Universal Gateway

UTSTARCOM TOTAL CONTROL® 1000 – UNIVERSAL GATEWAY (UG)

A HIGH PERFORMANCE UNIVERSAL GATEWAY, THAT PROVIDES UNIVERSAL CONNECTIVITY OF VOICE AND DATA, AND VIRTUAL PRIVATE NETWORKING

- FLEXIBLE TECHNOLOGY
- CARRIER CLASS RELIABILITY
- SUPPORTS LEADING ITU STANDARDS
- DEPENDABLE HIGH PERFORMANCE
- MODULAR PLATFORM
- INDUSTRY LEADING VOICE QUALITY
- SCALABILITY
- INTEGRATED VPN SUPPORT
- DISTRIBUTED SECURITY SERVICES
- HOT-SWAPPABLE CARDS
- COST EFFECTIVE INTEGRATED SERVICES

The Total Control® 1000 multi-service access platform provides unmatched performance. Our unmatched performance stems from Universal Gateway's modular design, engineering excellence and years of operating in the most demanding telecommunications environments. This leading access solution gives carriers and service providers a comprehensive solution for Voice over IP access, and a variety of other voice and data services.

The Universal Gateway is easily configured and scales to meet a wide variety of network capacity needs. Whether it is co-located in a Central office or within a service provider's premise, the Total Control 1000 meets the most stringent environmental demands.

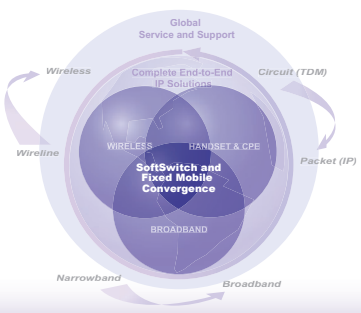
KEY FEATURES AND BENEFITS

Integrated voice/data solutions built on the industry's most powerful access platform- The telecom's leading access solution, the UTStarcom Total Control 1000 multi-service access platform, gives carriers and service providers a comprehensive solution for VoIP, remote access, and VPN. While providing the latest in security, and ensuring that service providers will maximize profits while reducing their operational costs. As an essential component of the three-tier multiservice architecture, this versatile solution helps service providers successfully evolve their network infrastructure and deploy new revenue producing enhanced data services.

This system combines digital signaling processor (DSP) technology, access routers cards, and management software to provide tens of thousands of remote subscribers with fast reliable connectivity, using today's most advanced communications technologies. It delivers high port density and performance for both traditional analog plain telephone service (POTS) and Integrated Services Digital Network (ISDN) calls dynamically, while ensuring the fastest connections through every kind of modem architecture available.

Modular flexibility – The UTStarcom Universal Gateway can be combined and configured to provide remote users with fast, reliable access to network services. Up to 17 hot-swappable cards can be connected through a high bandwidth midplane. One DSP provides analog/digital RAS, fax services and VoIP CODEC support for many services without costly, time-consuming hardware replacements.

Dependable high performance – Designed to ensure no single point of failure, the Total Control 1000 uses redundant power supplies and modular application cards to maximize availability. The hot-swappable network interface and application cards can be inserted or removed while the platform remains in service.



Technical Specifications

HARDWARE

CHASSIS CAPACITY

- 19 slots:16 slots for interface/application cards
- 2 slots for AC or DC dual redundant power supplies
- 1 slot for Total Control 1000 network management card

CHASSIS CAPACITY

- Dimensions:22.15cm H X 48.26cmW

CONNECTION DENSITY

- VoIP:Up to 960 calls via T1 or 900 calls via E1
- Data:Up to 1152 calls via T1 or 1080 calls via E1

DTE INTERFACE SUPPORT

- V.35
- RJ-45/48C
- ITU t.1430/1

PROTOCOL SUPPORT

- Layer 2

- PPP
- Frame Relay
- Ethernet
- Fast Ethernet

- Layer 3

- IP

OPERATING REQUIREMENTS

- Chassis maximum power:130Amp
- Nominal operating range:0 to 40°C
- Humidity:20%-80%
- Non-Nominal operating range:0 to 50°C
- Humidity:10%-95%
- Shipping Conditions:-40 to +60°C

REGULATORY/AGENCY APPROVALS

Telecom Safety

FCC Part 68

IC CS-03 UL1950

EMI/EMC C-UL

FCC Part 15, Class A NEBS

VCCI

ACA NEBS Level 3 Compliant

EN50082

SOFTWARE

LAN Protocols:	TCP/IP, Ethernet
WAN Protocols:	PPP, Frame Relay
Routing Protocols:	Routing Information Protocol (RIP), RIP V2, Transparent on-demand routing, IP protocol routing, OSPF, V1, V2, Support for host, subnet and network routers
Virtual Private Networking:	L2TP, PPTP, GRE, IPSec PPP specific feature: STC Data Compression for PPP payload, Address and control field compression, PAP, CHAP, Magic number loopback detection, Van Jacobson compression, IP address negotiation and assignment
Voice Codec:	G.711 a/b, G.792a and b, G.723.1, G.726
Voice Features DSP:	In-band DTMF support for G.711, RFC 2833 out-of-band DTMF support, G.168-compliant echo cancellation, Silence suppression via voice activity detection and comfort noise generation (VAD/CNG), Multiple audio frames per RTP packet, Configurable packet payload size, Dynamic/Static Jitter compensation
Voice and Fax signaling protocols:	RFC 3261 SIP, Fax/Data over G.711, T.38 Fax, Voice/Fax/Data call type detection, dynamic codec negotiation
Modulation Support:	V.92, V.90, V.34, V.Fast Class (Vfc), V.32 Terbo, V.32 (9600 and 4800), V.32bis V.22 (1200bps), V.22bis, V.25, Bell 208B, Bell 202A, Bell 103, V.21
Error Correction:	ITU-T, V.42, Microcom Networking Protocol MNP 2-4
Data Compression:	V.44, V.42bis, MNP 5
Administration/Accounting:	Radius Accounting, Local flash ROM for booting and configuration storage, DNS, SNMP Management, MIB II and additional MIBS, Telnet, Ping, Dial in administrative access
Network Management:	Telnet, SNMP v2, v2, v3, Command Line Interface, Java Management interface
PSTN Interfaces:	IMT, T1/E1, T1 PRI, T1, CAS, E1 PRI, DS-3, SS7
Capacity:	DS-3 chasis-T1 672 Ds0, Non-DS-3 chassis T1-1152 DS-0, E1-1080 DS-0

SUPPORT

- For an overview of worldwide support, visit http://totalservice.utstar.com

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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

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