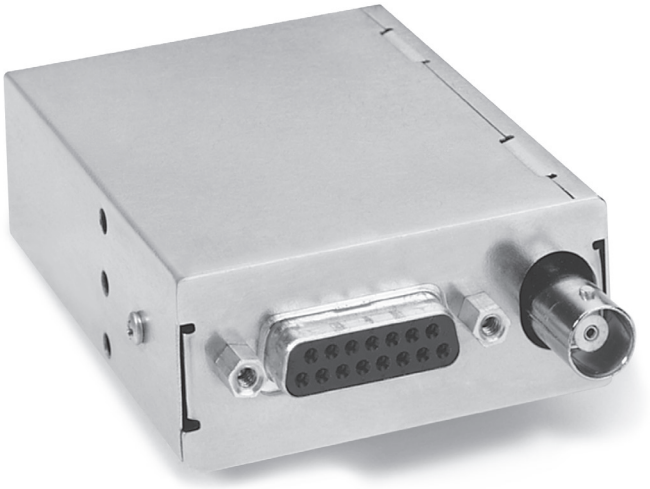
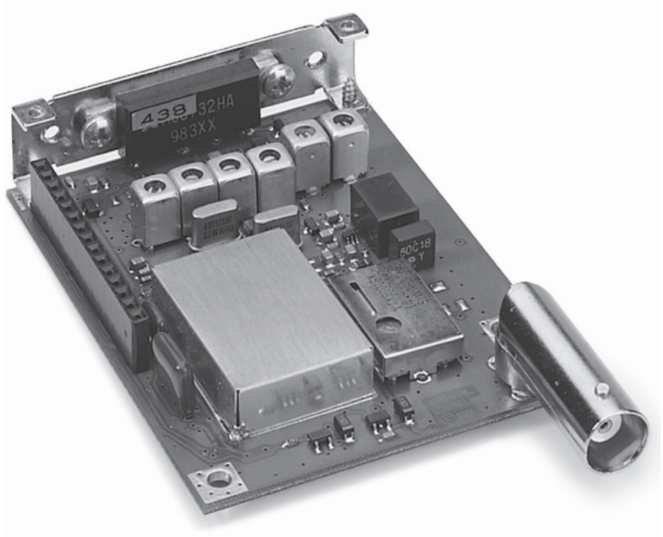
Ritron RF Telemetry- The Wireless Connection[sm]

Features

- Narrow band (12.5 kHz) or wide band (25 kHz) models
- Broadband TX/RX design: 26 MHz VHF, 20 MHz UHF
- 6 Watt (VHF) and 3/6/10 Watt (UHF) models
- Frequency ranges: 136-162 MHz VHF
  148-174 MHz VHF
  400-420 MHz UHF
  450-470 MHz UHF
- Compact size (only 3.6" L x 2.3" W x 1.0" H)
- Frequency stability standard @ 1.5 ppm for fixed applications
- Ultra fast TX/RX attack times
- Controlled Envelope[sm] TX keying
- Dual Transmit and Receive Audio paths
- Meets FCC and IC (Canada) standards**
- Programmable Electronic settings and adjustments
- Programmable High/Low Output Power
- SMD Component Design
- Custom frequency ranges available
- Made in the USA

Small, rugged, and dependable synthesized RF transceivers for OEM or end user applications. . . . . .





The DTX Plus 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 Plus 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 Lock[sm] synthesizer-loading algorithm reduces unit turn-on-time to less than 15ms for high-speed data throughput rates and Controlled Envelope[sm] keying reduces adjacent channel "keyclicks" resulting in spectrum-friendly operation.

Capable of half- and full-channel spacing operation, the DTX Plus Series can be installed in systems where refarming compliant narrow band frequencies have been assigned.

If dependability, reliability, and low-cost are important factors in your RF Telemetry requirements, call RITRON at **800-USA-1-USA**.

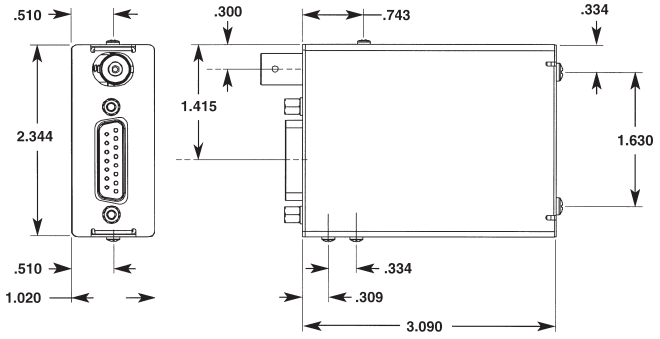
RITRON®

DTX *Plus*[sm] Series

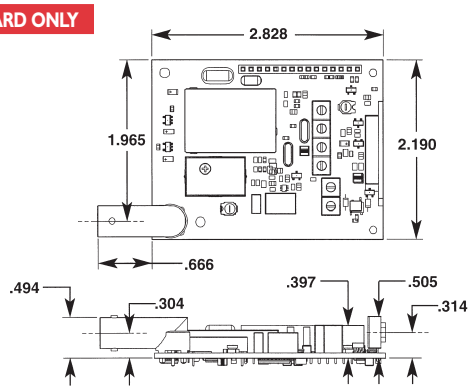
Synthesized Telemetry Transceivers

Dependable, reliable, and low-cost synthesized RF transceivers for OEM or end user applications. . . . . .

RF and CTROL BOARD MODULE



RF BOARD ONLY



Dimensions shown in inches

AVAILABLE MODELS:

DTX Plus Module		DTX Plus RF Board	
Model	Frequency	Model	Frequency
DTX-154-G	136-162 MHz	DTX-154-G-DD	136-162 MHz
DTX-154-O	148-174 MHz	DTX-154-O-DD	148-174 MHz
DTX-454-G	400-420 MHz	DTX-454-G-DD	400-420 MHz
DTX-454-O	450-470 MHz	DTX-454-O-DD	450-470 MHz

Various power and voltage options are available. Please contact the Ritron Sales Department for your specific requirements.

DTX PLUS SPECIFICATIONS

GENERAL	VHF	UHF
FCC Identifier	AIERIT12-150	AIERIT11-450
Number of Channels	8	8
TX/RX Spacing (w/in frequency range)	26 MHz max	20 MHz max
Mode of Operation	Simplex or Half Duplex	
Channel Increment (Synthesizer step size)	2.5 kHz	5/6.25 kHz
Emissions Bandwidth		
Narrow Mode	11 kHz	11 kHz
Wide Mode	16 kHz	16 kHz
Frequency Stability (-30° to +65° C)	1.5 ppm	1.5 ppm
Supply Voltage (VDC)		
3 and 6 watt versions	7.5 or 11-16 w/internal regulator	
10 watt version	11.5 to 15	
RF Input/Output Connector	BNC	BNC
Power/Data Interface	15 pin subminiature D type	
Operating Temperature	-30° to +65° C	-30° to +65° C
Maximum Dimensions (L x W x H)	3.6″x 2.3″x 1.0″	
Weight	6 oz	6 oz

TRANSMITTER	VHF	UHF
Operating Bandwidth	26 MHz	20 MHz
RF Output Power	1-3, 1-6, or 1-10 watts depending upon model	
Duty Cycle	5 to 100 % depending upon power and temperature	
RF Load Impedance	50 ohms	50 ohms
Audio Distortion	≤5% max	≤5% max
Modulation Frequency Response	(+1/-3 dB ref 1 kHz)	
At MIC IN (ref pre-emphasis curve)	50 Hz-2500 Hz	50 Hz-2500 Hz
At AUX IN w/o pre-emphasis	50 Hz-2700 Hz	50 Hz-2700 Hz
Transmitter Attack Time:	≤15 ms	≤15 ms
Spurious and Harmonics:	≤-20 dBm	≤-20 dBm
FM Hum and Noise		
12.5 kHz channel operation	≥40 dB	≥40 dB
25 kHz channel operation	≥45 dB	≥45 dB
Current Drain		
1 watt	≤1.0 A	≤1.0 A
6 watt	≤2.4 A	≤2.4 A
10 watt version (13.7 VDC supply)	N/A	≤2.4 A

RECEIVER	VHF	UHF
Operating Bandwidth	26 MHz	20 MHz
Sensitivity		
(12 SINAD w de-emphasis)	≤0.28 uV	≤0.28 uV
RF Input Impedance	50 ohms	50 ohms
Adjacent Channel Selectivity		
+/- 12.5 kHz w/narrow IF	≥60 dB	≥60 dB
+/- 25 kHz w/wide IF	≥70 dB	≥70 dB
Spurious and Image Rejection	≥70 dB	≥70 dB
Intermodulation Rejection	≥70 dB	≥70 dB
FM Hum and Noise		
12.5 kHz channel operation	≥40 dB	≥40 dB
25 kHz channel operation	≥45 dB	≥45 dB
Conducted Spurious	≤-57 dBm	≤-57 dBm
Receive Attack Time	≤15 ms	≤15 ms
Noise Squelch Attack Time	≤13 ms	≤13 ms
RSSI Squelch Attack Time	≤5 ms	≤5 ms
Audio Distortion	≤5%	≤5%
Audio Response at AUX OUT		
12.5 kHz channel operation	100 Hz to 3.5 kHz	100 Hz to 3.5 kHz
25 kHz channel operation	100 Hz to 5 kHz	100 Hz to 5 kHz
Receive Current Drain	≤80 mA	≤75 mA

DTX-154/454 INPUT/OUTPUT CONNECTOR

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

**IC approval pending as of this printing

Specifications subject to change without notice. Specifications are typical for most applications using good RF propogation and installation practices.
RNet is a trademark of Dataradio, Inc.

MADE IN THE USA

www.ritron.com

RITRON®

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