

DTX09511 Series Multi-Channel Transmit / Receive System

The **DTX09511** 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 **DTX09511** 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

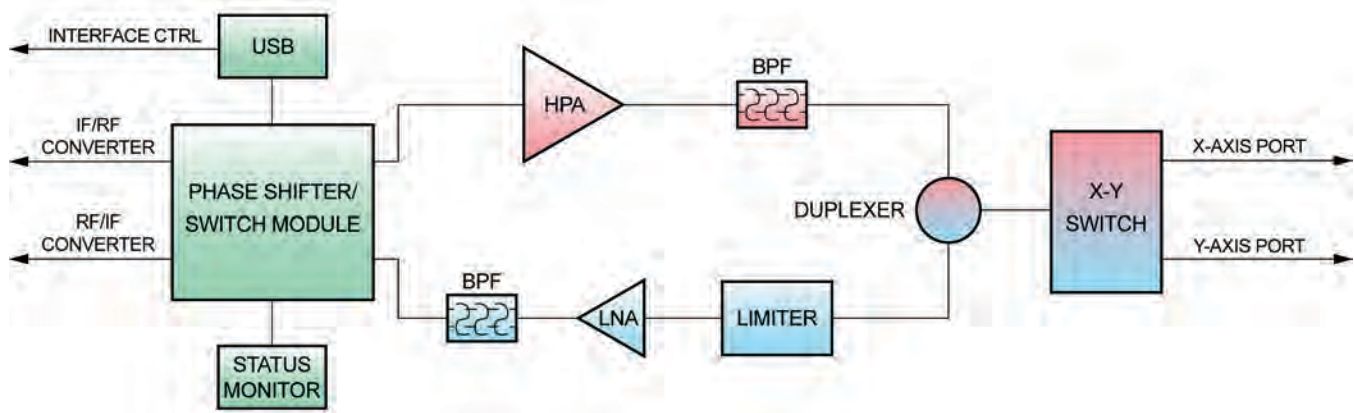
- Weather Monitoring
- Test Ranges
- Phased Arrays
- Airport Surveillance



DTX09511 Series Multi-Channel TR Block Subsystem

Block Diagram

The **DTX09511** 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 **DTX09511** 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

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

Electrical Connections

All electrical connections for the **DTX09511** 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 **DTX09511** 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