

# Intelligent Distribution and Control of Mobile Network Traffic

4G LTE promises to revolutionize the use of data services for mobile users worldwide. With mobile data traffic projected to grow exponentially during the coming years, mobile carriers are increasingly focused on ways to improve network service dependability and their customer's Quality of Experience (QoE). Ultimately this effort will lead to higher levels of service assurance and increased revenue for mobile carriers. An important element in this process is the use of sophisticated and costly network monitoring probes that allow mobile carriers to immediately detect and resolve issues that impact QoE.

The Ixia GTP Session Controller 7433 helps mobile carriers optimize the performance of their network monitoring solutions. As data traffic and session counts continue to increase, the GSC 7433 provides intelligent traffic distribution with the ability to detect faulty or overloaded monitoring probes and redistribute the load to other probes in the cluster. Additionally, the GSC 7433 provides unprecedented scalability and network visibility by ensuring that GTP traffic related to one session is delivered to a single probe. This allows monitoring probes to focus their resources on QoE analysis instead of spending cycles attempting to reassemble GTP session traffic.



## Highlights

### Performance

- 10GE Ethernet support
- Full line-rate across all ports
- Supports over 50 million GTP sessions

### High-Availability Features

- NEBS Level 1 Certified Product
- Redundant, hot-swappable power supply & fan modules
- Local and remote alarm relay support
- Redundant management ports
- Craft interface for emergency out-of-band reset

### Port Flexibility

- Up to 64 10GE (SFP+) port configurations available via flexible 10GE port modules
- All port licenses are included with purchase of modules
- **3GPP Specification Support**
- 4G LTE, UMTS, GPRS, GSM
- GTPv1 and GTPv2

### Management

- SNMP v1, v2, v3c support
- TACACS+ and RADIUS support (members and groups)
- Granular access control features
- Event logging
- Local and remote Syslog
- API for IT automation and control
- Dual IP-based management ports (RJ45 –10/100/1000 Mbps)

By optimizing the reliability and efficiency of monitoring probes, the GSC 7433 aids mobile carriers in the delivery of user-centric mobile services allowing them to retain and grow their subscriber base, improve ARPU and minimize operational costs.

### Key features:

- **GTP-session aware** – Enable monitoring solutions to scale by offloading the correlation of subscriber data from monitoring probes. The GSC 7433 understands the GTP protocol and can deliver all the packets from a single subscriber to a single probe.
- **Session distiller** – Sample GTP sessions to reduce traffic sent to probes to the essential information, maximizing probe utilization and control costs as your network scales. Edit only the sessions you are interested in – categorize by RAT, ULI, QCI, or even individual session identified by either IMSI or IMEI, either as number or as wildcards.
- **Session safety net** – Automatically detect probe failure and redistribute the traffic until the probe recovers.
- **Scalable, high-density solution** – Build a right-sized monitoring solution with enough headroom for future growth. The GSC 7433 can distribute over 27 million subscriber sessions to probes in a 32-port configuration. To double the capacity to more than 54 million subscribers, simply double the number of ports to 64 in the same 2RU chassis.
- **Carrier-grade robustness** – Deliver uninterrupted traffic distribution in demanding telecommunication environments. The NEBS Level 1 certified GSC 7433 includes high-availability features such as redundant management ports, power supplies, and fan trays.
- **Simple visual management** – Focus on the business of running the network rather than spending time reading an instruction manual. The GSC 7433 includes a simple self-configuring user interface and presents function-specific statistics for insight into how the system is working.
- **Remote probing** – forward monitored traffic over EPC to remote monitoring probes using GRE encapsulation. Reduce traffic by trimming packets to a specific size, while optionally keeping packet length and packet ingress timestamp as metadata.
- **Backup / restore** – optional appliance available to keep session correlation data and tunnel identifiers during maintenance.



### Physical specifications

- Size and Weight
  - 2U high rack mountable enclosure
  - Dimensions: 17.5W x 19.125L x 3.5H (inches), 44.45W x 48.58L x 8.89H (centimeters)
  - Weight: 35.0 lb (16 kg)
- Power AC
  - Input AC voltage: 90-240V AC RMS auto-switching
  - Frequency: 50-60Hz
  - Nominal power requirement: 2.36A @ 110V AC, 260W
  - Maximum power requirement: 5A @ 110V AC, 550W
  - Heat/power dissipation for system with all 64 ports on the front panel at 100% traffic load: nominally 260W/887 BTU/hour

- Power DC
  - Operating input voltage: -36 to -75V DC
  - Nominal current: 5.41A @ -48V DC, 260W
  - Maximum operating input current: 11.46A @ -48V DC, 550W
  - Heat/power dissipation for system with all 64 ports on the front panel at 100% traffic load:  
Nominally 260W/887 BTU/hour

## Operating specifications

- Temperature
  - Operating: 5°C to 40°C
  - Short-term: -5°C to 55°C (not to exceed 96 consecutive hours)
  - Short-term: with fan failure: -5°C to 40°C (not to exceed 96 consecutive hours)
- Humidity
  - Operating: 5% to 85%, (non-condensing)
  - Short-term: 5% to 90% (non-condensing, not to exceed 96 consecutive hours)
- Mean Time Between Failures (MTBF) Prediction
  - 106,256 hours

## Regulatory/safety

### North American Safety

- UL 60950-1, 2nd Edition
- CSA C22.2 No. 60950-1, 2nd Edition
- GR-1089-CORE, Issue 5, August 2009

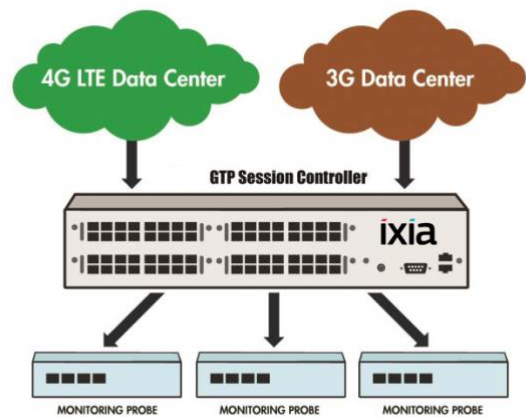
### European Safety

- EN60950-1
- International Safety
- CB Scheme: IEC 60950-1:2005 First Edition

### RoHS Compliant

### EMI/EMC

- North American EMC
  - FCC part 15, Class A (USA)
  - ICES-003 Issue 4, Class A (Canada)
  - GR-1089-CORE, Issue 5, August 2009
- European EMC
  - EN55022 2006 Class A (Emissions)
  - EN55024 1998 w/A2 (Immunity)



- EN61000-3-2:2006 (Harmonics)
- EN61000-3-3 1995 w/A2 (Flicker)
- ETSI EN 300 386:2005-4
- IEC/International EMC
  - IEC/EN 61000-4-2:2001 Electrostatic Discharge Immunity
  - IEC/EN 61000-4-3:2006 Radiated Immunity
  - IEC/EN 61000-4-4:2004 Transient/Burst Immunity
  - EN61000-3-3 1995 w/A2 (Flicker)
  - IEC/EN 61000-4-5:2005 Surge Immunity
  - IEC/EN 61000-4-6:2007 Conducted Radio Frequency Immunity
  - IEC/EN 61000-4-11:2004 Voltage Dips, Interruptions and Variations

### Included accessories

- USB flash drive with activation license key
- Rack mount kit

### Ordering Information

Chassis	
<b>SYS-7433-STD</b>	GTP Session Controller base system. Includes chassis and three fan modules. Power supplies must be purchased separately
Interface Modules	
<b>MOD-GLB-X16-N</b>	Single (1) network-side, 16-Port GTP Session Controller module with 14M LTE sessions
<b>MOD-GLB-X16-T</b>	Single (1) tool-side, 16-Port GTP Session Controller module. Ports can only be used with SFP+ transceivers - quantity 16 licensed ports.
<b>MOD-GLB-X8NX8T</b>	Single (1) network- and tool-side combo, 16-Port GTP Session Controller Module. Ports can only be used with SFP+ transceivers – quantity 8 ingress and 8 egress licensed ports.

## Options, Upgrades, and Accessories

<b>MOD-7433-ACMOD</b> Single (1) AC power module	Single (1) AC power module
<b>MOD-7433-DCMOD</b>	Single (1) DC power module
<b>MOD-7433-FANMOD</b>	Single (1) fan module unit
<b>ACC-7433-FILTER</b>	1 year supply of air filters for the 7433 chassis
<b>ACC-7400-RBRACKET-19</b>	4-Post 19" Bracket Extender 30"-42". Front brackets are included with system
<b>ACC-7400-RBRACKET-23</b>	4-Post 23" Bracket Extender 30"-42". Front brackets are included with system
<b>LIC-P7433-TUNNEL</b>	Ixia GSC 7433 Series, Tunneling on Tool ports feature, Allows for origination of L2 GRE encapsulation tunnel to tools, including virtual tools, Licensed per system QTY (1)
<b>LIC-P7433-ADV</b>	Ixia GSC 7433 Series, Advanced packet processing feature, includes packet trimming and packet timestamping for virtual GRE ports. Requires LIC-P7433-TUNNEL license. Licensed per system QTY (1) (993-0087)
<b>LIC-P7433-ADV-FILTER</b>	Ixia GSC 7433 Series, Advanced filtering capabilities feature license, provides support for up to 8 million IMSIs. Licensed per system QTY (1) (933-0076)
<b>LIC-P7433-SBR</b>	Ixia GSC Session Backup/Restore License. This license enables the session state backup/restore feature on the GSC 7433. Requires external server.

Learn more at: [www.keysight.com](http://www.keysight.com)

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