

Products to Solution

Switch Matrices



SWITCH MATRICES

Ducommun RF Products builds on the extensive history and fundamental knowledge of electro-mechanical coaxial switches and combines them into the system with its ability to integrate products into a workable solution and design to meet customer's unique requirements. From a simple SPST coaxial switch to a fully integrated switching solution, Ducommun RF Products has the technical expertise that is equal to the challenge.

TYPICAL APPLICATIONS

- ATE Testing
- Switching Between Communication Links
- Data Acquisition
- Signal Path Control
- Satellite Control Stations

SWITCH MATRIX CAPABILITIES

Ducommun RF Products has been actively working with our individual customers to develop unique testing solutions with our Switch Matrices and coaxial switches. Ducommun RF Products has over twenty five years experience with the design and manufacturing of switch matrix systems. Combining together our technical knowledge of both coaxial switches and switching systems, we have been able to assist our customers with a variety of solution that fit their unique requirements. Ducommun RF Products offers a complete, fully supported, turnkey solution that allows our customers to have the benefit of a customized solution at a fraction of the price.

Ducommun RF Products provides technical assistance to our customers to help them create the best test matrix for their unique application. Ducommun RF Products engineering team will work with individual customers to help define the system specifications; design the system and propose this to each customer; and deliver the final switching system in a time sensitive schedule.

To begin this process, contact a Ducommun RF Products local representative or contact a factory representative or visit our web site to find our Switch Matrix Questionnaire.

BENEFITS

- Expandable system for future growth
- Reduced touch labor
- Short lead time (typical)

FEATURES

- Modular design
- Customizable
- USB controlled switches
- Available with either 50 or 75 ohm



EXAMPLES OF OUR MATRIX CONFIGURATIONS

As Ducommun continues to provide customers with custom switch matrix configuration, listed below are a few examples of model numbers, as well as standard and custom configuration specifications.

STANDARD SPECIFICATIONS

- AC Supply: 100-240 VAC
- Control: Ethernet/GPIB
- Frequency Range Options: DC to 46 GHz

Model Number	C322U4x4-01
Configuration:	4 Input SMA 4 Output SMA
Frequency	DC to 18 GHz
Size:	2U
VSWR:	1.7 : 1 Max
Insertion Loss	3 dB Max
Isolation	80 dB Min

Model Number	C32U1x16-01
Configuration:	16 Input SMA 1 Output SMA SP16T RF Switch (16x1)
Size:	2U
VSWR:	1.6 : 1 Max
Insertion Loss	1.5dB Max
Isolation	60dB Min

Model Number	C32U12x2-01
Configuration:	12 Input SMA 2 Output SMA Non Blocking (12 x 2 Crossbar)
Size:	2U
Insertion Loss	3dB Max
Isolation	60dB Min



Model Number	C323U6x6-01
Configuration:	12 Input SMA 2 Output SMA SP6T RF Switch (2x12)
Frequency Range	DC to 12 GHz
Size:	2U
Insertion Loss	DC 8 GHz - 3dB Max 8 GHz - 12 GHz -4dB Max
Isolation	60dB Min



Model Number	C326U2x4x4-01
Configuration:	2x4 Input SMA 4 Output SMA Non Blocking (4 x 4 Crossbar)
Size:	6U
VSWR:	1.6 : 1 Max
Insertion Loss	1.5dB Max
Isolation	60dB Min



CROSS-PATH OPTIONS

Our switch matrix systems utilize a significant number of discrete components, including our own coaxial and pin diode switches, in a modular configuration. We are currently offering the following cross-path options:

- Crossbar- One path exists between the input and output path
- Fan Out- Divides the input signal into a multiple path array
- Fan In- Combines multiple inputs into a single output path

COMMUNICATIONS / CONTROL PROTOCOLS

Ducommun RF Products can provide our switch matrices with different communication/control protocols. These include;

- Labview based drivers
- GPIB
- RS-232/Ethernet (TCP/IP)
- USB

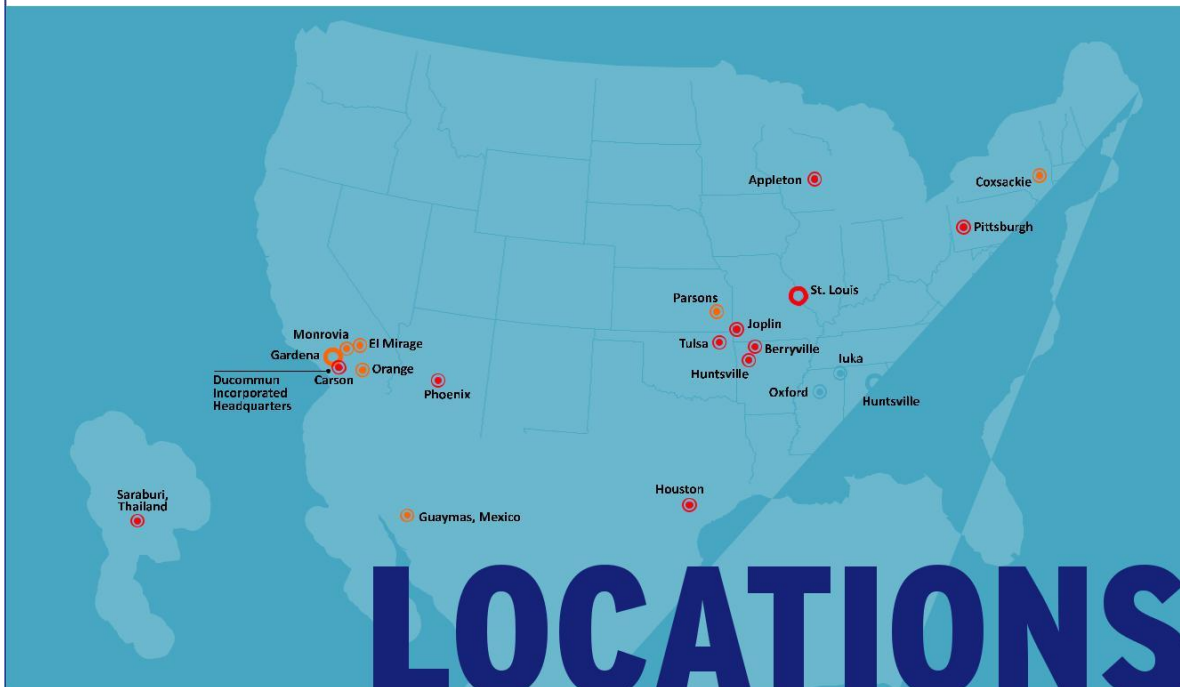


ABOUT DUCOMMUN RF PRODUCTS

Ducommun RF Products is a key supplier of Microwave and Millimeter Wave components and sub-assemblies to our customers throughout the world. Ducommun has been making RF Products since 1969, 1st as Dynatech (DMT) and then expanded our product offering with the acquisitions of DBP Microwave and WiseWave Technologies.

Along with our Switch Matrix products, we manufacture Coaxial Switches, Pin Diode Switches, Switched Filter Banks, Mixers, Up & Down Converters, Multipliers, Doppler & Ranging Radars. We also manufacture many passive components such as Filters, Diplexers, WG Transitions, Flanges, Bulkhead Adapters and WG to Coax Adapters. We have designs for Commercial Aircraft, Military Aircraft, Defense, Industrial, Medical, SATCOM, Telecommunications and Test & Measurement applications.

Where We're Located



Ducommun LaBarge Technologies

- Appleton, Wisconsin
- Berryville, Arkansas
- Carson, California
- Houston, Texas
- Huntsville, Arkansas
- Joplin, Missouri
- Phoenix, Arizona
- Pittsburgh, Pennsylvania
- Saraburi, Thailand
- St. Louis, Missouri
DLT headquarters
- Tulsa, Oklahoma

Ducommun AeroStructures

- Coxsackie, New York
- El Mirage, California
- Gardena, California
DAS headquarters
- Guaymas, Mexico
- Monrovia, California
- Orange, California
- Parsons, Kansas

Ducommun Miltec

- Huntsville, Alabama
Miltec headquarters
- Iuka, Mississippi
- Oxford, Mississippi