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 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).

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 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.

* Wideband (25kHz) model available by special order only and where allowed by appropriate regulatory authorities.
** Contact Ritron with your specific frequency band requirement.

Have a radio modem requirement? Ask about the DTXM RadioModem.
**DTX PLUS INPUT/OUTPUT CONNECTORS**

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

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**AVAILABLE MODELS**

<table>
<thead>
<tr>
<th>DTX+ 60 Series</th>
<th>DTX+ 60 Series RF Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Frequency</td>
</tr>
<tr>
<td>DTX-160-O</td>
<td>136-174 MHz</td>
</tr>
<tr>
<td>DTX-260-O</td>
<td>217-245 MHz</td>
</tr>
<tr>
<td>DTX-360-M</td>
<td>380-400 MHz</td>
</tr>
<tr>
<td>DTX-460-G</td>
<td>400-430 MHz</td>
</tr>
<tr>
<td>DTX-460-O</td>
<td>450-470 MHz</td>
</tr>
</tbody>
</table>

**GENERAL**

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>220 MHz</th>
<th>UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC</td>
<td>AIERIT33-1600</td>
<td>AIERIT33-2660</td>
<td>AIERIT33-4600</td>
</tr>
<tr>
<td>Industry Canada</td>
<td>1084A-RIT331600</td>
<td>1084A-RIT332600</td>
<td>1084A-RIT334600</td>
</tr>
<tr>
<td>Number of Channels</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>TX/RX Spacing (w/ frequency range)</td>
<td>38 MHz max.</td>
<td>28 MHz max.</td>
<td>20 MHz max.</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Simplex/Half Duplex</td>
<td>——</td>
<td>——</td>
</tr>
<tr>
<td>Channel Increment (Synthesizer step size)</td>
<td>2.5 kHz</td>
<td>2.5/3.125 kHz</td>
<td>5/6.25 kHz</td>
</tr>
</tbody>
</table>

**Emissions Bandwidth**

- Wide Mode*: 16 kHz
- Narrow Mode: 11 kHz
- Very Narrow Mode: 4 kHz

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

- 1.0 ppm
- 1.5 ppm

**Supply Voltage (VDC)**

- 7.5 or 11-16

**RF Input/Output Connector**

- BNC

**Power/Data Interface**

- 15 pin sub D

**Operating Temperature**

- -30° to +65° C

**Maximum Dimensions (L x W x H)**

- 3.6 x 2.3 x 1.0

**Weight**

- 6 oz

**TRANSMITTER**

**Operating Bandwidth**

- 38 MHz

**RF Output Power**

- 1-6 watts

**Duty Cycle @ 25° C**

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

**RF Load Impedance**

- 50 ohms

**Transmitter Attack Time:**

- <10 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

**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**

- <10 ms

**Squelch Attack Time**

- <5 ms

**Receive Current Drain**

- <120 mA

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