BULLETIN
FR-4-23-25

CYTEC CORP.
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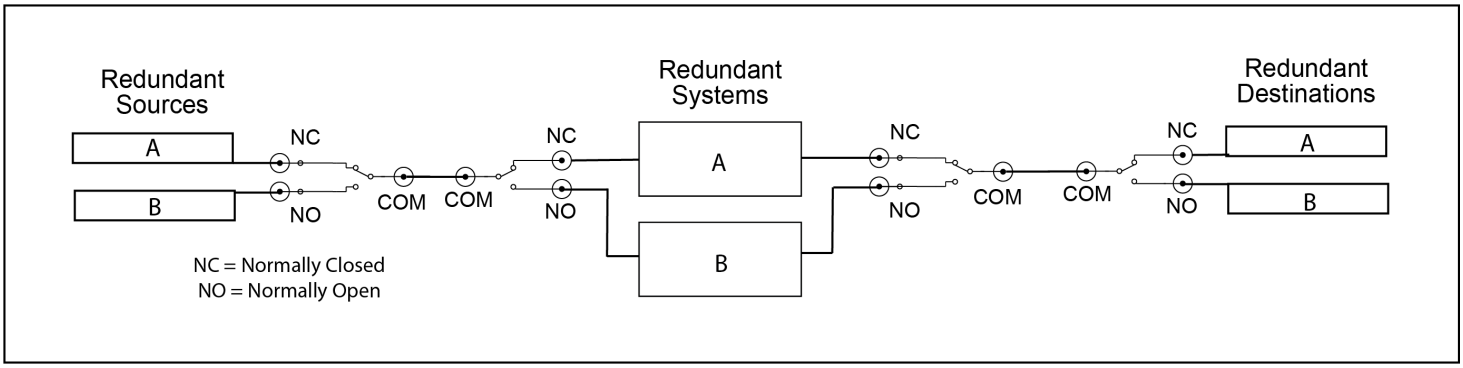
Failsafe, Redundancy and Fall-Over Switches

These systems are designed to act as safety devices in situations where you need to automatically switch cabling between redundant devices or reroute cabling in emergency situations. They can be used for coax signals, network communication cabling, power wiring or almost any application where the loss of a connection creates a serious demand for a rapid solution. They are also useful in remote systems that require rerouting of signals without having to be at the physical location. or even situations where you simply need to disconnect a signal quickly.



Applications:

- **RF and Microwave applications such as satellite dishes, cable TV, video signals in 50 or 75 ohms up to 40 GHz.**
- **Network, LAN, WAN, Telco with RJ45 Connectors. Disconnect or reroute signals remotely.**
- **Multi-wire signal groups on D9, D15, D25, D37 or D50 connectors. Video Monitors, RS232, 422, EIA 530 subsets.**
- **AC or DC Power. Typical 110 / 220 AC, DC up to 1000 Volts or up to 150 Amps.**
- **Custom solutions for any connector types or signal types.**

CONTROL MODULES

IF-12 LAN / RS232 / GPIB Control (optional USB to RS232)
Cytec's newest control module has the three most popular control interface protocols built into one module and is backwards compatible with all previous Cytec control modules. Simple control using ASCII text strings makes programming easy. Go to https://cytec-ate.com/quickstart/getting-started/ for more information.

LAN - 10/100BaseT Ethernet with an RJ45 Connector.
The interfaces uses DHCP or Local loop for autofind or can be set to a static IP for secure networks. There are three ports available and all may be used at the same time. Two ports can be set by the end user and one is the default Telnet which may be disabled.

RS232 - Standard D9 serial port which can be used from computer COM ports or USB to COM port cables

GPIB - IEEE488.2 compliant control module. Commonly used with automated test applications. Works with all GPIB control cards and software including National Instruments LabView and LabWindows, Matlab and Keysight.

Drivers and programming examples available upon request in almost any programming language.

FOR TECHNICAL ASSISTANCE, CONTACT CYTEC AT 585-381-4740
E-mail: sales@cytec-ate.com or VISIT OUR WEBSITE AT cytec-ate.com

Common CTC and CTA Chassis

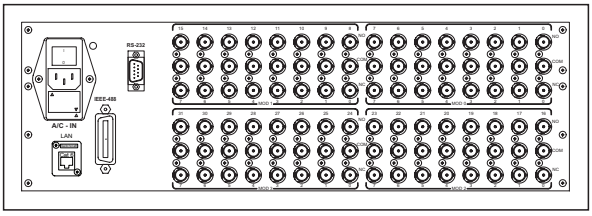
The CTC and CTA Series are 19" rack mounting chassis with built-in power supplies and are designed to hold any Coax, Microwave, Telecom, Network or power 2x1 or 2x2 switch modules. The front panels have discrete LEDs showing the status of all switch points and also provide the optional manual controls. CTC chassis hold the Form C switches, while the CTA type holds Normally Open 2x1 switches that need two drives per module.

CTC/32 MAINFRAME OR -E EXPANSION CHASSIS

Each chassis holds up to 32 2x1 or 2x2 Form C Switches which are in a Normally Closed (NC) position when OFF and a Normally Open (NO) position when ON. Or it can control up to 16 Form A Normally Open or Latching switch modules that require two drives per module. LEDs on the front panel show both switch and power status. Controls and user-selected 2x1 switches complete the system.

Dimensions: 19" rack mounting (483 mm)
15" deep (381 mm)
5.25" (3 RU) high (133 mm)
Weight: 20 lbs. (9 kg) max
AC Power : 30 W max. 115/230 VAC selectable

CTC/32 Mainframe with Pushbutton Manual Control

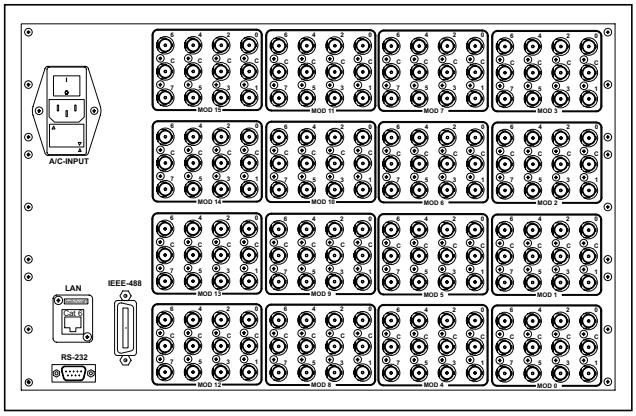


CTC/32 Rear Panel with IEEE488 & RS232 Control

CTA/128 MAINFRAME OR -E EXPANSION CHASSIS

Holds up to 64 CXR/2x1 Normally Open switches. LEDs visible through the front panel show both switch point and power status. Add controls and coaxial 2x1 switches complete the system. One CP8 Display/Driver Module is required for every four switch modules.

Dimensions: 19" rack mounting (483 mm)
15" deep (381 mm)
10.5" (3 RU) high (267 mm)
Weight: 30 lbs. (14 kg) max
AC Power : 50 W max. 115/230 VAC selectable



CTA/128 RearPanel with IEEEE-488, RS232 & LAN Interfaces

Other Chassis Sizes:
CTC or CTA 16 -- When space is a premium and you only need 16 Form C switches or 8 Form A switches
CTC or CTA 64 -- Same as the CTA/128 but can only has drive modules for 64 relays and size is minimized.
CTC or CTA 256 -- Drive chassis used to control multiple switch chassis.

ALL CHASSIS

Material: Gray anodized extruded or sheet aluminum with a polycarbonate front panel overlay.
Mounting Hardware: Rack mount handles are standard. Flush mount flanges available at no cost.
Protection: Selectable AC input fused at: 2 amps 110 Vac, 1 amp 220 Vac.
Temperature: Operating: 0 to 55 deg. C Storage: -25 to 80 deg. C

MANUAL CONTROL OPTION

Manual Controls are available for all mainframe chassis.
CTC/16, CTC/32 and **CTA/32** chassis can be purchased with optional pushbutton manual controls **PB/16** or **PB/32**. **CTA/64** mainframes are available with with optional thumbwheel manual controls **M/64-TW**. **CTC/64** and **CTC/128** mainframes can be built with with optional keypad manual controls **MC-2**.

Coax switch modules for 50 ohm, 75 ohm or balanced line 100 ohm signals. Frequencies up to 2 GHz (some higher). 2x1 A/B switches and 2x2 Transfer switches. See the CXAR product bulletin for schematics and specifications.

Coax 2x1 Form A, 1 or 2 pole, Normally Open modules requiring 2 drives per module (< 200 MHz)

CXR/2x1-1S -BNC 2x1 one pole Type S Reed w/ BNC	P/N 2-101-1-1S
CXR/2x1-2S-BNC 2x1 two pole Type S Reed w/ BNC	P/N 2-101-1-2S
CXR/2x1-2S-TBNC 2x1 two pole Type S Reed w/ Twin BNC	P/N 2-101-1-2S-TBNC

Coax 2x1 2 pole, Form C modules requiring 1 drive per module (< 300 MHz)

CXR/2x1-2C-BNC 2x1 two pole Form C Armature w/ BNC	P/N 21-00-10-BNC
CXR/2x1-2C-TBNC 2x1 two pole Form C Armature w/ Twin BNC	P/N 21-00-10-TBNC

Coax 2x1 and 2x2 50 Ohm, Form C RF modules requiring 1 drive per module (< 2.0 GHz)

CXR/2x1-G-50-BNC or -SMA 2x1 one pole failsafe 50 ohm w/ BNC or SMA	P/N 30-25-10
CXR/2x2-G-50-BNC or -SMA 2x2 transfer switch 50 ohms w/ BNC or SMA	P/N 30-27-10
CXR/2x2-GH-50-SMA 50 watt, 2x2 transfer switch 50 ohms w/ SMA	P/N 30-37-10-SMA

Coax 2x1 50 Ohm, Terminated, Form C RF modules requiring 2 drives per module (< 2.0 GHz)

CXR/2x1-GT-50-BNC or -SMA 2x1 Terminated module 50 ohm w/ BNC or SMA	P/N 21-01-10
CXR/2x1-GT-C-50-BNC or-SMA 2x1 Terminated common 50 ohm w/ BNC or SMA	P/N 30-33-10

Coax 2x1 and 2x2 75 Ohm, Form C RF modules requiring 1 drive per module (< 2.0 GHz)

CXR/2x1-G-75 -BNC 2x1 one pole failsafe 75 ohm w/ BNC	P/N 30-10-10-1
CXR/2x1-G-75-F 2x1 one pole failsafe 75 ohm w/ F connectors	P/N 30-31-10
CXR/2x2-G-75-BNC 2x2 transfer switch 75 ohms w/ BNC	P/N 30-26-10
CXR/2x2-G-75-BNC 2x2 transfer switch 75 ohms w/ F connectors	P/N 30-41-10

Coax 2x1 75 Ohm, Terminated, Form C RF module requiring 2 drives per module (< 2.0 GHz)

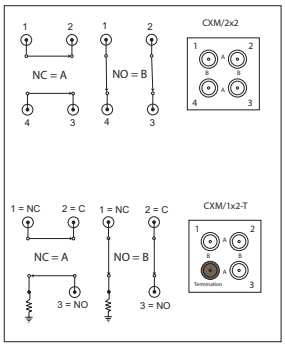
CXR/2x1-GT-75 -BNC or -SMB 2x1 Terminated module 75 ohm w/ BNC	P/N 30-30-10

Microwave switch modules for 50 ohm signals DC to 40 GHz. 2x1 SPDT relays and 2x2 Transfer switches. Terminated and Latching options.
See the CXM product bulletin for schematics and specifications.

Cytec uses microwave relays from multiple vendors depending on required specifications.
Contact us to get a quote on a system with the relays you prefer or we recommend.

SPDT

SPDT Terminated



DPDT Transfer Switch

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E-mail: sales@cytec-ate.com or VISIT OUR WEBSITE AT cytec-ate.com

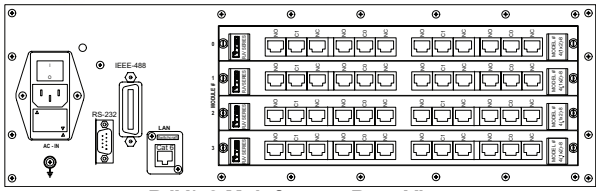
RJV SERIES - A/B switches for Telecom, DSL, LAN or WAN

The RJV Series accept 8 wire CAT6A RJ45 A/B switches for telecom and network redundancy applications. Modules with CAT6A connectors work with Ethernet LAN rates up to 10G copper. The modules may be used with any 8 wire signal but is specifically designed for pairs using the TIA/EIA 568 pair scheme on RJ45 connectors.

RJV/48 Mainframe

This chassis is 5.25" high and accepts up to four RJV/4(1x2)-8-CAT6A switch Modules for up to 16 A/B switches.

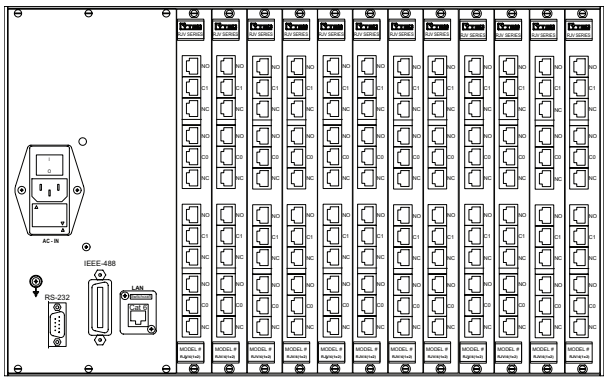
RJV/48 Mainframe - Front View



RJV/48 Mainframe - Rear View

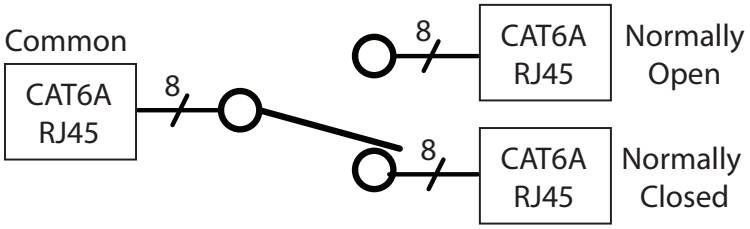
RJV/144 Mainframe

This chassis is 10.5" high and accepts up to 12 RJV/4(1x2)-8-CAT6A switch Modules for up to 48 A/B switches.



RJV/144 Mainframe - Rear View

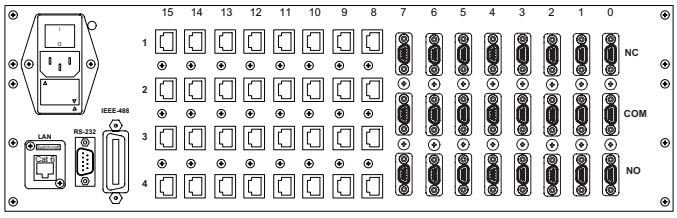
RJV/4(1x2)-8-CAT6A Module (1 of 4 circuits)



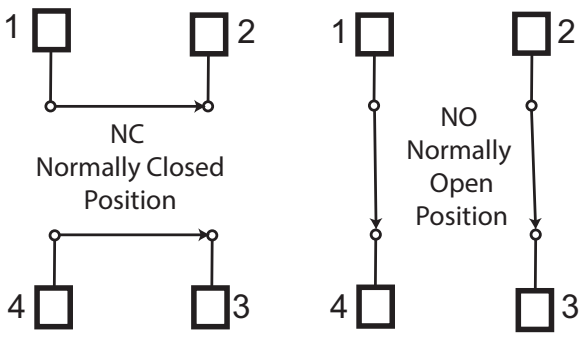
See the RJV product section for more information.
Test data available on request.
Email sales@cytec-ate.com for details.

RJG/16 and RSG/16 Mainframes

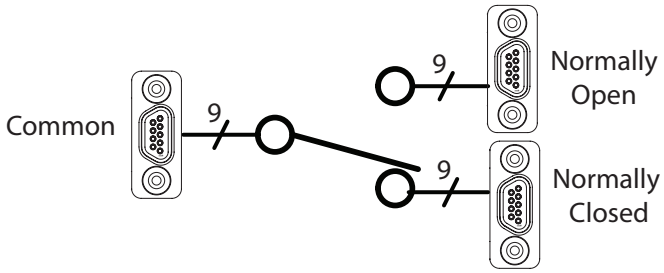
16 channel mainframes hold up to 16 RJG/2x2-8-CAT5 Transfer switches or CTC/2x1-MD9 Space Wire switches. Transfer switches may be used as A/B or Line Length simulation testing. Space Wire switches us Micro D9 socket connectors.



RJG and RSG 16 channel Mainframe - Rear View



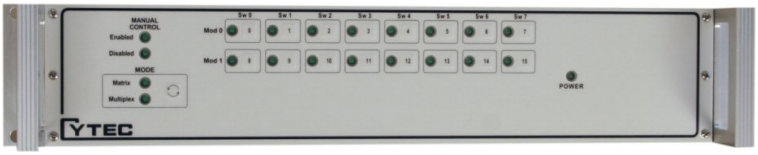
RJG/2x2-8-CAT5 Transfer Switches



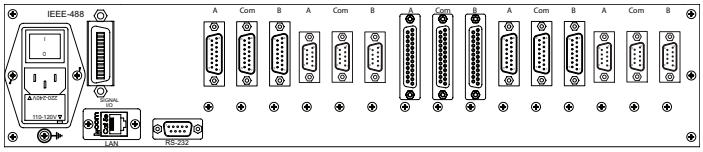
Micro D9 Spacewire A/B switch

RSG/16 Mainframes for D9, D15 or D25 A/B Switch Modules

These 16 channel mainframes can be built with up to eight Form A switch modules switching 9, 15 or 25 wires with standard D type connectors. Connectors may be pin or socket type. Capable of frequencies up to 80 MHz or 50 Mbps data rates. Mechanical relays make them bidirectional and automatically match impedance of signals switched. Form A relays allow for an OFF state or firmware can automatically make them default to a normally closed position whenever the system is on. Larger systems can be built using a driver chassis and multiple expansion chassis.



Front Panel with PB/16 Push Button Manual Control



Rear Panel with D9, D15 and D25 A/B Modules

See the RS section of our web page and download the RS bulletin for more information

CUSTOM SYSTEMS ARE AVAILABLE WITH LITTLE TO NO NRE!
DON'T SEE WHAT YOU NEED?
PLEASE CALL OR E-MAIL FOR MORE OPTIONS

Options Include:

- **Voltages from micro Volts to 25 KV**
- **Pico-amps to 160 amps**
- **Single wire to thousands of wires**
- **DC to 40 GHz**
- **Digital data rates up to 20 Gbps**
- **Specialty connectors**
- **ZIFF, MAC Panel, Virginia Panel**
- **Redundant control modules**
- **Hot swap redundant power supplies**
- **Remote virtual manual control panel**

SOFTWARE

Free drivers and/or sample programs are available for the most commonly available application programming languages including:

- C, C++
- Java
- LabView*
- LabWindows*
- Python

* LabView and LabWindows are registered trademarks of National Instruments

WARRANTY

CYTEC Corp. warrants that all products are free from defects in material or workmanship for a period of five years. Extended warranties available with purchase of spare parts. Cytec does not void warranties if the end user works on it themselves. Life time tech support is always free. Humans answer our phones and are very responsive.

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