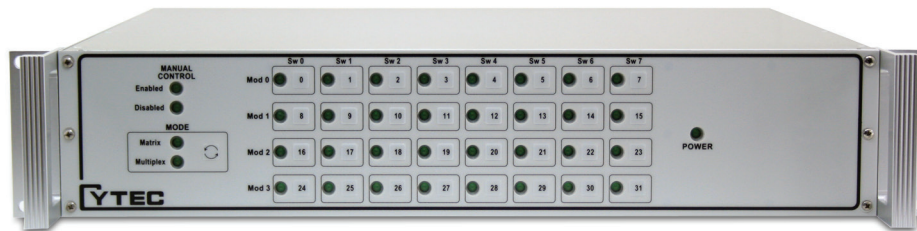


CTC and CTA SERIES COAXIAL A/B SWITCHING SYSTEMS

The CTC and CTA Series are computer controlled chassis that hold from 16 to 64 passive, bi-directional coaxial A/B switches. Single ended, 50 and 75 ohms impedance switches are offered that have a bandpass of DC to 1 GHz, while two-wire switches have a bandpass of DC to up to 400 MHz. Connector options include BNCs, SMAs, Twin Ax and Triax, however, all connectors are not available on every switch module. Ethernet, RS232 & IEEE488 controls are standard, while USB and front panel Manual Controls are optionally available. The CTC chassis hold Form C Normally Closed 2x1 switches, while the CTA hold Normally Open types.



CTA/32 Mainframe with Pushbutton Manual Control

FEATURES:

- Individual chassis furnishing from 16 to 64 coax 2x1 switches. Multiple chassis systems supply up to 1024 switches.
- Single-ended 50 or 75 ohm impedance and two wire A/B switch modules offered.
- Bandpass of single-ended 2x1 switch modules is over 1 GHz. Bandpass of two wire modules is up to 400 MHz.
- Computer control via IEEE488 & RS232 standard. Ethernet LAN, USB and front panel Manual Controls optional.
- Standard front panel LEDs showing open/closed switches and remote Status feedback aid in debugging.
- Passive design doesn't add to signal noise or create intermodulation products typical of solid state devices.
- Connectors include BNC, SMA, Twin Ax and Triax. All connectors are not offered on every switch module.

CHASSIS:

The **CTC and CTA** systems are 19" rack mounted chassis, and are built as either Mainframes or Expansion Chassis. They are designed to hold the CXR/2x1 Series Switches specified by the user. All chassis have front panel LEDs showing closed switch points. RF connectors are mounted on the rear panel along with the AC power and computer control connectors.

CTC/16 Chassis - Has 16 relay drives and holds up to 16 CXR/2x1 Form C switch modules.

CTC/32 Chassis - 32 relay drives allow up to 32 CXR/2x1 Form C switch modules to be installed.

CTC/64 Chassis - Provides up to 64 relay drives and controls the same number of CXR/2x1 Form C modules.

CTA/32 Chassis - 32 relay drives. Holds 16 CXR/2x1 Normally Open switch modules.

CTA/64 Chassis - Holds up to 32 CXR/2x1 N.O. switch modules while supplying 64 relay drives.

CTA/128 Chassis - Up to 128 relay drives. Typically used to control up to 64 coaxial N.O. 2x1 switch modules..

COAXIAL A/B SWITCH MODULES

Two basic types of coaxial 2x1 A/B switch modules are offered.

CTC chassis hold the **CXR/2x1-G** (75 and 50 ohm versions) single ended and **CXR/2x1-2C** two pole Form C types. These modules return to their NC position when cleared and require only one relay drive per switch module.

CTA chassis hold the **CXR/2x1-1** and **CXR/2x1-2** single and two pole Normally Open types, along with the **CXR/2x1-GT** Terminated Switch Modules. Two relay drives are required per switch module.

CONTROL MODULES:

All systems available with Ethernet LAN, IEEE488 (GPIB) & RS232 (standard), or USB or TTL Control (optional).

CTC and CTA CHASSIS

The CTC and CTA Series are 19" rack mounting chassis with built-in power supplies and are designed to hold CXR/2x1 coaxial switch modules selected by the user. 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 CXR/2x1 switches, while the CTA type holds N.O. coaxial 2x1s.

CTC/16 or -E EXPANSION CHASSIS

These chassis furnish 16 switch points and hold up to 16 Form C CXR/2x1 Switch Modules. Built-in front panel LEDs display switch and power status. Add controls and switch modules to complete the system.

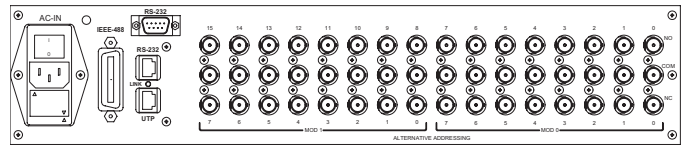
Dimensions: 19" rack mounting (483 mm)
15" deep (381 mm)
3.5" (2 RU) high (89 mm)

Weight: 15 lbs. (6.8 kg) max.

AC Power : 20 W max. - 115/230 Vac selectable.



CTC/16 Mainframe with Pushbutton Manual Control



CTC/16 Rear Panel with IEEE488, RS232 and LAN Control

CTC/32 MAINFRAME OR -E EXPANSION CHASSIS

Each chassis holds up to 32 CXR/2X1 Form C Switches. LEDs or the front panel show both switch and power status. Controls and user-selected coaxial 2x1 switches complete the system.

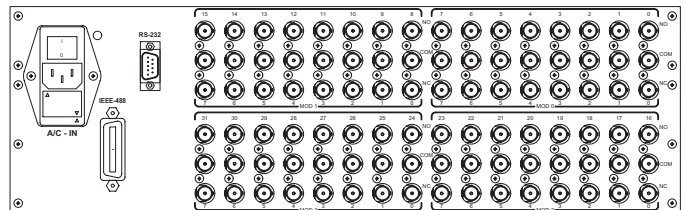
Dimensions: 19" rack mounting (483 mm)
15" deep (381 mm)
5.25" (3 RU) high (133 mm)

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

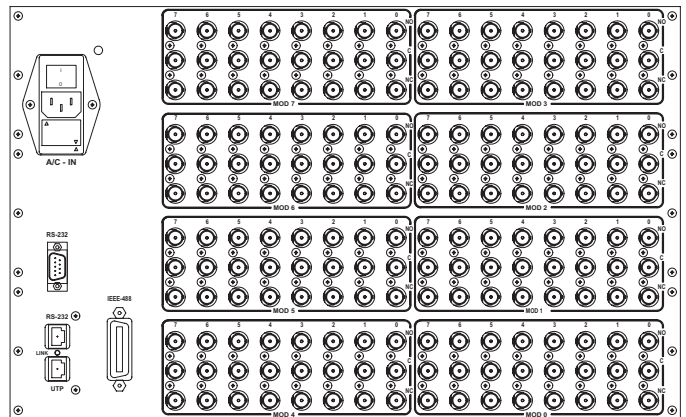
CTC/64 MAINFRAME OR -E EXPANSION CHASSIS

Holds up to 64 CXR/2X1 Form C Switches. LEDs on the front panel show both switch point and power status. Add controls and Form C 2x1 switches complete the system. One CL8 Display/Driver Module is required for every eight 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



CTC/64 Rear Panel with IEEE488, RS232 & LAN Control

FOR TECHNICAL ASSISTANCE, PLEASE CONTACT CYTEC AT
800-346-3117 OR VISIT OUR WEBSITE AT cytec-ate.com

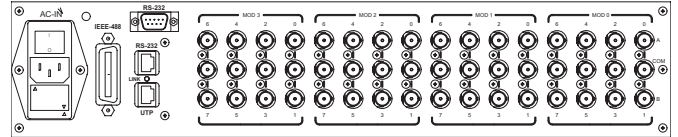
CTA/32 MAINFRAME OR -E EXPANSION CHASSIS

These chassis supply 32 switch points and hold up to 16 of the CXR/2x1 Normally Open coaxial switch modules. Built-in front panel LEDs display switch and power status. Add controls and the appropriate coaxial switch modules to complete the system.

- Dimensions:** 19" rack mounting (483 mm)
 15" deep (381 mm)
 3.5" (2 RU) high (89 mm)
- Weight:** 15 lbs. (6.8 kg) max.
- AC Power :** 20 W max. - 115/230 Vac selectable.



CTA/32 Mainframe with Pushbutton Manual Control



CTA/32 Rear Panel with IEEE488, RS232 & LAN Control

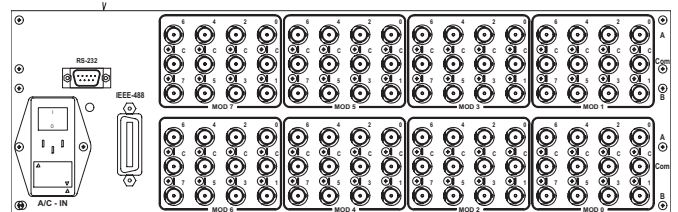
CTA/64 MAINFRAME OR -E EXPANSION CHASSIS

Each chassis supplies 64 switch points and holds up to 32 of the CXR/2x1 Normally Open coaxial switch modules. One CL8 Display/Driver Module is required for every four switch modules. The CL8s also have built-in switch status LEDs that can be viewed through the front panel. Controls and the selected coaxial switch modules 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



CTA/64 Mainframe with M/64-TW Thumbwheel Control

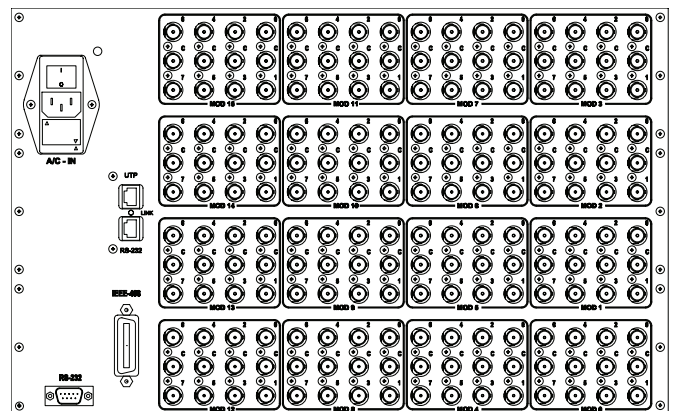


CTA/64 RearPanel with IEEE-488 & RS232 Interfaces

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 CL8 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 IEEE-488, RS232 & LAN Interfaces

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

FOR TECHNICAL ASSISTANCE, PLEASE CONTACT CYTEC AT
 800-346-3117 OR VISIT OUR WEBSITE AT cytec-ate.com

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 optional thumbwheel manual controls **M/64-TW**. **CTC/64** and **CTC/128** mainframes can be built with optional keypad manual controls **MC-2**.

LED DISPLAYS

CTC/16, CTC/32 and **CTA/16** Chassis include front panel LED display of switch status. **CTC/64, CTA/64** and **CTA/128** Chassis require separately purchased **CL8** Display Modules. Four CTA switch modules can be controlled via one CL8, while eight CTC 2x1 switch modules are controlled via each CL8. LEDs aid in program debugging and viewing system status.

CONTROL MODULES

IF-11 LAN / GPIB / RS232 Control

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.

LAN - 10/100BaseT Ethernet with an RJ45 Connector. The interfaces uses a static IP easily reset by the end user. 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.

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

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

CYTEC SWITCH MANAGER SOFTWARE



The Cytec Switch Manager provides a GUI interface for remotely controlling both matrices and multiplexers. The software includes an intuitive graphical interface, security implementation, built in test functionality, multiple device control, switchpoint memory, as well as many other useful features. You can download the Switch Manager free of charge from our website.

Available for Windows, Linux, Mac OS, or any other Java enabled platform

SOFTWARE

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

WARRANTY

CYTEC Corp. warrants that all products are free from defects in material or workmanship for a period of five years.

CTC SERIES SWITCHES

The CTC Series holds the **CXR/2x1-G** and **CXR/2x1-2C** Switch Modules. These are Form C, passive, bidirectional switches.

CXR/2x1-G (Form C)

This single-ended module switches its COM to one of two inputs as shown in **Fig. 1**. In the unenergized position, the common connects to input A. Available in 50 and 75 ohms versions and with BNC or SMA connectors. Bandpass is 2 GHz @ 50 ohms and 1.2 GHz @ 75 ohms. Crosstalk is -65 dB at 500 MHz.

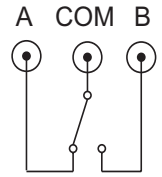


Fig. 1

CXR/2x1-2C (Form C)

Is a two pole 2x1, Form C configuration as shown in **Fig. 2** which allows one input to be switched to two outputs (A or B). Available with BNC or Twin BNC connectors, and is built with Type A Armature relays. This module defaults to the Normally Closed position when off. Bandpass is 200 MHz (differential into 100 ohms).

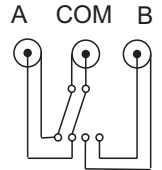


Fig. 2

CTA SERIES SWITCHES

The CTA Series holds the **CXR/2x1-1S, -2S** and **CXR/2x1-GT** Switch Modules. These are Normally Open, passive, bidirectional switches.

CXR/2x1-1S or -2S (Form A)

This module switches its COM port between A, B or OFF positions as shown in **Fig. 3**. Module is built with single or two pole Type S reed relays. Bandpass is 400 MHz (-3 dB). Crosstalk is -60 dB at 5 MHz.

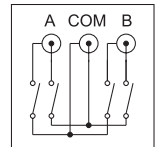


Fig. 3

CXR/2x1-GT Self-Terminating (Form A)

This module is a version of the CXR/2x1-G module that has the unused A/B connection terminated into 50 or 75 ohm resistors as shown in **Fig 4**. It allows an off state with both inputs terminated. Bandpass is 1.6 GHz @ 50 ohms, 1.1 GHz @ 75 ohms, and Isolation is 70 dB at 500 MHz.

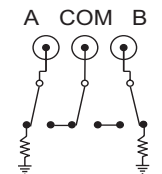


Fig. 4

SWITCH CHARACTERISTICS

	Type S	Type T	Type 2A
Switch Voltage	200 V	200 V	110 V
Switch Current	0.5 A	0.25 A	1.0 A
Breakdown Voltage	400 V	200 V	750 V
Operating Time	1 ms	1 ms	3 ms
Life Expectancy	10 ⁸	10 ⁸	2x10 ⁵
Contact Rating	10 VA	3 VA	60 VA

**CUSTOM SYSTEMS ARE AVAILABLE
DON'T SEE WHAT YOU NEED?
PLEASE CALL FOR MORE OPTIONS**

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