

SYNCHRONY®

CX-1500

AND CX-1540

CELL EXCHANGE

ATM Access

Concentrators for

Cell-Based and

Legacy Traffic



TimePlex Group

Networking Your World



SYNCHRONY Cell Exchange

Wide Variety of Interface Modules

Supports Terrestrial and
Satellite Networks

ATM Standards-Compliant

Compact and Rack Mountable

Sophisticated Diagnostics

Supports Data Encryption Equipment

Optional Redundant CPU and
Power Supplies

Fully Year 2000 Compliant



[CX-1500/1540 ATM Access Concentrators]



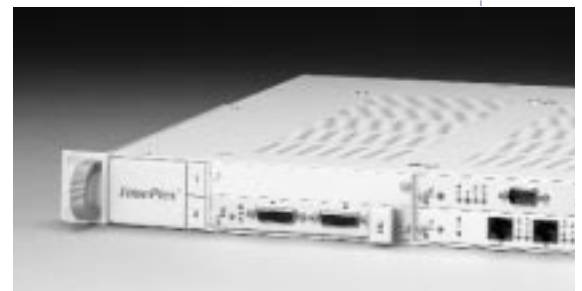
Moves virtually any combination of cell-based, frame relay, and legacy traffic to and from ATM facilities

Expanding the Possibilities for ATM Transport

The new SYNCHRONY Cell Exchange ATM products offer carriers and private networks all-new ways to tap the economy and efficiency of ATM transport.

These highly flexible systems allow a wide variety of high and low-speed data streams to be conveyed to and from a long-haul ATM backbone. The CX-1500 and CX-1540 convert the incoming data streams to the appropriate ATM standards, and deliver the payload to the ATM backbone. At the receiving end, the systems “reassemble” the data streams into their original form, for delivery to local transport facilities or devices.

The Cell Exchange products can accommodate cell-bearing ATM traffic, Frame Relay, as well as IP, Ethernet, TDM, asynch, bi-synch, and SNA legacy traffic. In all, you'll have the high degree of flexibility you need to support a wide range of applications, in a cost-effective design that can maximize ATM capability for your investment.





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For Carriers and Service Providers

As a carrier or service provider, you can use the **SYNCHRONY** Cell Exchange systems to offer ATM-based service to a much larger market—and make greater use of your ATM infrastructure.

With Cell Exchange systems installed on your “network edge”, you can gather low-speed ATM T-1/E-1 traffic from customers, and consolidate it for efficient transport across your ATM switching fabric. This allows you to provide affordable low-speed ATM services with VPN-like benefits—to smaller customers who wouldn’t otherwise be prospects for ATM.

With Cell Exchange systems installed at your point-of-presence, you can aggregate traffic from a multitude of services and traffic types and integrate them into an ATM access link for delivery to an ATM WAN backbone. Traffic and services such as Frame Relay, IP and voice can be more cost-effectively switched into an ATM service. The compact shelf size and low power consumption makes the Cell Exchange ideal for your co-location requirements.

For Government and Secure Applications

The Cell Exchange is a proven ATM platform, which is deployed and operational in mission-critical defense ATM networks. The rich feature set of the Cell Exchange includes options to inter-operate with external encryption systems. In addition, the cell exchange provides industry standard forward error correction technology to ensure reliable ATM transmission over satellite and wireless facilities.

For the Private Network

In an enterprise network, the **SYNCHRONY** Cell Exchange system can help reduce WAN transport costs substantially. By aggregating the voice, data, and video traffic from all your locations onto a “universal” ATM WAN backbone, you can handle your traffic with much less bandwidth, and a much simpler network.

You can also use the **SYNCHRONY** Cell Exchange system to connect remote offices and locations to headquarters via T-1/E-1 ATM services—which can often cost significantly *less* than long-distance T-1/E-1 connections.

Accommodate Any Combination of Traffic Types, CPE, and Facilities

You can equip the Cell Exchange CX series to support data streams to and from almost any combination of terrestrial and satellite networks simply by installing the necessary interface modules. You can install up to 14 interface modules in the CX-1500 for central site applications. For branch office applications, the CX-1540 supports 3 interface modules for greater economy and space savings.

For cell-bearing traffic, there are several interfaces available. Each terminates the incoming interface, recovers clock, accesses the ATM cells within the incoming payload, and sends these cells to the switching fabric. In the transmit direction, the modules remove the ATM cells from the switching fabric and map them into the payload, properly formatted and clocked out.



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Single port OC-3 SONET/SDH UNI. Available with multi-mode, and single-mode fiber optic interfaces.

Single port DS-3/E-3 UNI. Terminates one DS-3 or E-3 facility.

Dual port T-1/E-1 UNI. Terminates two independent T-1 or E-1 facilities.

Dual port serial synchronous UNI. Terminates two synchronous cell-bearing EIA-530 data links (EIA-422, V.35 or Mil-188).

For legacy traffic, the interface modules provide circuit emulation for a variety of data streams and devices.

T-1/E-1 Voice, Nx64 Kbps data. Terminates four or eight T-1/E-1 circuits and allows each time slot of voice or data to be independently addressed over the ATM network.

Ethernet Router. Integrates Ethernet LANs onto an ATM network, by converting the IP traffic into ATM cells per RFC 1577.

Low-speed Asynchronous. Converts an async RS-232c interface to ATM VBR (AAL5), allowing you to independently address each of the eight asynchronous legacy interfaces to a VPI/VCI.

Synchronous. Converts synchronous traffic into ATM cells and establishes the circuit emulation over the ATM network in AAL1 unstructured mode. Available in two or four port versions which support data rates from 16 Kbps to 2 Mbps with EIA-530 interfaces (EIA-422, V.35 or Mil-188).

High-Speed Synchronous. Provides a high-speed interface and establishes the circuit emulation over the ATM network in AAL1 unstructured mode. Supports data rates from 1 Mbps to 50 Mbps in 8 Kbps increments with an EIA-530 interface (EIA-422, V.35 or Mil-188).

Additional Interfaces

The modular architecture of the CX-1500 is ideally suited for integration of new interface and protocol capabilities. Contact your TimePlex representative for a complete list of current capabilities.

Integrates With Other SYNCHRONY Systems

The SYNCHRONY Cell Exchange products enhance the capabilities of the SYNCHRONY family of products, by providing a gateway to ATM backbones and services for TimePlex ST, AD, IAN-150 and LINK products.



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Compact and Rack-Mountable

The 19 inch rack-mountable CX-1500 is a lean 3Ux19", making it far more compact, and with greater port density than other modular ATM access concentrators.

The CX-1540 is a smaller 1Ux19", lighter, more economical solution for connecting a small number of remote office legacy or ATM applications to a larger ATM switch or network. Both products use the same interface modules.

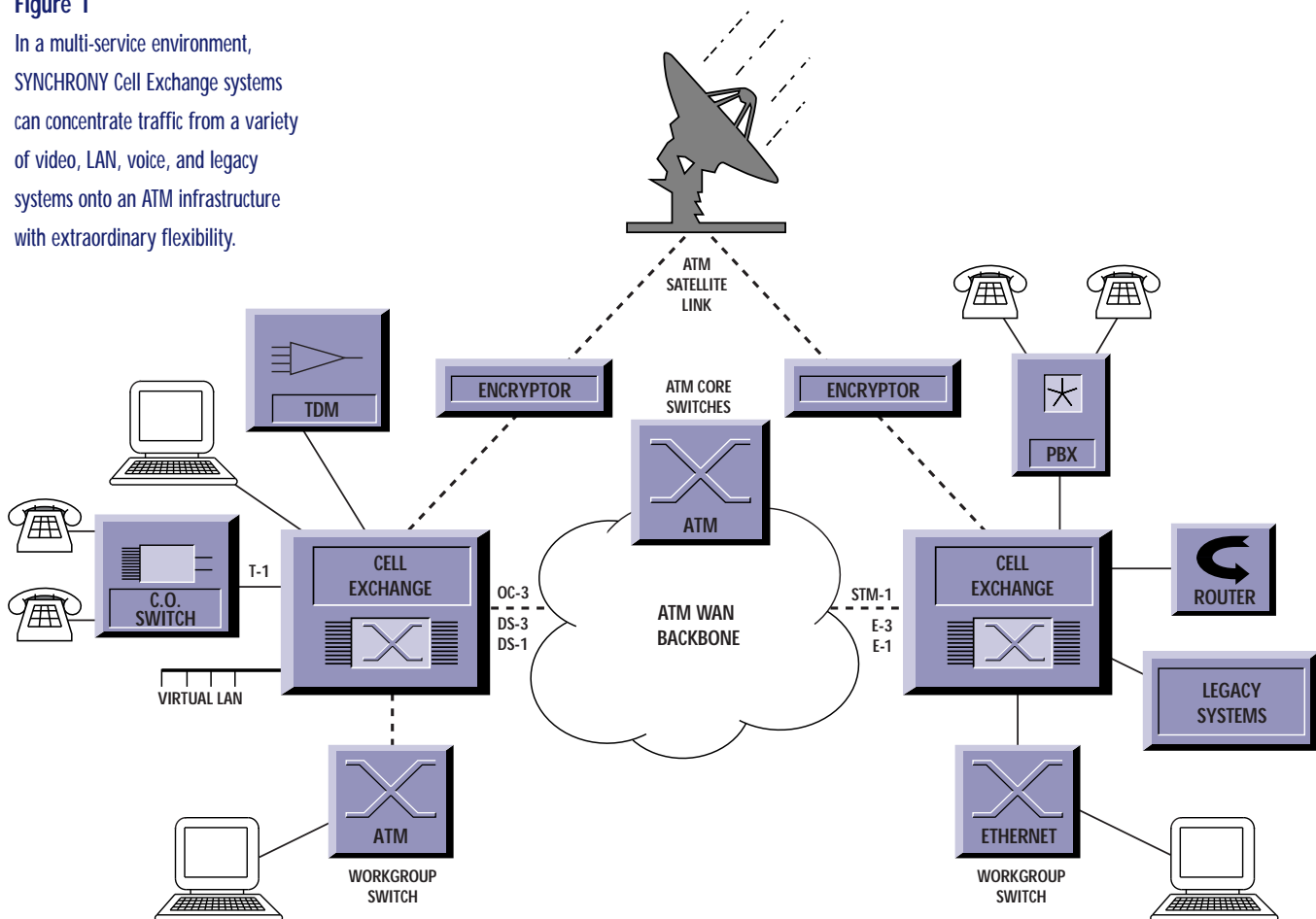
Flexible Management

The CX-1500 provides a user-friendly, menu-driven system for configuration, network management and diagnostics. This system can be accessed locally via the RS-232 CPU craft interface or via a dial-up modem.

The Cell Exchange products may be managed using their built-in industry-standard SNMP v.2 management, remotely accessible via a graphical user interface under HP OpenView.

Figure 1

In a multi-service environment, SYNCHRONY Cell Exchange systems can concentrate traffic from a variety of video, LAN, voice, and legacy systems onto an ATM infrastructure with extraordinary flexibility.



[CX-1500/1540 ATM Access Concentrators]

TECHNICAL SPECIFICATIONS

Management Interface:

Access – SNMP via LANE over SVCs, ASCII Terminal/Modem craft interface

Protocol – Menu Driven with On-line Help

Password Protection – Three Levels of Password Protection

Configuration – Non-Volatile Memory

Craft Interface – EIA RS-232, DB-9(M) Connector

Standards:

ATM Forum, ITU, ANSI and Bellcore

ATM-UNI, AAL1, AAL3/4, AAL5

DIAGNOSTICS:

Loopback types – Line, Local, Payload, and Data Terminal (Varies with card type)

Performance Monitor:

Level 1, Level 2, Error Counts, Thresholds, Statistics, History, Current Status and cell counts

Environmental:

Operating Temp. 0 to 50° C; 32 to 122°F

Relative Humidity 0% to 95% Non-Condensing

Timing:

Internal, External, Recovered Reference and Station Clock

Physical:

CX-1500

5.25" High by 19" Wide by 14" Deep

Standard Rack Mount. 16-20 lbs.

(Nominal depending on no. of cards and type),

15 Module Slots

CX-1540

1.75" High by 19" Wide by 14" Deep

Power:

CX-1500

AC Option: 90 to 230 VAC. 57 to 63 Hz

DC Option: -48VDC Version Optional

CX-1540

AC Option: 100-240 VAC. 50 to 60 Hz



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