
Test and Measurement Solutions for All Networks



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Website: <http://www.gl.com>

Company Profile

- GL Communications Inc, a global leader in Test and Measurement Solutions for telecommunications industry, has worked with almost all major telecom Equipment Vendors & Service Providers, for over 25 years, to meet the test requirements of telecom products & networks.
- GL prides itself on its comprehensive suite of telecom testing solutions to ensure 'quality & reliability' of variety of telecom networks. GL's test solutions cover wide array of networks - 5G, 4G (LTE), 3G (UMTS), All-IP, Ethernet, T1 E1, T3 E3, OPTICAL, and PSTN.
- Our solutions provide unprecedented capture, storage, visualization, centralized access & control, portability, convenience, & cost-effectiveness. The tools are widely used for conformance, performance, & automated testing.
- GL also provides consulting services for system design of wireless, satellite, fiber optic, & microwave networks, including testing & analysis to telecommunication companies all around the world. Please visit <http://www.gl.com> for more information.

Product at a Glance

Ethernet Test Solutions

All Protocols over IP, TCP, UDP
10 GigE, MPLS, VLAN
Signaling, Voice, Fax, Data, &
Video QoS



Wireless Test Solutions

LTE, VoLTE, IMS, Diameter, UMTS, GPRS
Drive Testing, GPS Mapping
Signaling, Voice, Fax, Data, & Video QoS



TDM & PSTN Test Solutions

Signalling & Traffic
T1, E1, T3, E3, Analog, FXO, FXS



Fiber Optics Test Solutions

OC-3, OC-12, STM-1, STM-4
Channelized & Unchannelized



TEST
ANALYZE
MONITOR

Voice, Fax, Data, & Video Quality

5G, Wireless - 4G (LTE, VoLTE), 3G, 2G,
Bluetooth, Wi-Fi
IP, TDM, PSTN, PESQ, POLQA



Network-wide Monitoring Solutions

VoIP, TDM, Wireless
Signaling, Voice, Fax, Data, & Video QoS



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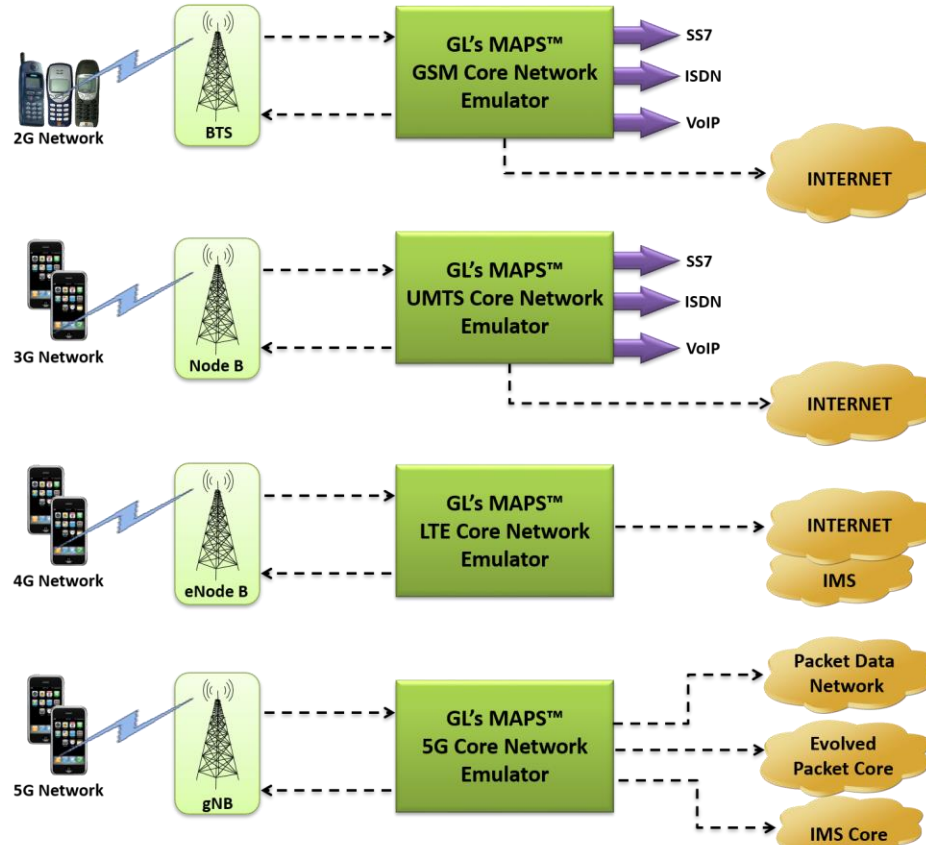
- Testing, Installation and Maintenance Solutions
 - For Wireless Networks
 - For All-IP Networks
 - For TDM, PSTN
 - For High-Speed Telecom Lines (OC-3/ STM-1, OC-12/STM-4, T3 E3)
 - Network-wide Surveillance and Monitoring Solutions
- Network-wide Voice, Video, & Data Quality Test Solutions
- Handheld Test Solutions for IP, TDM, & PSTN
- Echo Measurement and Simulation, Echo Canceller Testing Solutions

Some of Our Customers

- 3 Com
- Accelerated Networks
- AHK Associates
- All Star Systems
- Altiga Networks
- Amerifax
- Analogic Systems
- AT&T
- Aztec Engineering
- Banby Industries
- Bartec
- Bell Atlantic
- Bi-Right Int'l.
- Boeing NA, Inc.
- Brook Trout
- Carinex Ltd.
- Cisco Systems
- Comsat
- Conexant
- Converse Information Systems
- Coppercom
- Digital Receiver
- Ditech
- Dynalink
- EC Tel
- ECI Telecom
- Edison
- Ericsson
- Farmer's Telephone
- General Dynamics
- Global One
- GTE Systems
- Harris Corp.
- Hughes Network Systems
- IDT
- IMS
- Infonet
- Innomedia
- InRange
- Intelsat
- IPverse
- IQ Telecom
- Itopia
- Jetstream
- JSI Telephone
- WytecLara Tech
- Litton Industries
- Lockheed Martin
- Lucent Technologies
- Marker Communications
- Massachusetts Bay Transit Authority (MBTA)
- MCI Worldcom
- Maryland Mass Transit Administration (MTA)
- Memotec
- Merlin Interactive
- Mockingbird Networks
- Motorola
- NET
- NetAccess
- Newbridge
- Nextel Communications, Inc.
- Nokia
- Nortel Networks
- Novus
- NTC
- Octel
- Opuswave
- Pairgain
- Paratel
- Pilgrim Telephone
- PMC-Sierra
- Pulsecom
- Raychem
- Raytheon E-Systems
- RCS Co.
- RFB Cellular
- Safeco Ins.
- Salix
- Samsung
- Siemens
- Silicon Wireless
- Sonus Networks
- Sony Transcom
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- Sprint
- Tachion Network Tech.
- Tekelec
- Telcordia Tech.
- Telebyte
- Teleglobe Canada, Inc.
- Tellabs, Inc.
- Tenzing
- Ticketmaster
- Troncom Corp.
- University of Michigan
- Virtual Access
- Vital Telecom
- Voicepump.com
- Washington Metropolitan Area Transit Authority (WMATA)
- World PCS

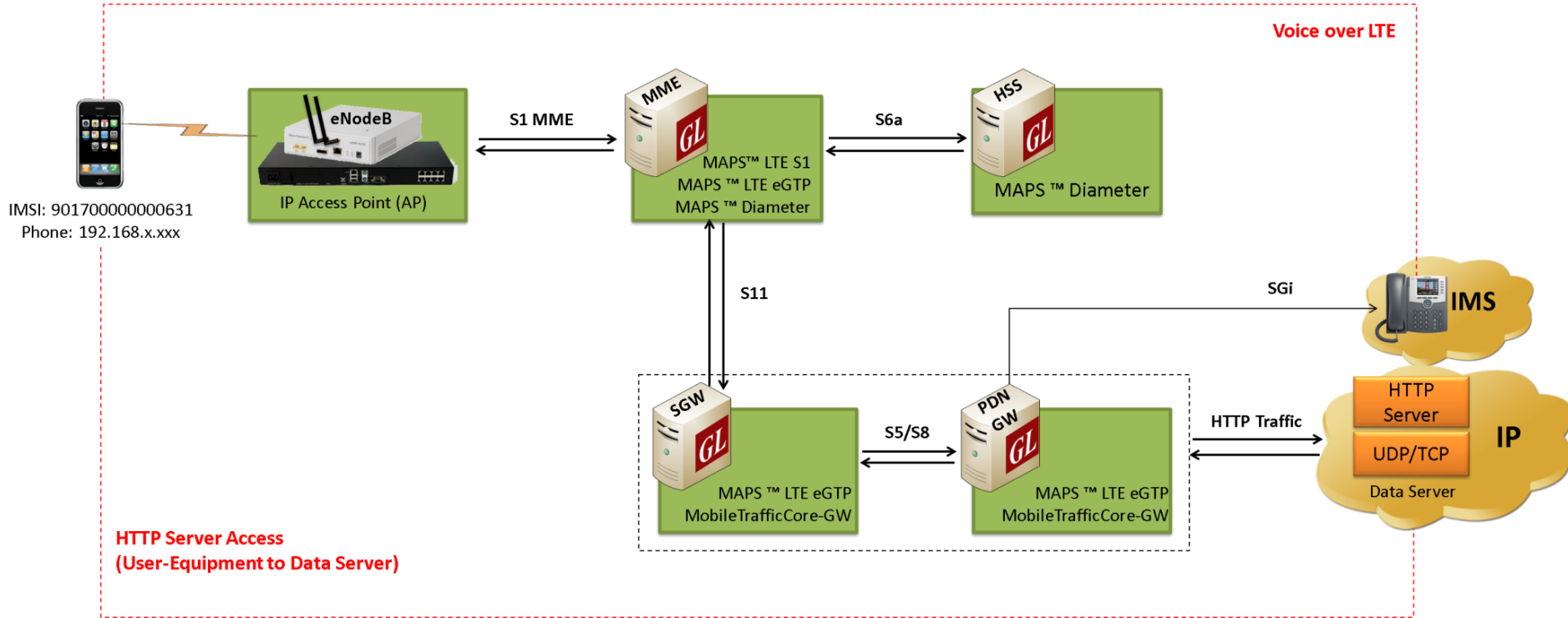
Test Solutions for Wireless Networks

Complete Wireless Lab Simulation

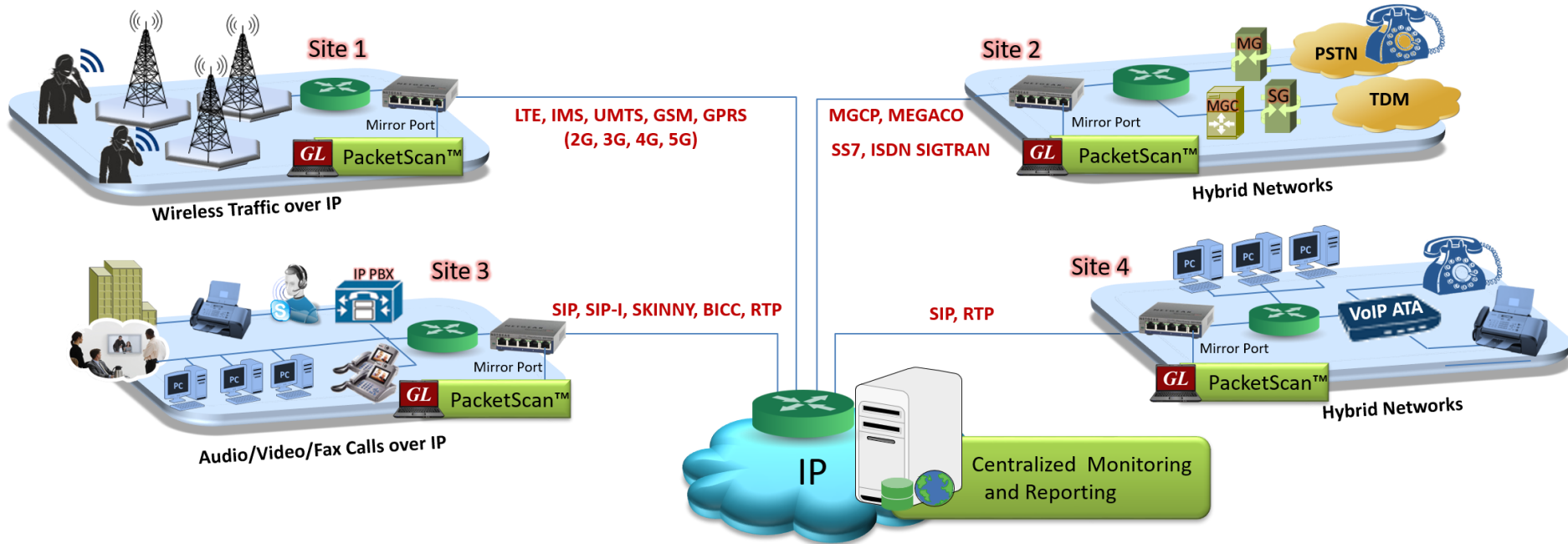


For more details, please visit -
www.gl.com/maps.html

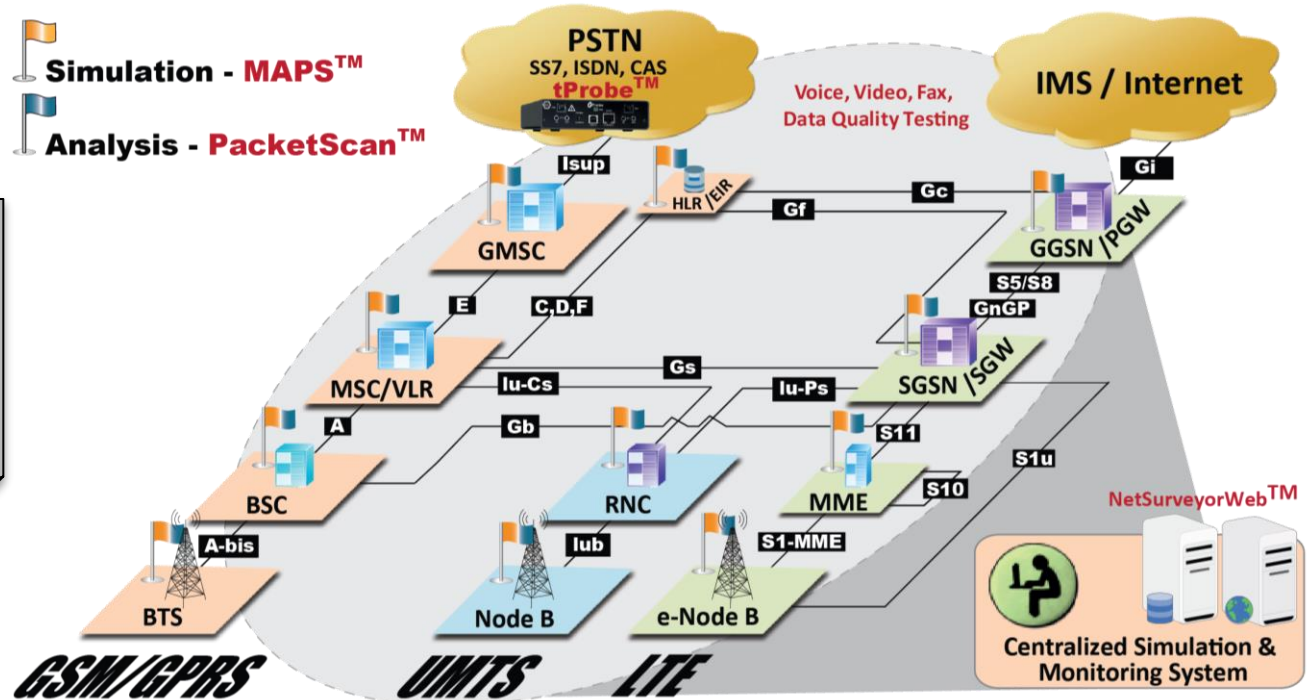
Typical LTE Network Lab Simulation



Analysis Solutions for All-IP Networks (LTE, VoLTE, IMS, 5G..)



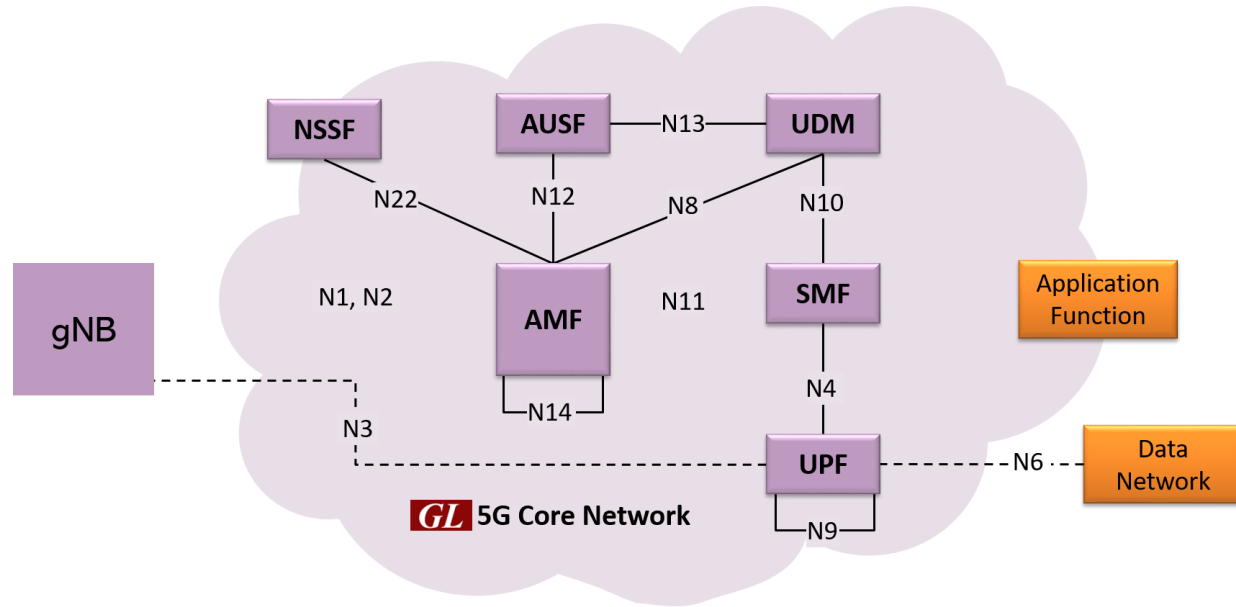
Signaling and Traffic Simulation, Monitoring, & Conformance (Any-Network, Any-Interface)



- Simulate and monitor all nodes and interfaces within a Wireless and Wired Network
- Setup a complete virtual Wireless and Wired Network Lab
- Suitable for Conformance, Performance, and Load Testing

5G Core (5GC) Network Test Solution

- MAPS™ 5GC Network emulator can simulate multiple UEs and elements such as UE+gNB, AMF, SMF, UPF, AUSF, UDM, UDR, NSSF, NRF which forms the 5G core network

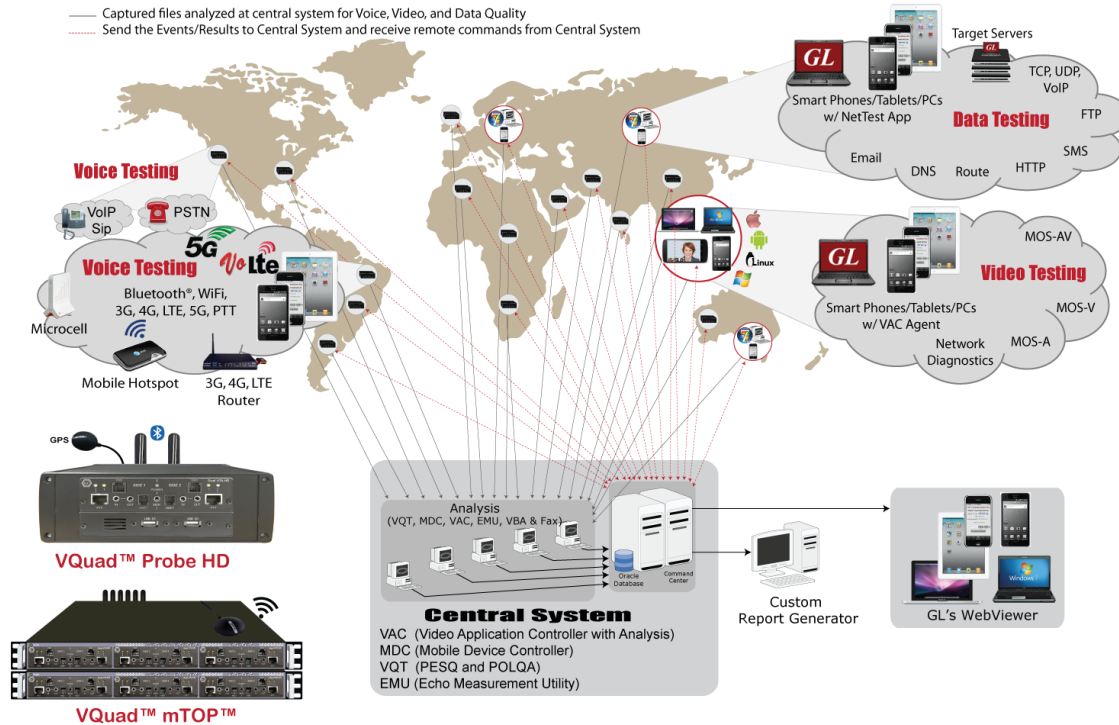


 **5G Network Test Solution**

Network-wide Voice, Video, & Data Quality Test Solutions

Any-Network, Any-Interface

Complete Voice, Video, and Data QoS Test Solution



For more details, please visit - <http://www.gl.com/completevqtsolutions.html>

Network-wide Voice, Video, & Data Quality Test Solutions

A single platform to connect to any device under test

Supports NB, WB

GPS



Dual UTA HD



Back Panel

VQuad™ Probe HD

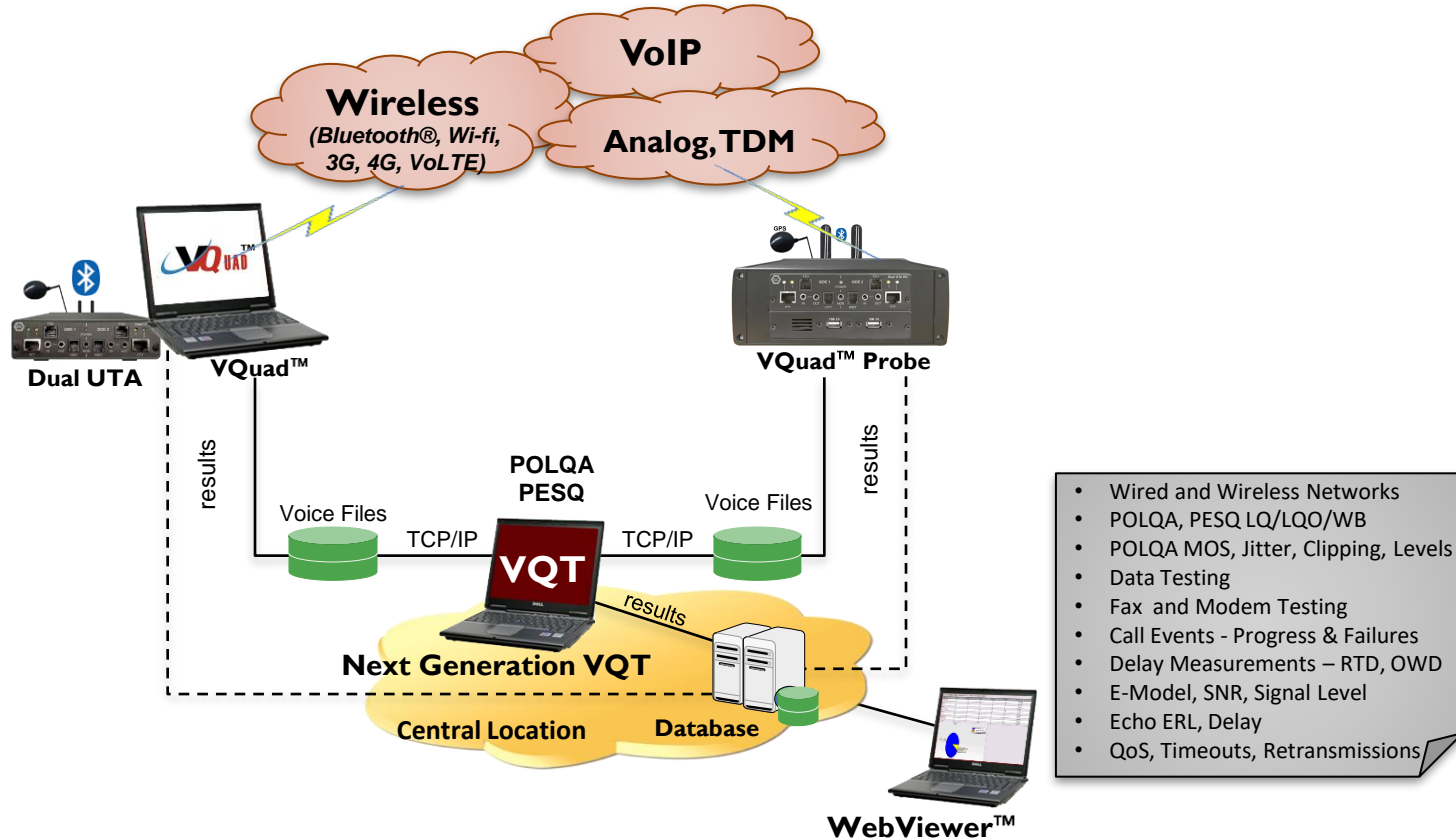


Front Panel

Dual UTA HD with
PC Interfaces

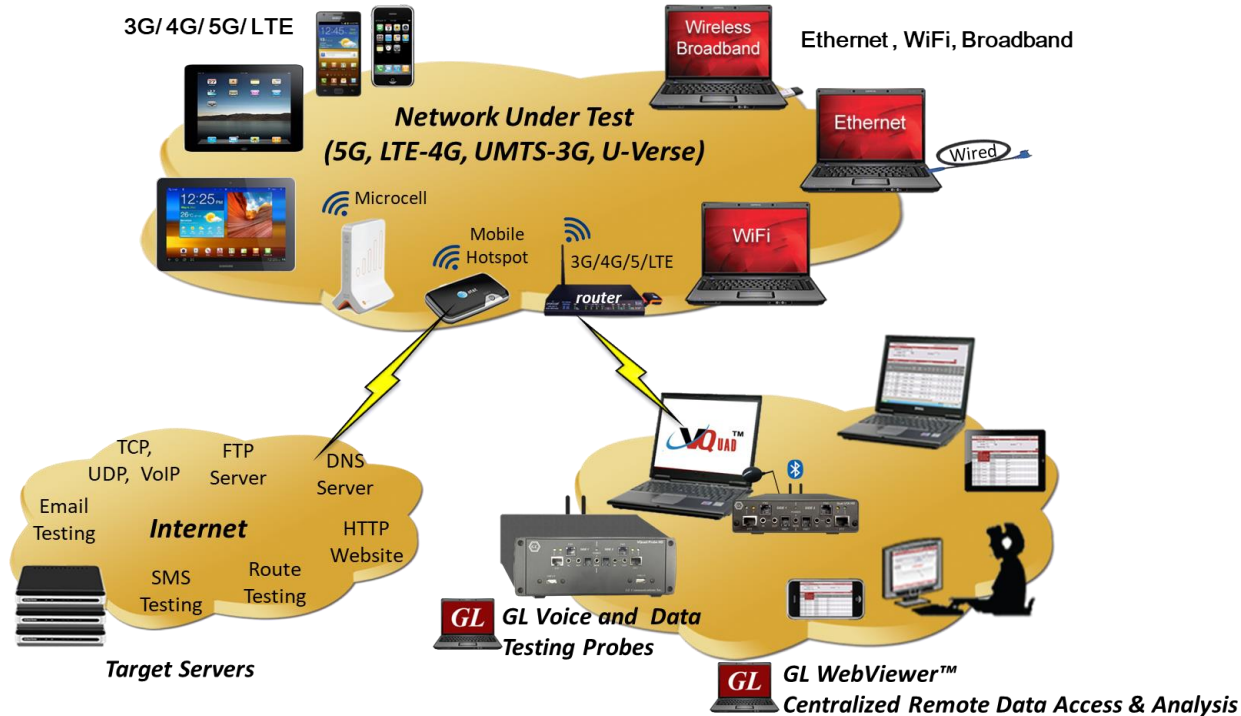
- Bluetooth®
- RJ-11 POTS lines (FXO)
- Handset Phones (POTS, Digital, VoIP)
- Balanced I/O interfaces
- Mobile audio interface acting as a headset connection to Smartphones (iPhone, Android, Blackberry)
- Mobile Radios with Push-to-Talk (PTT) functionality
- GPS sync ports for synchronization
- Work with GL's T1 E1 Analyzer for T1 E1 interfacing

Voice Quality Testing



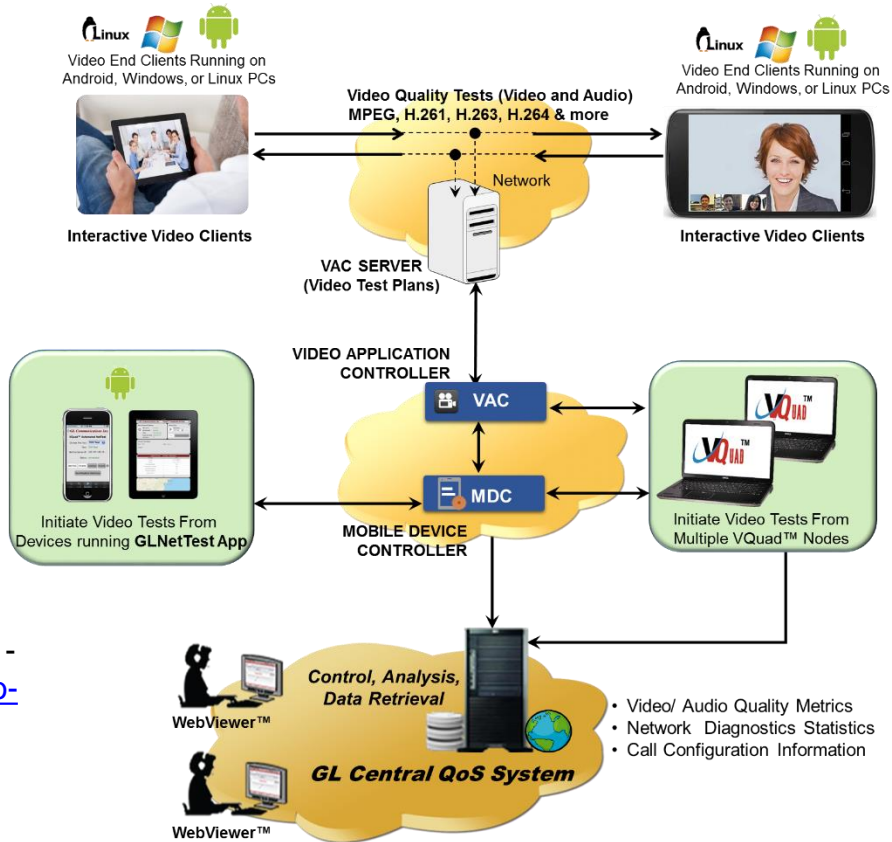
For more details, please visit - <http://www.gl.com/completevqtsolutions.html>

Data Quality Test Solutions (On Wireless devices & Wired Broadband)



For more details, please visit - www.gl.com/web-based-client-for-voice-and-data-quality-testing.html

Video Quality Test Solutions (On Wireless devices & Wired Broadband)



For more details, please visit -
www.gl.com/automated-video-quality-testing.html

Test Solutions for Ethernet/IP Networks

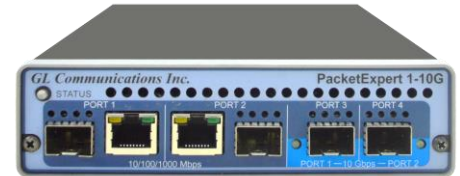
Ethernet and Optical Hardware Platforms



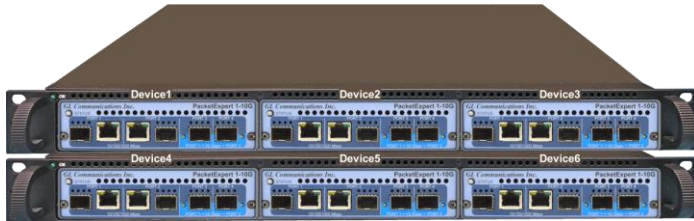
PacketExpert™ - 1Gbps
Quad Port Ethernet and Optical tester



PacketExpert™ 10G



PacketExpert™ 10GX (10G/1G)



PacketExpert™ mTOP™ HD – 10G/1G
Ethernet and Optical Tester



PacketExpert™ mTOP™ HD – 1G
Ethernet and Optical Tester



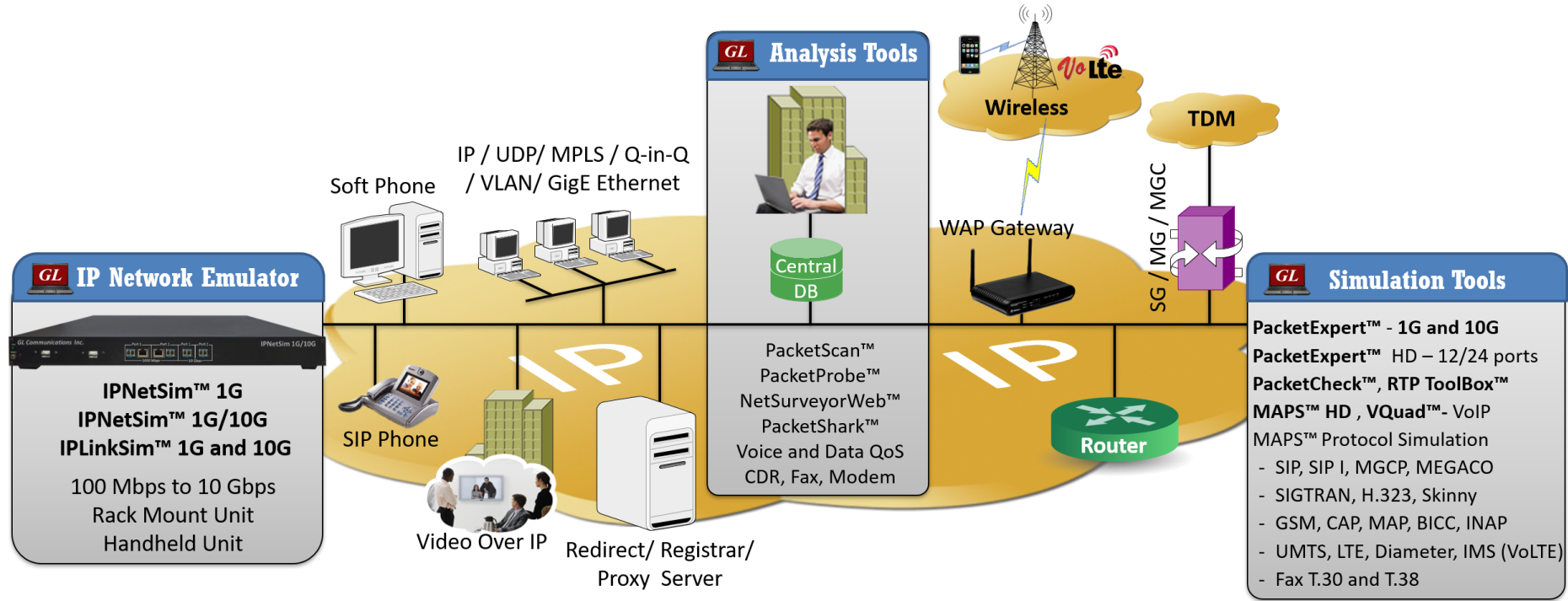
PacketExpert™ 10GX
mTOP™ Probe

Simulate, Capture and Analyse with High Density Traffic

1U Compact Rack Servers with High-Density NIC Cards Up to 100 k to 200 k Sustained Calls with Multiple Servers Capture and Analyse with High Density Traffic



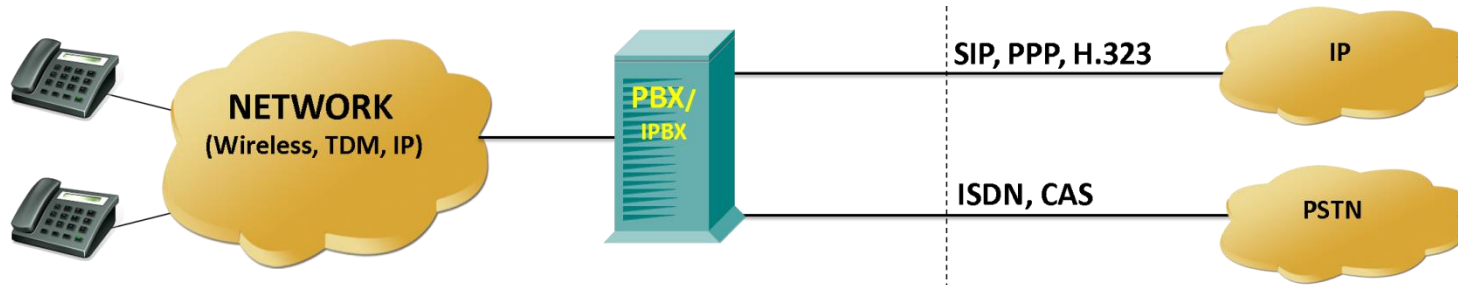
Analysis & Simulation Solutions for All-IP networks



Supported Codecs

- G.711 (A-Law and μ -law)
- G.711 Application II (A-Law and μ -law with VAD)
- G.722, G.722.1
- G729, G729B (8kbps)
- G726 (40, 32, 24, 16kbps)
- GSM HR, GSM (13.2kbps), GSM EFR (12.2 kbit/s)
- ILBC_15_2 (for 20 msec), ILBC_13_33 (for 30 msec)
- SPEEX (Narrow band and Wideband)
- Video codecs include H263++ CIF 190, 350, 512 kbps, QCIF 64, 80, 128 kbps, and H264
- Other optional codec include (must be purchased with additional license)
 - AMR (Narrow band and Wideband)
 - EVRC, EVRC0 (Rates - 1/8, 1/2 and 1)
 - EVRCB, EVRCB0 (Rates - 1/8, 1/2 and 1)
 - EVRC-C
 - SMV (Modes - 0, 1, 2 and 3)

Call-Detail-Records – Finding the Calls-of-Interest

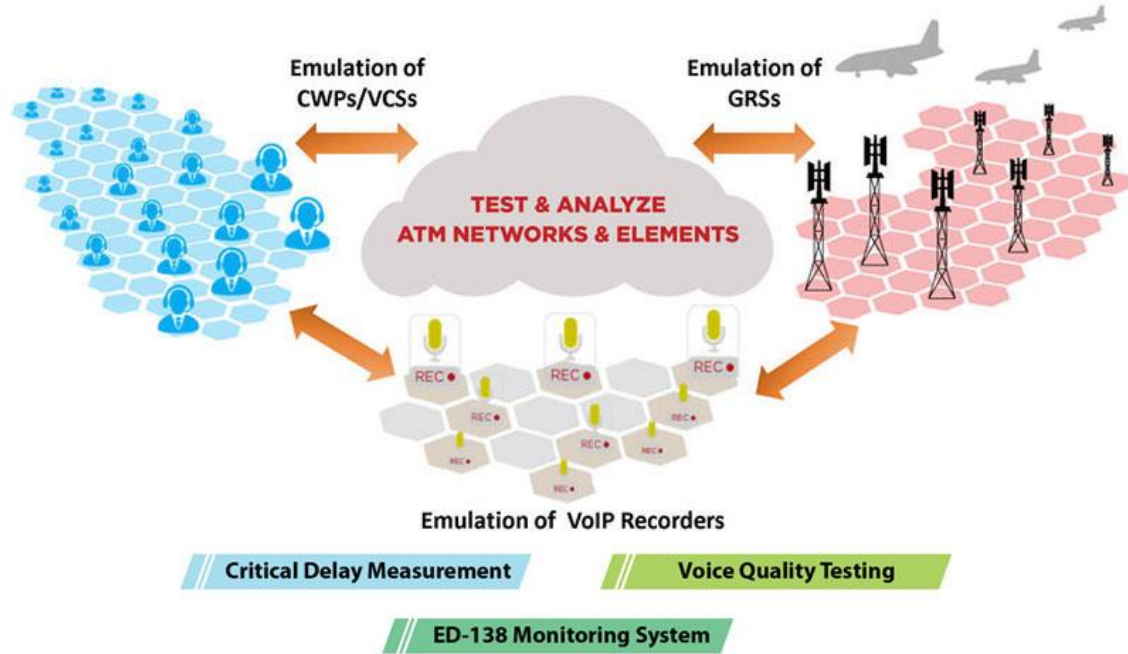


Calls of Interest



Testing ED-137 and ED-138 (Air Traffic Control)

- Critical Delay Measurements
- Bulk Air-to-Ground and Ground-to-Ground Call Simulation
- AG, GG Call Recording and Recorder Interface Simulation
- Voice Quality Testing
- IP Network Monitoring
- WAN IP Link Simulation



Test Solutions for TDM (T1, E1, T3, E3) Networks

T1 E1, Datacom Hardware Platforms



Dual T1 E1 Express (PCIe)
T1/E1 Analyzer



Quad / Octal T1 E1
PCIe Card



Dual HD Universal T1 E1
PCI Card



tProbe - Portable USB based
T1 E1 VF FXO FXS & Serial Data Analyzer



Portable USB based
Dual T1 E1 Analysis Unit



tScan16™ - T1 E1 Analysis
(16 Port Rx Only)

Analog FXO FXS Hardware Platforms



**tProbe™ - Dual T1 E1 VF FXO FXS
Datacom Analyzer**



Dual UTA HD

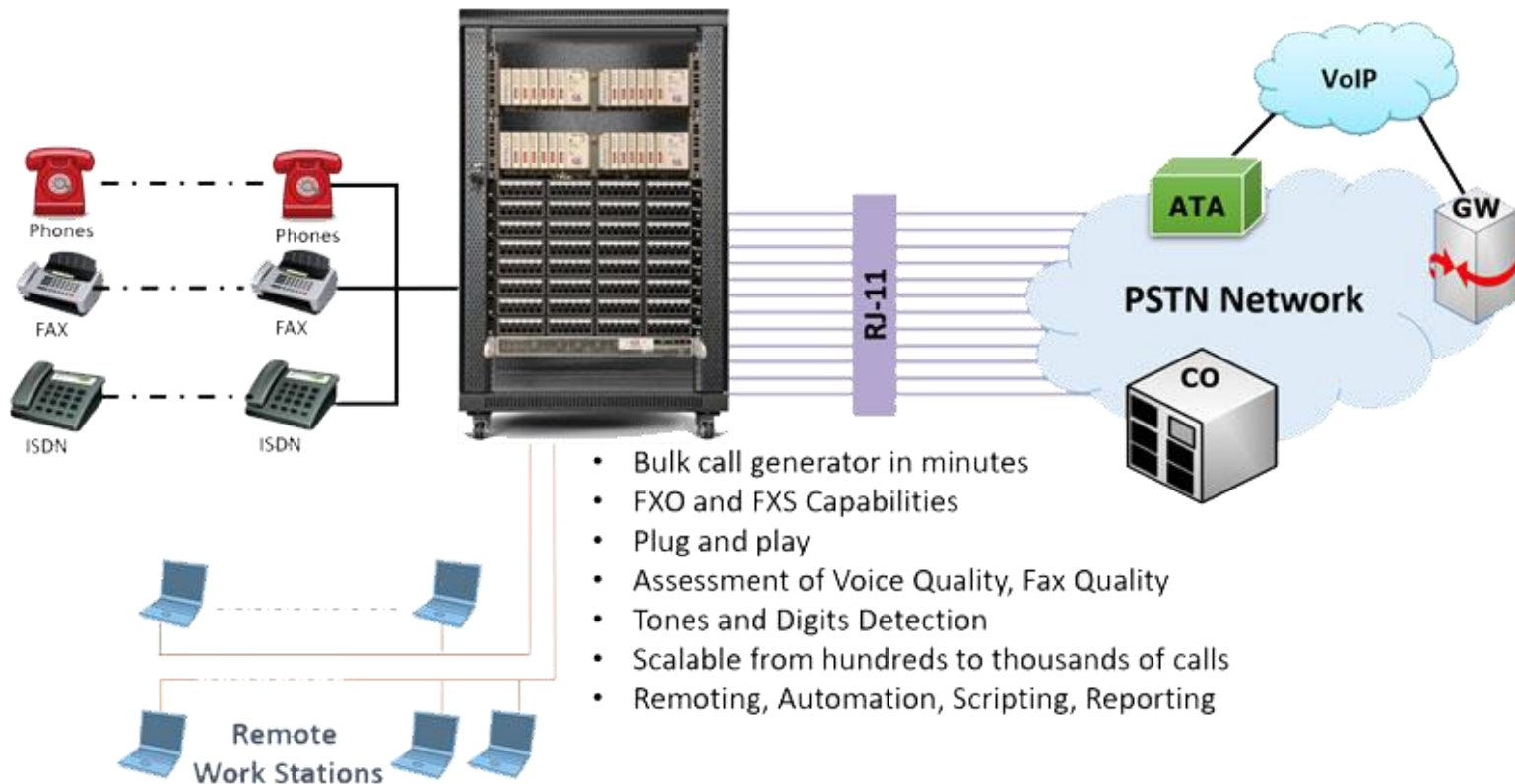


**VQuad™ Probe HD - all-in-one self-
contained VQuad™ with Dual UTA HD**

For more details, please visit - http://www.gl.com/hardware_platforms.html

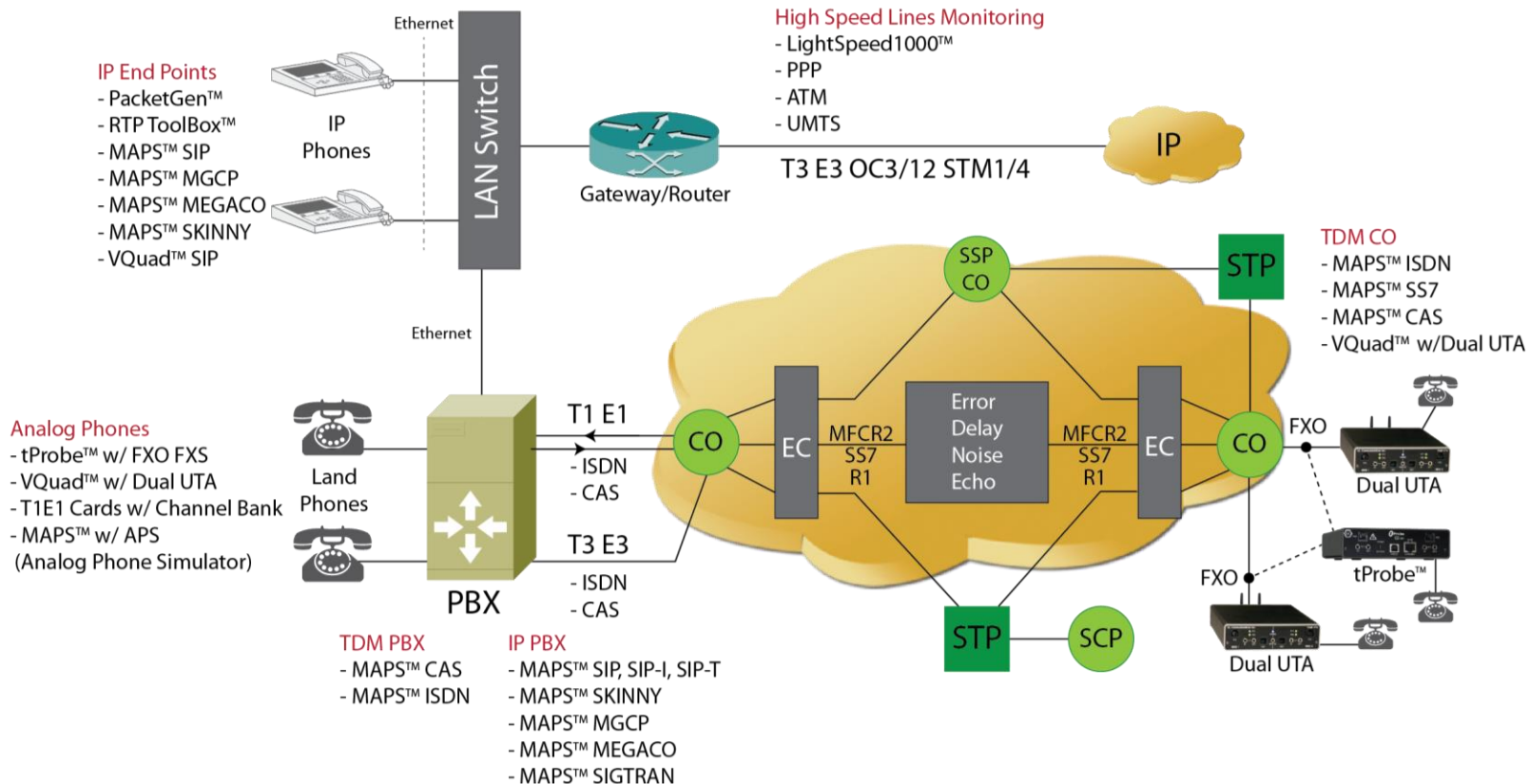
MAPS™ APS

MAPS™ APS-24, 48, 96, or 192 Port



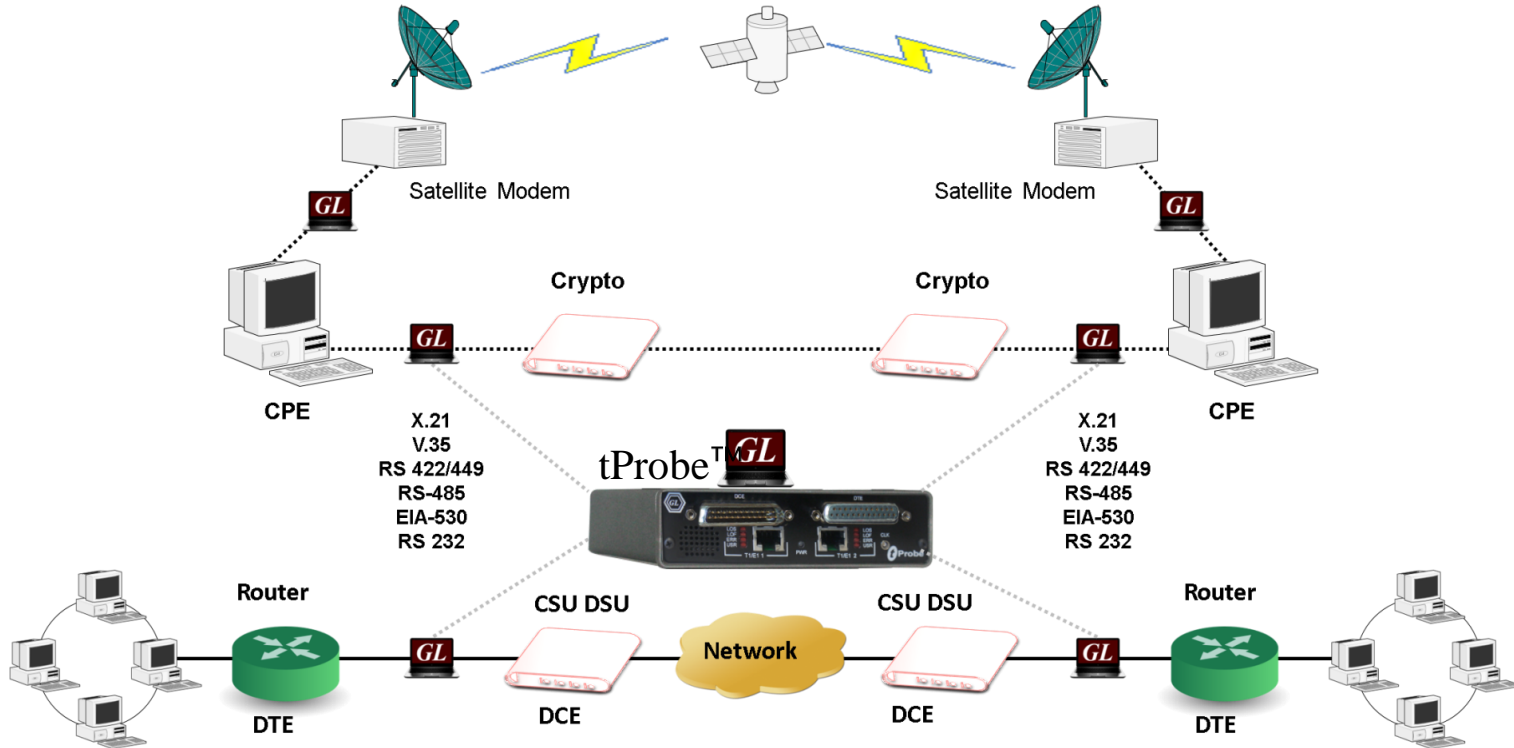
For more details, please visit - <http://www.gl.com/2Wire-Analog-Bulk-Call-Generator.html>

T1 E1, T3 E3, IP Emulation and Analysis



For more details, please visit - <http://www.gl.com/t1e1testing.html>

Test Serial Data Communications Interfaces



For more details, please visit - <http://www.gl.com/tprobe-datacom-analyzer.html>

T3 E3 and Optical Hardware Platforms



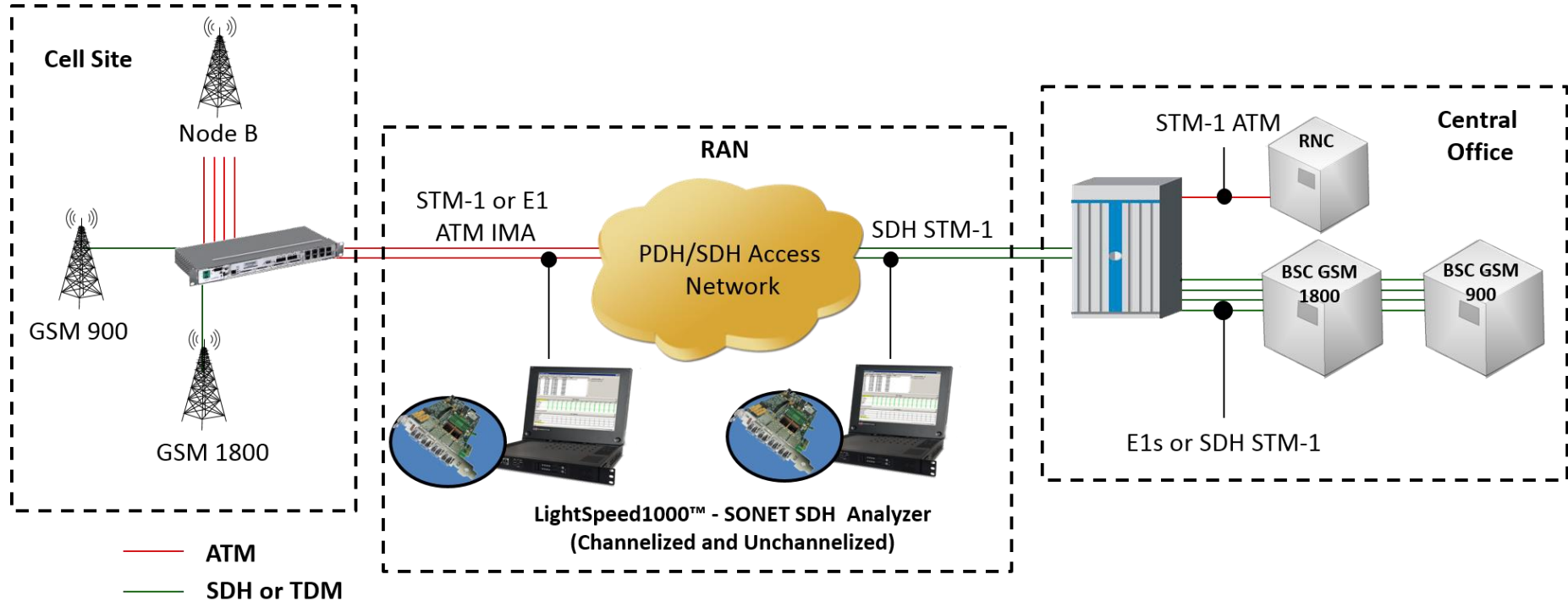
**LightSpeed1000™ - Quad Port
Optical Tester – Channelized and Unchannelized**



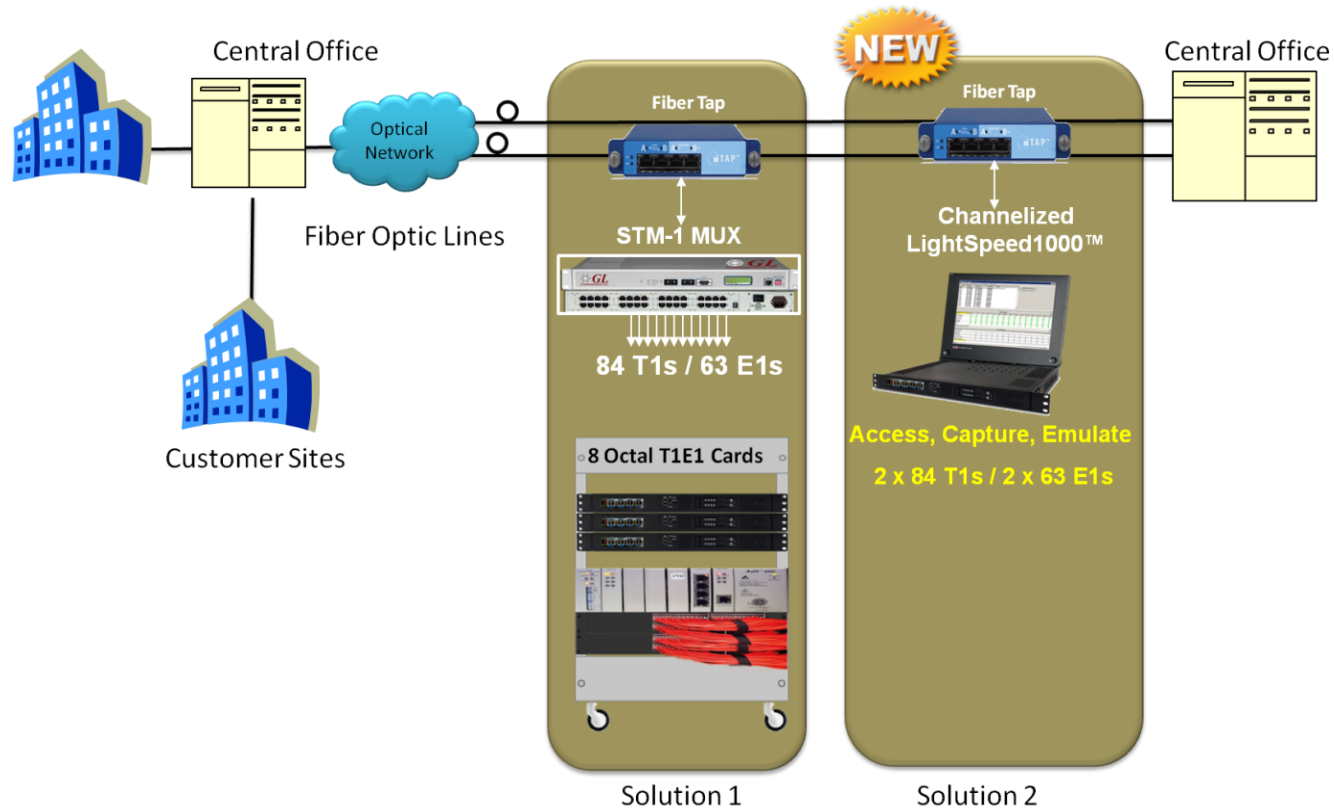
USB based T3 E3 Analyzer Unit

Test Solutions for Fiber Optic Networks

Testing Channelized and Concatenated Optical Networks

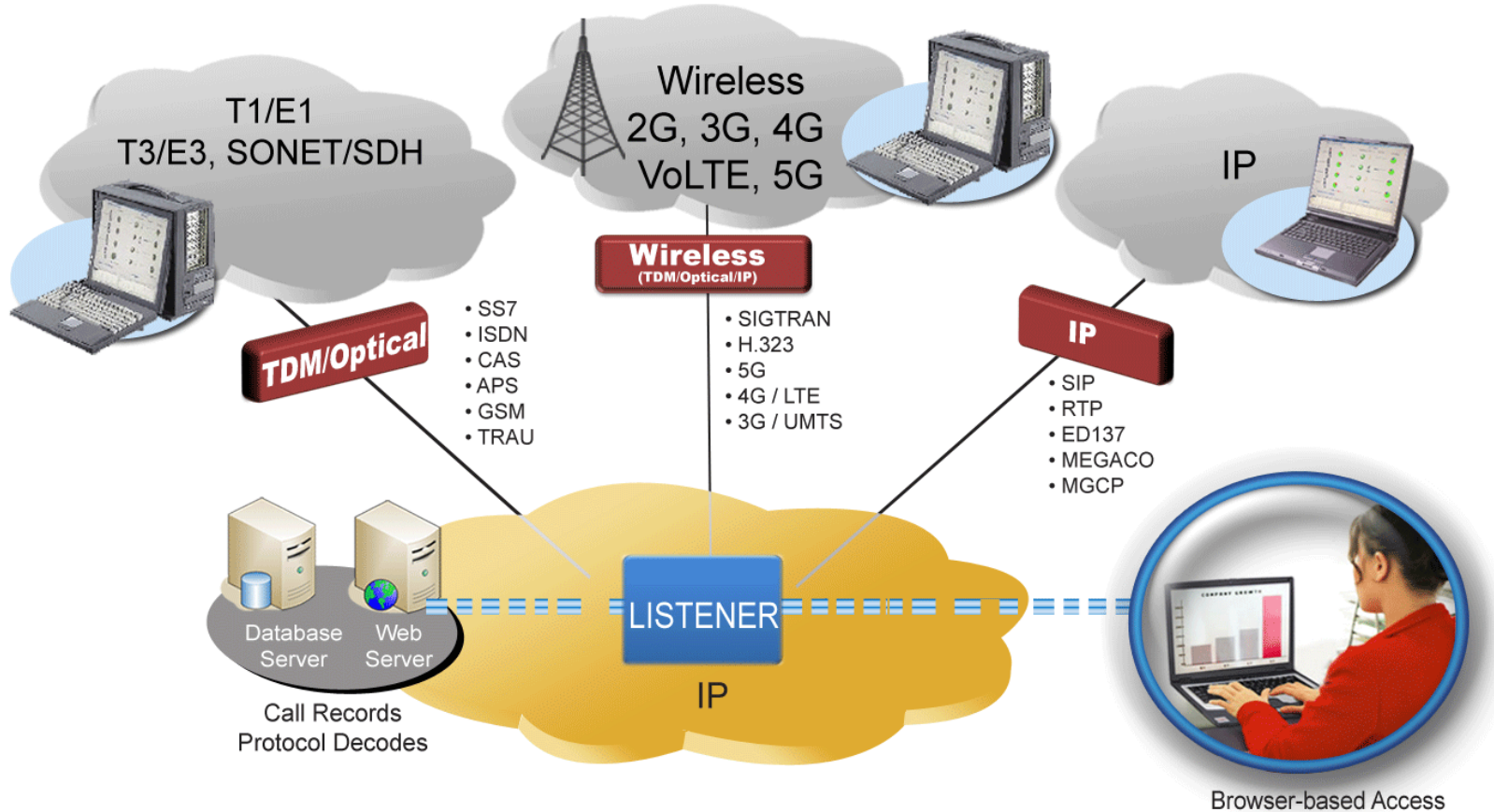


Compact and Cost-effective Test Solution for Channelized Optical Networks



For more details, please visit - <http://www.gl.com/testing-channelized-optical-carriers.html>

NetSurveyorWeb™- Network Surveillance System



Thank you!

Contact us:

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