

# mSwitch® Trunk Gateway

NEXT GENERATION TOLL QUALITY VOICE GATEWAY

ENABLE NEXT-GENERATION TELEPHONY SERVICES ON WIRED AND WIRELESS CONVERGED NETWORKS



- **SCALABLE HIGH CAPACITY**
- **FAULT TOLERANT**
- **STANDARDS COMPLIANT**
- **CONVERGED WIRELINE AND WIRELESS DESIGN**

The UTStarcom Trunk Gateway (TG) lets service providers offer enhanced Internet Protocol (IP)-based telephony services even as they migrate to a Next Generation Network (NGN) infrastructure. The TG's main role is to serve as a voice/data/fax bridge between IP networks and the legacy PSTN/Public Switched Telephone Network (PSTN) and Public Land Mobile Network (PLMN). It functions seamlessly and transparently, providing utmost scalability and cost-efficiency.

As an integral part of the UTStarcom mSwitch® product family, the TG provides excellent voice communication and enhanced services over IP networks. The high capacity TG platform can be easily deployed in a nationwide core-packet network to transport communications traffic between central offices.

The TG enhances availability by combining software resiliency and hardware redundancy to create a robust and highly available solution. The UTStarcom Trunk Gateway has proven itself in the field, servicing billions of minutes of live traffic.

## KEY FEATURES AND BENEFITS

**Multiple Applications** - Supports applications such as packet toll and packet access tandem, voice off-load, mobile switching trunking, and IP-based enhanced services trunking. Supports the convergence of wireline, wireless and IP by providing connectivity to PSTN/PLMN thereby extending the reach of IP networks and enabling ubiquitous service.

**Carrier-Class Communications**- Utilizes UTStarcom's outstanding expertise in switching, digital signal processing, PSTN signaling and IP networking to seamlessly bridge telephony services between legacy PSTN / PLMN networks and next generation telephony over IP-based networks.

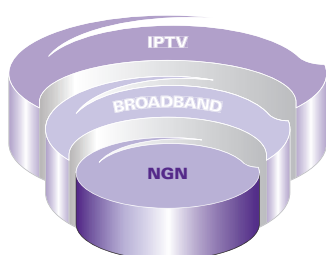
**Cost-Effective High Technology** - Leverages a design approach that rides the technology cost/performance curve, delivering outstanding technology and applications, with hardware that has one of the lowest cost, highest scalability and one of the finest performances.

**Wireline/Wireless Convergence** - Interfaces seamlessly with the PSTN/PLMN to deliver toll-quality voice and a suite of value-added services.

**Highly Scalable** - A modularized, cost-effective solution scalable to more than 16,000 voice channels at DS-0 in a fully configured chassis. For smaller configurations it can be collocated with the CS-P to provide a full function switch in a single chassis.

**High Reliability** - Uses a NEBS compliant signaling gateway that includes hot swappable redundant modules and power supplies.

**Standards Based** - Complies with IETF MEGACO ITU H.248, SNMP.



## SYSTEM CHASSIS

Dimensions: 622.3mm (24.5")(14U) H x 482.6mm (19") W x 431.8mm (17") D  
(Rack Mountable)

Temperature: -5° to 55°C (23° to 131°F) (operating)

Humidity: 5% to 95% non-condensing

Power: -40v to -72v DC

Rack capacity: Up to three chassis per standard 7-ft rack

Compliance: FCC Part 15 Class A, UL1950, Canadian-UL, NEBS Level 3, CE Mark, CB Mark, VCCI, RoHS

## PSTN / PLMN INTERFACES

E1 or T1 IMTs - ISDN-PRI: Up to 320 links per chassis

OC-3/STM-1 : Up to 8 optical connections per chassis

## IP INTERFACES

RTP Traffic: Redundant Gigabit Ethernet

Management: Redundant 10/100BaseT Ethernet

Call Control: Redundant 10/100BaseT Ethernet

## DIGITAL SIGNALING PROCESSING

- ITU G.711 : PCM of voice frequencies
- ITU G.723 : Extensions of Recommendation G.721 adaptive differential pulse code modulation to 24 and 40 kbit/s for digital circuit multiplication equipment application
- ITU G.726 : 40, 32, 24, 16 kbit/s ADPCM transmission of voice at rates of 16, 24, 32, and 40 kbit/s
- ITU G.729 : CS-ACELP A and B
- FAX over G.711
- T.38
- Transcoding between G.711 and G.723.1 / G.726 / G.729A/B
- Silence Suppression
- Jitter Buffer
- ITU G.168 : Digital network echo cancellers
- VAD
- CNG
- DTMF
  - In-band over G.711
  - Out-of-Band per RFC2833
- EVRC

## STANDARDS / PROTOCOL SUPPORT

- MEGACO/ITU H.248
- SNMP v2
- RTP
- RTCP
- SIGTRAN/ISDN Q.921 User Adaptation Layer (IUA)/MTP2/M2UA

## HIGH RELIABILITY

- Redundant DC feeds
- N+1 hot swap / load-sharing power supplies
- NEBS-compliant hardware design
- Hot swap / redundant modules
- STM-1/OC-3 interfaces

## MANAGEMENT

- GUI interface for provisioning
- SNMP network manageability for configuration, monitoring and troubleshooting
- In-service software upgrades

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

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