

# Transaction Gateway

## A Total Control® 1000 Solution

A POWERFUL PLATFORM DESIGNED FOR PROCESSING HUNDREDS OF MILLIONS OF SHORT-DURATION CALLS



### KEY BENEFITS

#### Speeds Transactions

Reduces modem handshake time by 70 to 75 percent and connection times to as little as one second, speeding transaction times and reducing costs.

#### Supports the Latest Standards

Supports the most recent VISA standards and the Synchronous Transaction Protocol, reducing traffic to a processing host by up to 50 percent.

#### Automatic Call-by-Call Selection

Supports both TCP/IP and X.25 egress in a single system, and automatically selects the egress on a call-by-call basis; TCP/IP or X.25 is selected automatically, based on DNIS.

#### High Scalability

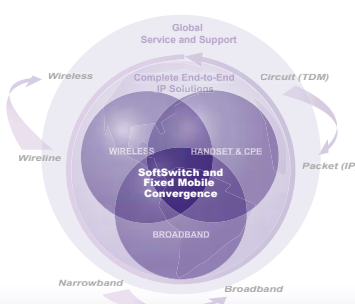
Supports up to 336 T1 or 420 E1 X.25 switched virtual circuits, providing the ability to add capacity to accommodate future growth.

#### System Redundancy

Provides maximum system reliability with load balancing and automatic failover.

#### Point of Sale (POS) Terminal Support

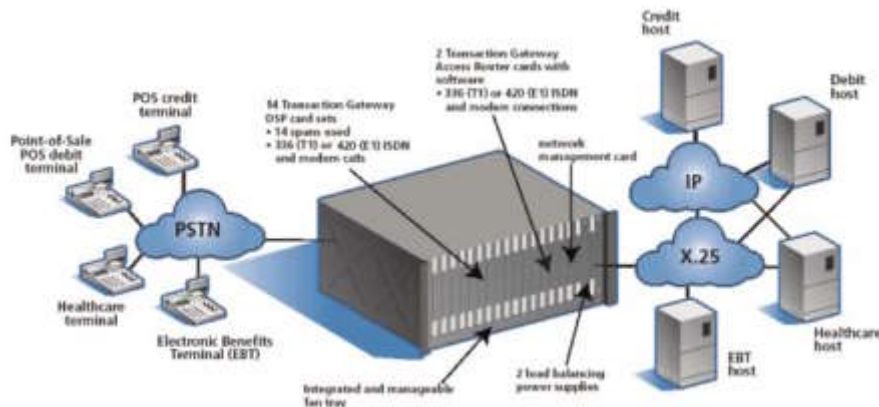
Supports most POS terminals, eliminating the need for costly hardware replacements.



The UTStarcom® Transaction Gateway offers the market leading solution for carrier-class transaction network service providers. This specialized software suite enables fast transaction processing of credit card authorizations, debit card fund transfers, health benefit authorizations, electronic benefits transfers, and other communications involving single-session transfer of small amounts of data.

Designed to run on the industry-leading UTStarcom Total Control 1000 multiservice access platform, the transaction gateway speeds transaction times with features such as Fast Connect, (reduces or eliminates steps such as alerting, audible ring, billing delay, answer tone, and call termination); and supports transaction protocols such as VISA I/II and Synchronous Data Link Control (speeds calls and reduces traffic to a processing host by up to 50 percent) with full protocol emulation.

Additional features include the ability to support up to 336 (T1) or 420 (E1) X.25 switched virtual circuits on a fully functional X.3/X.28/X.29 PAD with a dual V.35 interface. The transaction gateway also provides maximum reliability with redundant access router cards capable of switching from load balancing to automatic failover and back.



**All Total Control cards are hot swappable**

A fully configured Transaction Gateway uses DNS to route debit, credit, POS, healthcare, and EBT transactions to the host server over X.25 and IP networks.

**NO SINGLE POINT OF FAILURE**

With 336 (T1) or 420 (E1) DSP ports, plus support for redundant Access Router cards, the Total Control system is fully reliable. Load sharing is the default condition, but if a failure is detected in the card, the X.25 connection, or the IP connection, the system will automatically fail over to the second Transaction Gateway Access Router card and NIC.

**SUPPORT FOR ASYNCHRONOUS AND SYNCHRONOUS CALLS**

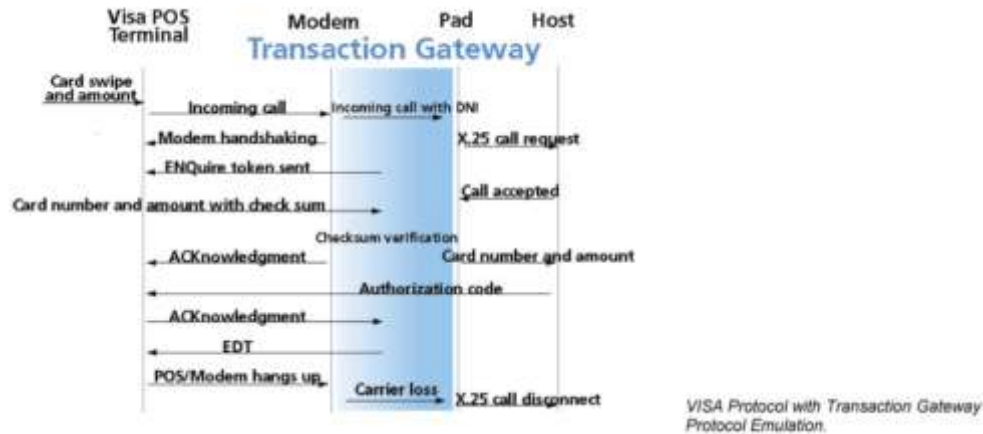
Using the Auto Detect functionality, the transaction gateway automatically detects and supports asynchronous and synchronous calls on the same dialed number.

**VISA PROTOCOL SUPPORT**

Enhanced support for the most current VISA standard makes the Transaction Gateway the perfect solution for legacy, point-of-sale, and host applications.

## TRANSPORT PROTOCOL DATA UNIT

The transaction gateway includes support for Transport Protocol Data Unit (TPDU) routing, providing the ability to complete transactions with greater efficiency and flexibility.



## TOTAL CONTROL 1000 MULTISERVICE ACCESS PLATFORM

The Total Control 1000 platform features a no-worry system, designed for future expansion with a flexible mid-plane architecture that supports emerging technologies and applications. The platform includes a powerful feature set, providing the following benefits:

- Enables software downloads for upgrades and problem resolution, making it easy for customers to add new functionality for a competitive edge.
- Integrates the functionality of channel banks, CSU/DSU modems, CODECs, ISDN equipment, access routers, and terminal servers to achieve an unprecedented level of call density in a compact platform that is only five rack units high.
- Features a modular chassis design that accommodates new elements and functionality via software upgrades and updated installable cards.

## BUS ARCHITECTURE

The Total Control 1000 system gives customers the convenience of a complete, self-contained system for operation, management, and configuration flexibility.

### VISA Protocol with Transaction Gateway Protocol Emulation.

**Packet bus.** The packet bus allows high-speed intercard communications among network application cards (NACs), except the network management card (NMC), handling the access applications. The packet bus is capable of 1 Gbps throughput between packet-oriented devices such as the Total Control 1000 access router card and the 24-port Total Control 1000 DSP card.

**Management bus.** The management bus provides dedicated, full-duplex channels that run from the NMC in slot 17 to each NAC slot. It also provides an individual dedicated serial channel from each NIC to the NMC. This bus lets the NMC communicate with installed cards for configurations, status queries, issuing commands, performing tests, and downloading software to NACs. TDM bus. A time division multiplexing (TDM) bus allows communication between telco trunk interface cards and port cards in the chassis.

**PCI bus.** Communication between NACs and their corresponding NICs is accomplished through the protocol control information (PCI) bus.

## TRANSACTION PROTOCOL SUPPORT

- Visa I/II
- Synchronous transaction protocol (ISO 8583)

## CONFIGURABLE BASED ON DNIS

- Synchronous/asynchronous transaction calls
- Autocall/interactive call
- Primary and secondary IP destination address and range of TCP ports
- X.25 calling address
- X.25 facilities (NUI, reverse charging, OSI facilities, etc.)
- X.25 user data (up to 12 bytes)
- Abbreviated address list
- Disconnect on clear request
- X.25 profile
- Modem parameters
- Protocol emulation settings
- TPDU routing
- Accounting/reporting
- Buffers up to 4 MB of accounting statistics
- ANI Packet Verification

## X.25 PAD

- In-dial function from PSTN
- Outdial to PSTN
- X.3 profiles with extensions 101-106
- X.28 PAD compliant with CCITT X.3/X.28/X.29 (80, 84, 88 versions)
- Call-by-call service selection
- Autocall
- Persistent SVC support
- Mnemonic-only addressing
- Reverse charge if no NUI

## FAST CONNECT

- Fast Connect
- 1200 Fast Connect 2400

## NETWORK INTERFACE CARD

- Two V.35 ports
- One 10/100 Ethernet port
- One RS-232 console port

## V.35 INTERFACE

- Link rates from 2400 bps to 2 Mbps
- Physical DTE
- Logical DTE/DCE
- External clock required

## TOTAL CONTROL 1000 MULTISERVICE ACCESS PLATFORM

- 17 slots
- Hot-swappable cards
- Dual 130 load balancing/sharing redundant power supplies
- No single point of failure

## HIPERDSP

- DSP and RISC processor card
- 24 modem or ISDN calls with T1
- 30 modem or ISDN calls with E1
- Integral trunk (T1/E1) interface
- Compatible with Quad modems
- 1,200 MIPS per HiPer DSP card
- Modems support high-speed standards such as V.34 and V.90

## HIPERARC

- Power PC 603, 200 MHz RISC
- 16 MB Flash ROM and 128 MB RAM
- 2 Mb V.35 interface for HiPer TRAX (capable of running at 8 Mb)
- Support for up to 450 calls
- SNMP agent
- Redundancy
- Same hardware is used for IP-dial access (Internet) applications
- Designed to support ATM, Frame Relay, and 10/100 Mbps Ethernet

## ORDERING INFORMATION

Total Control 1000 Transaction Gateway Software Kit 003555-01

Total Control 1000 Redundant Software Kit 3C0504087-00

Total Control 1000 Access Router Card Set 001417-01

Total Control 1000 DSP 24 Port (HiPer) T1 Card Set 002092-01

Total Control 1000 DSP 30 Port (HiPer) E1/PRI Card Set 992267-01

Total Control 1000 UG Managed Chassis with Dual 130 A DC 1223026300

Total Control 1000 UG Managed Chassis with Dual 130 A AC-US 122303000

Total Control 1000 UG Managed Chassis with Dual 130 A AC-EU 1223026400

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### UTStarcom, Inc. USA

1275 Harbor Bay Parkway  
Alameda, CA 94502 USA  
Tel: 510-864-8800  
Fax: 510-864-8802

[www.utstar.com](http://www.utstar.com)

### About UTStarcom, Inc.

UTStarcom is a global leader in IP-based, end-to-end networking solutions and international service and support. The company sells its broadband, wireless, and handset solutions to operators in both emerging and established telecommunications markets around the world. UTStarcom enables its customers to rapidly deploy revenue-generating access services using their existing infrastructure, while providing a migration path to cost-efficient, end-to-end IP networks. Founded in 1991 and headquartered in Alameda, California, the company has research and design operations in the United States, China, Korea and India. UTStarcom is a FORTUNE 1000 company. For more information about UTStarcom, visit the company's Web site at [www.utstar.com](http://www.utstar.com)

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