHz@VHF, 28 MHz@220 MHz, 20 MHz@UHF
- DSP audio processing for cleaner data transmission
- Frequency Ranges: \*  
136 -174 MHz  
217- 245 MHz  
380-400 MHz  
400- 430 MHz  
450- 470 MHz
- Frequency Stability Standard @ 1.0 ppm
- Ultra Fast TX/RX Attack Times
- Controlled Envelope<sup>SM</sup> 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

*Ideal for OEM and System Integrator use in fixed and mobile applications.*



### DTX+ High Power Transceiver

The high-power versions of 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 and where higher RF power is required. 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).

\* Contact Ritron with your specific frequency band requirement.

\*\* Models listed have not been approved by the FCC. This device is not, and may not be, offered for sale or lease, or sold or leased until approval by the FCC has been obtained.

**Have a radio modem requirement?  
Ask about the DTXM RadioModem.**



**AVAILABLE MODELS**

**DTX+ HP**

Model	Frequency
DTX-165-O-NX	136-174 MHz
DTX-265-O-NX	217-245 MHz
DTX-365-M-NX	380-400 MHz
DTX-465-G-NX	400-430 MHz
DTX-465-O-NX	450-470 MHz

Other frequency ranges possible. Please contact the Ritron Sales Department for your specific requirements.

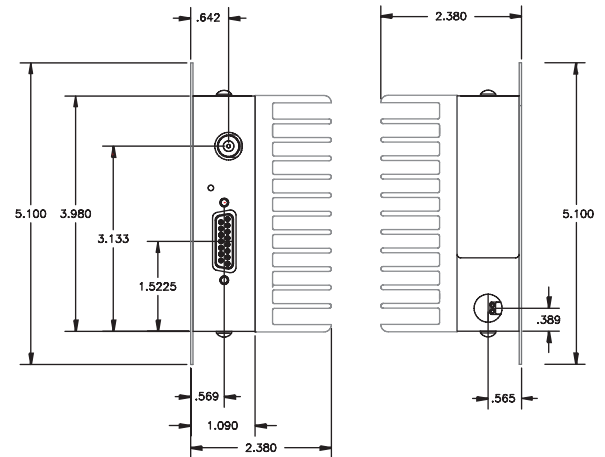
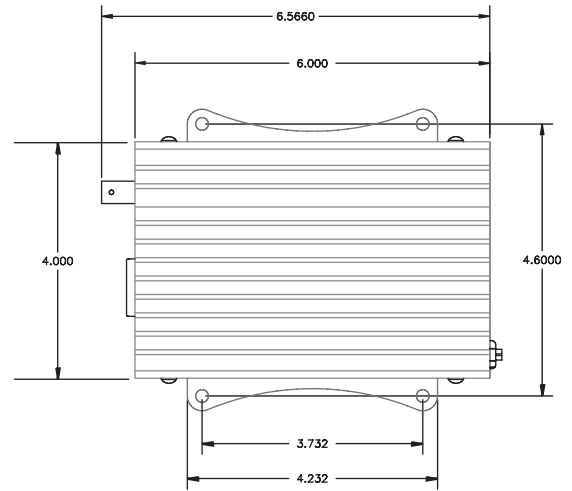
**DTX+ HP SPECIFICATIONS**

GENERAL	VHF	220 MHz	UHF
FCC Identifier	PENDING	PENDING	PENDING
Industry Canada Identifier	PENDING	PENDING	PENDING
Number of Channels	8	8	8
TX/RX Spacing (w/in frequency range)	38 MHz max.	28 MHz max.	20 MHz max.
Mode of Operation	--- Simplex/Half Duplex ---		
Channel Increment (Synthesizer step size)	2.5 kHz	2.5/3.125 kHz	5/6.25 kHz
Emissions Bandwidth			
Narrow Mode	11 kHz	11 kHz	11 kHz
Very Narrow Mode	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)	11-16	11-16	11-16
RF Input/Output Connector	BNC	BNC	BNC
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)	6.56" x 5.1" x 2.38"		
Weight	33 oz	33 oz	33 oz
Power Interface	2 pin Molex	2 pin Molex	2 pin Molex
TRANSMITTER	VHF	220 MHz	UHF
Operating Bandwidth	38 MHz	28 MHz	20 MHz
RF Output Power	5-30 watts	5-30 watts	5-30 watts
Duty Cycle @ 25° C			
@30 Watts	75%	75%	75%
@15 Watts	100%	100%	100%
Key-Down Time (minutes)	6 m	6 m	6 m
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	>40 dB	>40 dB	>40 dB
6.25 kHz channel operation	>35 dB	>35 dB	>35 dB
Current Drain@12VDC			
5 watt	<2.5 A	<2.2 A	<2.0 A
15 watt	<4.0 A	<4.0 A	<2.9 A
30 watt	<6.0A	<5.8A	<5.8 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	>45dB
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	>40 dB	>40 dB	>40 dB
6.25 kHz channel operation	>35 dB	>35 dB	>35 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	<140 mA	<210 mA

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**HP NX 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	NC
7	AUX IN Auxiliary Input
8	AUX OUT Auxiliary Output
9	PGN IN/OUT Programming I/O
10	RSSI Receive Signal Strength
11	RX MON Monitor
12	AUDIO OUT Audio PA Output
13	DCD Carrier Detect
14	PTT RTS Push-to-Talk
15	GND Ground



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