



Ritron DTX+

Industrial DIN-Rail-Mount Telemetry Radio

- VHF & UHF Models Available**
- Bell-202 Modem Option Available**
- 12.5 KHZ Narrowband Frequencies**
- 1-Year Manufacturer Warranty**



Mounts On 35mm Industrial Din-Rail...

SCADAmetrics is pleased to offer an industrial din-rail-mount version of the Ritron DTX+ Telemetry Radio. These high-quality Telemetry Radios are available in VHF and UHF bands, and are available with our newly-improved, 2.5KV Isolated Bell-202 modem option.

Cross-Compatibility...

When utilized with a non-proprietary modem, the Ritron DTX+ Telemetry Radios permit users to mix various makes and models of compatible radios within a telemetry system, thereby alleviating the problem of vendor-lockin. Compatibility is anticipated with a wide range of popular analog telemetry radios, including models from the following manufacturers:

- GE/Microwave Data Systems
- Calamp
- Maxon
- RF Neulink

FAQ's...

Which Ritron DTX+ Radios do we offer?

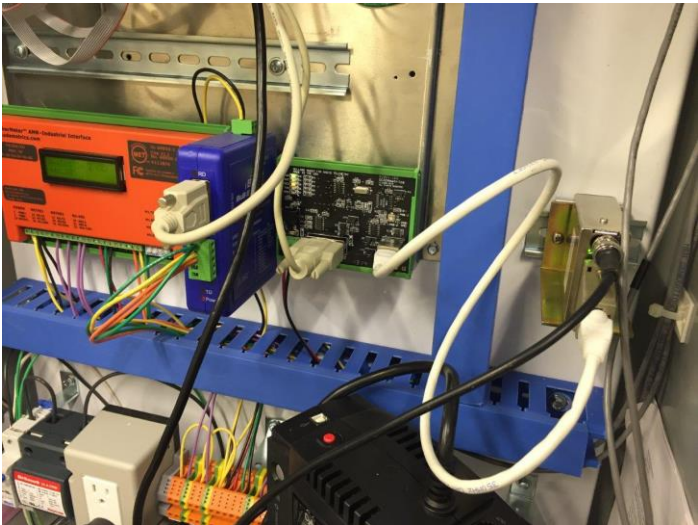
- 136-174 MHz, DTX-160-OBN6I
- 217-245 MHz, DTX-260-OBN6I
- 450-470 MHz, DTX-460-OBN6I

What documentation is available?

Complete Specifications and User Manuals are available for download from our website.

Do the radios require programming?

Yes, use of these radios require an FCC license, and therefore each radio is required to be programmed to transmit and receive on its licensed frequency(s).



Go Beyond Normal Limits...™

RITRON
WIRELESS SOLUTIONS

60 Series DTX+ Transceiver

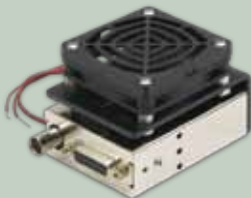
The Wireless Connection

*Ideal for system integrators
and OEM applications.*

FEATURES

- Wide Band (25 kHz)*
- 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
- 6 Watt (VHF & 220MHz) and
3/6/10 (UHF) Models
- DSP audio processing for cleaner
data transmission
- 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.



* Wideband (25KHz) model available by special order only and where allowed by appropriate regulatory authorities.

**Contact Ritron with your specific frequency band requirement.



DTX+ Transceiver

The DTX+ Series is ideal for any system design where high performance RF specifications, fast TX/RX attack times, and compact size are a requirement. High specifications permit integration into systems demanding the utmost performance in congested frequency environments.

This compact design makes the DTX+ Series perfect as a retrofit to RNet and JSLM installations. Direct modulation with low distortion and low group delay result in a low bit-error-rate (BER) for enhanced system integrity and reliability. The Swift LockSM synthesizer-loading algorithm reduces unit turn-on-time to less than 10ms for high-speed data throughput rates, and Controlled EnvelopeSM keying reduces adjacent channel "keyclicks", resulting in spectrum-friendly operation.

Capable of 6.25kHz and 12.5 kHz channel spacing operation, the DTX+ Series can be installed in systems where refarming compliant narrow band frequencies have been assigned.

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

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



AVAILABLE MODELS

DTX+ 60 Series

DTX+ 60 Series RF Board

Model	Frequency	Model	Frequency
DTX-160-0	136-174 MHz	DTX-160-0-DD	136-174 MHz
DTX-260-0	217-245 MHz	DTX-260-0-DD	217-245 MHz
DTX-360-M	380-400 MHz	DTX-360-M-DD	380-400 MHz
DTX-460-G	400-430 MHz	DTX-460-G-DD	400-430 MHz
DTX-460-0	450-470 MHz	DTX-460-0-DD	450-470 MHz

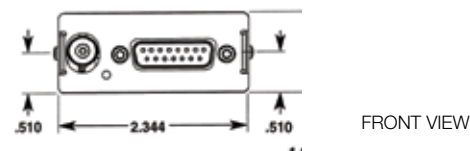
Various power and voltage options are available. Other frequency ranges possible. Please contact Ritron for your specific requirements.

DTX+ 60 Series SPECIFICATIONS

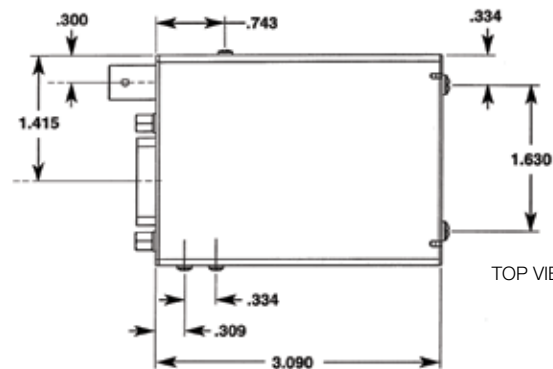
GENERAL	VHF	220 MHz	UHF
FCC	AIERIT33-1600	AIERIT33-2660	AIERIT33-4600
Industry Canada	1084A-RIT331600	1084A-RIT332600	1084A-RIT334600
Number of Channels	8	8	8
TX/RX Spacing (w/in frequency range)	38 MHz max.	28 MHz max.	20 MHz max.
Mode of Operation	— — Simplex/Half Duplex — —		
Channel Increment (Synthesizer step size)	2.5 kHz	2.5/3.125 kHz	5/6.25 kHz
Emissions Bandwidth			
Wide Mode*	16 kHz	16 kHz	16 kHz
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)	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
6.25 kHz channel operation	>40 dB	>40 dB	>40 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	>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	>45 dB	>45 dB	>45 dB
6.25 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
Squelch Attack Time	<5 ms	<5 ms	<5 ms
Receive Current Drain	<120 mA	<120 mA	<120 mA

* Wideband (25KHz) model available by special order only and where allowed by appropriate regulatory authorities.

RF and CONTROL BOARD MODULE

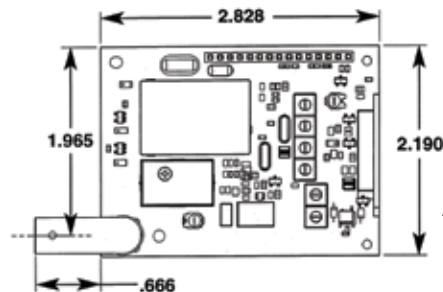


FRONT VIEW

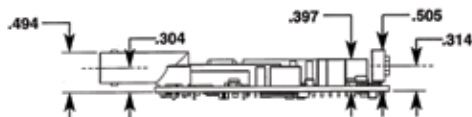


TOP VIEW

RF BOARD MODULE



TOP VIEW



SIDE 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	CTS	Clear to Send
11	RX MON	Monitor
12	AUDIO OUT	Audio PA Output
13	DCD	Carrier Detect
14	PTT RTS	Push-to-Talk
15	GND	Ground

Go Beyond Normal Limits...™



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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.