DTX+ Transceiver

The Wireless Connection

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 Lock™ synthesizer-loading algorithm reduces unit turn-on-time to less than 10ms for high-speed data throughput rates, and Controlled Envelope™ 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).

FEATyRES

- 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 Envelope™ 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.

Have a radio modem requirement?
Ask about the DTXM RadioModem.
### DTX+ 60 Series Specifications

#### General

<table>
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<th>Model</th>
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<tbody>
<tr>
<td>DTX-160-O</td>
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<tr>
<td>DTX-460-G</td>
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</table>

#### Number of Channels

- 8
- 8
- 8

#### TX/RX Spacing (within 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
- **Narrow Mode**
  - 11 kHz
- **Very Narrow Mode**
  - 4 kHz

- **Frequency Stability**
  - (-30° to +60° C) 1.0 ppm
  - (-30° to +65° C) 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

#### Operating Bandwidth

- 38 MHz
- 28 MHz
- 20 MHz

#### RF Output Power

- 3 Watts: 30%
- 6 Watts: 20%
- 10 Watts: 20%

#### Duty Cycle @ 25° C

- 3 Watts: 45 s
- 6 Watts: 30 s
- 10 Watts: 15 s

#### RF Load Impedance

- 50 ohms

#### Transmitter Attack Time

- <1 ms

#### Spurious and Harmonics

- <-25 dBm

#### FM Hum and Noise

- 12.5 kHz channel operation: >45 dB
- 6.25 kHz channel operation: >40 dB

#### Current Drain @ 12VDC

- 1 watt: <1.0 A
- 6 watt: <2.0 A
- 10 watt version (13.7 VDC supply): N/A

### Receiver

#### Operating Bandwidth

- 38 MHz
- 28 MHz
- 20 MHz

#### Sensitivity (12 dB SINAD)

- <0.25 uV

#### RF Input Impedance

- 50 ohms

#### Adjacent Channel Selectivity

- +/- 12.5 kHz: >60 dB
- +/- 6.25 kHz: >45 dB

#### Spurious and Image Rejection

- >60 dB

#### Intermodulation Rejection

- >67 dB

#### FM Hum and Noise

- 12.5 kHz channel operation: >45 dB
- 6.25 kHz channel operation: >40 dB

#### Conducted Spurious

- <-57 dBm

#### Receive Attack Time

- <1 ms

#### Squelch Attack Time

- <5 ms

#### Receive Current Drain

- <120 mA

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

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