The **CTX09511** is a multi-channel full duplex Transmit/Receive (TR) System platform capable of generating up to twelve 1 KW phase adjustable RF signals all contained in a single rack. Each of the twelve amplified signals can be switched between an X and Y port allowing the system to drive two separate antenna feeds. The **CTX09511** series can be modified to specific customer requirements and is capable of being the core instrument in both modern military and civilian phased array radar systems - significantly improving radar system accuracy, flexibility, maintainability, and reliability.

### Key Features
- Fully Duplexed Operation
- 12 Simultaneous Channels
- 12 KW Output Power, 1 KW Each Channel
- 20 dB Linear Dynamic Range
- Switchable RF Ports
- Adjustable Phase
- 1 KW RX Protection
- Power Supply Redundancy
- USB Control Interface

### Options
- Number of Channels
- Operating Frequency from VHF to C-Band
- Output Power
- Various Primary Power Inputs
- Control Interfaces (options)- RS232, RS485, IEEE-488, Ethernet, and USB

### Applications
- Weather Monitoring
- Phased Arrays
- Test Ranges
- Airport Surveillance
CTX09511 Series
Multi-Channel TR Block Subsystem

Block Diagram
The CTX09511 consists of power supplies working in concert with the Power Distribution Unit (PDU) to drive the RF/TR Function Blocks (each PDU can drive up to six TR Blocks). The TR Block outputs are switchable to either an X or Y port. The system operates in full duplex mode to accept and process the returned signal while simultaneously transmitting. The CTX09511 also includes a USB interface to allow for easy access to system status. The individual TR Block diagram (total of 12 channels) is shown below.

Subsystem Specifications

<table>
<thead>
<tr>
<th>Parameter Description</th>
<th>Value</th>
<th>Unit</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channels</td>
<td>12</td>
<td>-</td>
<td>X/Y Antenna Port each Channel</td>
</tr>
<tr>
<td>Operating Frequency Range</td>
<td>Customer Specified</td>
<td>MHz</td>
<td>VHF to C-Band</td>
</tr>
<tr>
<td>Output Power</td>
<td>12</td>
<td>KW</td>
<td>1 KW each Channel</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>20</td>
<td>dB</td>
<td>Minimum</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>96 - 240</td>
<td>VAC</td>
<td>Minimum/Maximum</td>
</tr>
<tr>
<td>Supply Power</td>
<td>6/10</td>
<td>KW</td>
<td>Nominal/Maximum</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to +40</td>
<td>°C</td>
<td>Maximum</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 to +85</td>
<td>°C</td>
<td>Maximum</td>
</tr>
<tr>
<td>Rack Size</td>
<td>24 x 49 x 78</td>
<td>Inches</td>
<td>W x D x H</td>
</tr>
<tr>
<td>Weight</td>
<td>1000</td>
<td>Lbs</td>
<td>Approximate</td>
</tr>
</tbody>
</table>

Electrical Connections
All electrical connections for the CTX09511 occur in the rear of the rack. Only a single AC line (96V - 240V) is required for the power supply and distribution modules. However, the RF interface, antenna feed, and control signals are collected off of each TR Function Amplifier via separate cables.

Certifications for Emissions and Susceptibility
The CTX09511 has been certified to CE102, CS101, CS114-116, RE102, and RE103 of MIL-STD-461E

Additional Information
For more information on this or other DAICO products, call or contact us at sales@daico.com