



Product Overview

The CTP150 Circuit to Packet Platform enables time-division multiplexing (TDM) and other serial circuit-based applications to be transported across IP/MPLS networks. The CTP150 uses circuit emulation with advanced clocking and buffering options to reliably transport critical circuits across an IP Infrastructure. It bridges the legacy and IP world and provides many unique features that enable cost reduction by eliminating point-to-point circuits and convergence of all applications onto one IP/MPLS network.

Product Description

With the ongoing deployment of IP networks, the efficiency and cost-savings gains of IP are being realized for a variety of applications and functions. Largely left out of this evolution have been the circuit-based applications such as TDM leased line and voice private branch exchange (PBX) connections, serial encryption connections, and analog and digital radio systems networking because their synchronous transport requirements are not addressed by a packet-based network. Juniper Networks® CTP Series Circuit to Packet Platforms enable customers to connect these circuit-based applications easily and reliably across the IP network, bringing them the advantages of converged multiservice IP networking.

The Juniper Networks CTP150 Circuit to Packet Platform interworks seamlessly with the CTP1000 line and CTP2000 line of products. It also interworks with Juniper Networks M Series Multiservice Edge Routers circuit emulation PICs. The product is designed for small, remote branch office locations and managed service environments. Juniper Networks CTPView Network Management System supports management of the CTP150.

The CTP150 is a 1 RU high chassis with two option module slots and a removable power supply. The following modules are available with the CTP150:

- 4-port T1/E1 module with four RJ48 interfaces for T1/E1 transport and one RJ48 for a dedicated T1/E1 clock input.
- 4-port serial module with four high-density 26-pin (HD-26) interfaces for serial interfaces and one HD-26 interface for a dedicated serial clock input. Each serial interface supports software selectable interfaces and data rates. The available options are EIA232, V.24, EIA530, EIA530A, EIA449, V.11, V.35, and X.21.
- 4-port serial module with optional analog support on two of the four ports for 4-wire Transmission Only (4WTO) analog or high-quality analog or IRIG-B. There are four high-density 26-pin (HD-26) interfaces for serial interfaces and one HD-26 interface for a dedicated serial clock input. Each serial interface supports software-selectable interfaces and data rates. The options are EIA232, V.24, EIA530, EIA530A, EIA449, V.11, V.35, and X.21.

Circuit-to-Packet Solutions

T1/E1 Module

The T1/E1 module supports IP transport and backhauling for applications such as PBX Interconnect, SS7 Transport, TDM, Leased Line Extension, and T1/E1 Backup. This provides investment protection for existing communication equipment and generates cost savings by using a common IP backbone for reliable transport of all applications. Figure 1 below illustrates the migration of PBX-voice switches from a leased line or ATM network to an IP network.

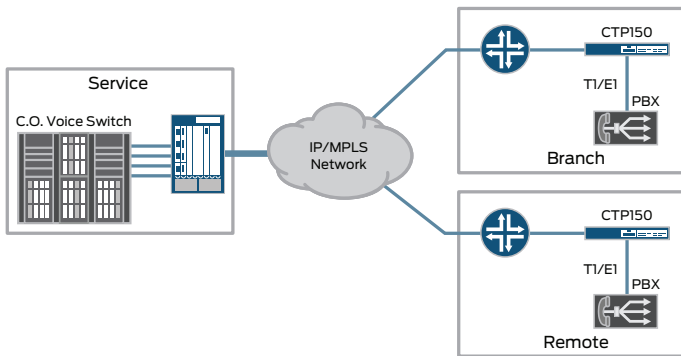


Figure 1: PBX interconnect over IP using CTP150 and M320

Serial With/Without Analog Module

The Serial module supports IP transport and backhauling for applications such as Radio (LMR) backhaul, Serial Encryption transport, Radar transport, SCADA, Telemetry, and Sensor data. This provides a mechanism to deploy these systems over a common IP infrastructure while maintaining the application reliability of critical communications. Figure 2 below illustrates the migration of SCADA, Telemetry and Sensor data transport to an IP based network.

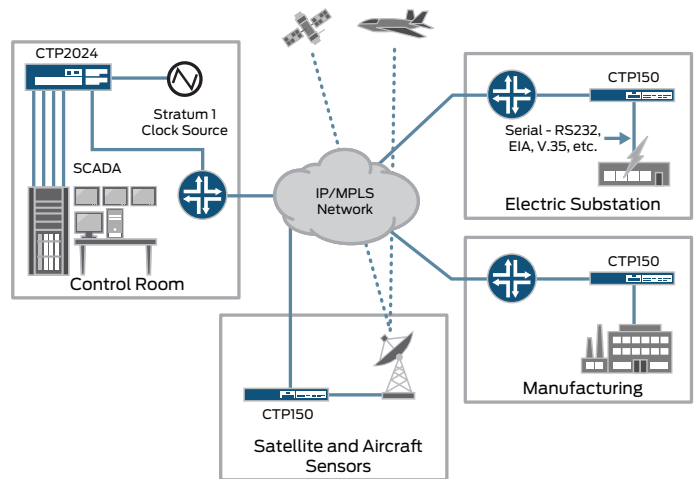


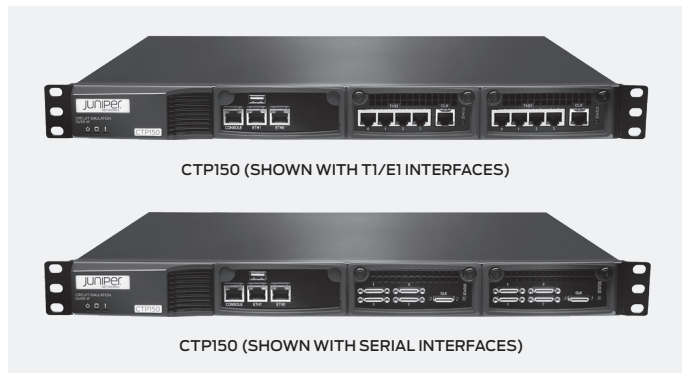
Figure 2: SCADA, Telemetry and Sensor data over IP using CTP150 and CTP2024

Features and Benefits

FEATURE	FEATURE DESCRIPTION	BENEFIT
Interoperability with M Series CE PICs and CTP1000 and CTP2000 Series products	Circuit emulation and pseudowire compatibility with M Series CE PIC and other CTP Series products.	Investment protection of current Juniper product deployments.
Software circuit provisioning	EIA530, RS-232, V.35, 4WTO, T1, and E1 circuit types are software configured including the line encoding, clocking, rates, and IP settings.	The network quickly fulfills new and changing end user requirements without deploying excess hardware.
Wide range of system clocking and circuit timing options	CTP Series Circuit to Packet Platforms are designed to use multiple external clocks as monitored and prioritized system references. Circuits are configured to use the system clock, external circuit timing, or to adaptively recover clock information from the remote port when required by the application or when no reference is configured.	Circuit reliability is improved since ports and systems are configured with the clocking solution that is most appropriate for the particular application.
Primary and secondary destinations on every circuit	Allows a primary and secondary destination IP address on every non-IP port.	High reliability of circuits enables remote box and site redundancy.
Packet protector	Redundant packets are created and transmitted to the IP network and then processed by the receiving CTP Series.	Circuit quality and reliability are increased when IP connections experience significant packet loss caused by bit errors.
Autobaud	The input timing leads are monitored, and the circuit rate is automatically changed at both ends of the network if a rate change is detected.	Flexible rate agility enables immediate provisioning changes.
Port mirroring	The CTP Series is able to port-mirror any transmit or any receive up to 10 local or remote destinations.	Port mirroring minimizes the bandwidth required to send the same traffic to multiple sites across the network. It enables easy monitoring for troubleshooting circuit problems. Port mirroring enables the replication of data to multiple local or geographically dispersed locations.

Features and Benefits (continued)

FEATURE	FEATURE DESCRIPTION	BENEFIT
CTPView Network Management System	Secure, multi-user web-based network management system provides network monitoring, circuit provisioning, IP performance reporting, database backup, and circuit troubleshooting tools.	Managers quickly deploy circuits and services while proactively monitoring the network. IP performance reports provide detailed information on IP network jitter, delay, and packet loss. Circuit troubleshooting tools include integral BERTS and loops to facilitate quick trouble resolution.
Troubleshooting tools on each circuit (loops and BERTs)	Circuit troubleshooting tools built into the CTP Series quickly isolate network, circuit, or cable problems.	Circuit troubleshooting tools include integral BERTS and loops to facilitate quick trouble resolution.



Specifications:

Weight

- Chassis only 14.5 lb (6.6 kg)

Dimensions (W x H x D)

- 17.24 x 1.73 x 14.5 in (43.8 x 4.4 x 36.8 cm)

Environmental Requirements

- Ambient operating temperature: 32° to 104° F (0° to 40° C)
- Ambient operating humidity: 5 to 90% (noncondensing)

AC Input

- Power required: 100–240 VAC
- AC line frequency: 50–60 Hz
- Nominal current: 115V amps <1.0
- Power: 100 W

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services and support, which are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to bring revenue-generating capabilities online faster so you can realize bigger productivity gains and faster rollouts of new business models and ventures. At the same time, Juniper Networks ensures operational excellence by optimizing your network to maintain required levels of performance, reliability, and availability. For more details, please visit www.juniper.net/us/en/products-services/.

Ordering Information

PART NUMBER	DESCRIPTION
CTP150-AC	CTP150 AC-powered base system includes CTPOS, 2 Ethernet interfaces, 1 console interface.
CTP150-IM-T1E1	CTP150 4-port T1/E1 module with 4 RJ48 interfaces and 1 clock input interface.
CTP150-IM-SER	CTP150 4-port serial module with 4 HD-26 pin interfaces and 1 clock input interface. Serial supports RS-232/V.24, EIA530/530A/RS-422/499/X.21, V.35.
CTP150-IM-SER-MS	CTP150 4-port serial module with 4 HD-26 pin interfaces and 1 clock input interface. Includes 2 daughter cards to add 4WTO analog, high-quality analog, and IRIG capabilities to 2 ports.
CTP150-PWR-AC	Spare AC power supply
CTP150-CBL-DB25-DCE-F	HD-26 Interface cable, DB25, DCE, Female
CTP150-CBL-DB25-DTE-M	HD-26 interface cable, DB25, DTE, Male
CTP150-CBL-DB15-DCE-F	HD-26 interface cable, DB15, DCE, Female
CTP150-CBL-DB15-DTE-M	HD-26 interface cable, DB15, DTE, Male
CTP150-CBL-RJ45-DIU	HD-26 interface cable, RJ45, V.24
CTP-OS-4G	4G compact flash with CTPOS
CTP-CF-4G-S	4G compact flash spare, no CTPOS

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

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