GL Communications Inc.
Packet / Ethernet Series Products Price List

Revised: Feb 29, 2024

Part Number	Description	Notes
	Ethernet, IP & VoIP Analysis Tools	
PKV100	**PacketScan™ – All IP/VoIP Analyzer (Online and Offline)** Supported Codecs include G.711, G.726, G.729 A/B, GSM, iLBC, Speex, G.722.2, G.711 / G.726 Appendix 2,	VoIP Analysis Software (w/ dongle) Includes decodes for transport (TCP, UDP, IP), signaling (SIP, Megaco, MGCP, Diameter), and media (RTP, RTCP, Fax, Video), ROT; Additional Protocol Decode Support for – SIGTRAN, GSM over IP, UMTS over IP, and LTE available with purchase of licenses.
PKV400	TCP Analytics (Optional with PacketScan™)	Analysis of TCP Open Connections, Closed Connections, Orphan Connections and TCP Server, Client Connections Summary; Requires either PKV100 or PKV120/PKV122
PKV110	IMS Protocol Decodes (Optional with PacketScan™)	IMS (IP Multimedia Subsystem) protocol decodes.
PKV111	Gateway/Router Performance Metrics	Router / Gateway Delay Measurements
PKV112	5G Analyzer (Optional with PacketScan™)	Analysis/Decode of 5G protocols (w/dongle to enable 5G Analysis, requires PKV100)
PKV113	Offline 5G Analyzer (Optional with PKV101 (offline PacketScan™) and PKV170 (NetsurveyorWeb™))	Analysis/Decode pre-captured traffic (w/dongle to enable Offline Version)
PKV120	PacketScan HD™ w/4 x 1GigE	High Density IP Traffic Analyzer w/ 4x1GigE Network Monitoring Appliance; Single Processor, 16 GB RAM, 500 GB SSD – minimum configuration. 32 GB RAM, 3 TB NVME SSD – additional. 32 GB RAM, 5.6 TB NVME SSD - additional. 2nd 4x1GigE SmartNIC - additional. Includes Ethernet Cables and Electrical SFPs. Optical SFPs and FO Cables extra
PKV120p	PacketScan HD™ w/4 x 1GigE - Portable	High Density IP Traffic Analyzer w/ 4x1GigE Network Monitoring Appliance (Portable Version); Single Processor, 16 GB RAM, 500 GB SSD – minimum configuration, 32 GB RAM, 3 TB NVME SSD – additional. 32 GB RAM, 5.6 TB NVME SSD - additional. 2nd 4x1GigE SmartNIC - additional. includes Pelican Case, Ethernet Cables, and Electrical SFPs; Optical SFPs and FO Cables extra.
PKV122	PacketScan HD™ w/2 x 1/10GigE	High Density IP Traffic Analyzer w/ 2x 1/10 GigE Network Monitoring Appliance; Dual Processor Xeon, 32 GB, 500 GB SSD – minimum configuration. 32 GB RAM, 3 TB NVME SSD – additional, recommended. 32 GB RAM, 5.6 TB NVME SSD - additional, 4x 1G/10G also available - additional. Multi-rate Optical SFPs included (MM or SM). Additional SFPs and FO cables extra.
PKV122p	PacketScan HD™ w/2 x 1/10 GigE - Portable	High Density IP Traffic Analyzer w/ 2x 1/10 GigE Network Monitoring Appliance (Portable Version). Single Processor, 32 GB RAM, 500 GB SSD – minimum configuration, 32 GB RAM, 3 TB NVME SSD – additional. 32 GB RAM, 5.6 TB NVME SSD - additional. 4x 1G/10G also available - additional.

		includes Pelican Case and Multi-rate Optical SFPs (MM or SM); Additional SFPs and FO cables extra.
PKV124	PacketScan HD™ w/ 40/100 GigE	High Density IP Traffic Analyzer w/ two 40/100 GigE Network Monitoring Appliance; includes 40/100 GigE Interface cables and Optical SFPs as required.
PKV124p	PacketScan HD™ w/ 40/100 GigE - Portable	High Density IP Traffic Analyzer w/ two 40/100 GigE Network Monitoring Portable Version; includes 40/100 GigE Interface cables and Optical SFPs as required, and Pelican Case
PKV125	PacketScanPX™	Interworking software for PacketScan and PacketExpert 10GX; requires PKV100; requires high end SA005d; also requires PXN100, PXN105; optional PXN101 for 10 GigE operation; SFPs optional.
PKV1251G	PacketScanPX™+PacketExpert™10GX – 1G	Includes: SA005d, PXN100, PXN105, PKV100, PKV125; excluding accessories, NetSurveyorWeb or NetSurveyorWeb Lite
PKV12510G	PacketScanPX™+PacketExpert™10GX – 10G	Includes: SA005d, PXN100, PXN101, PXN105, PKV100, PKV125; excluding accessories, NetSurveyorWeb or NetSurveyorWeb Lite
PKV121	PacketScan FB™	File Based IP Traffic Analyzer Server for near real-time processing of traces.
PKV123	FastRecorder™ and PacketExtractor™	Includes four modules; FastRecorder & PacketExtractor provide extreme wirespeed IP traffic filtering and recording up to 100 Gbps direct to disk and offline filtering, extraction, and analysis; supports 4 x 1 Gbps or 2 or 4 x 1/10 Gbps or 2 x 25/40/100 or 8 x 10 Gbps Ethernet Interfaces; PacketRecorder & PacketReplay provide record & playback of IP traffic up to 10Gbps; requires any "one" of PKV120, PKV120p, PKV122, PKV122p, PKV124, PKV124p
PKV301	LAN Switch w/ Mirror Port	NetGear GS105E - 5 Port 10/100/1000 LAN Switch with Mirror Port
PKV101	Offline PacketScan™ (Optional with PKV170 NetSurveyorWeb™)	VoIP Analysis Software without Real-time Capture Capability (w/dongle to enable Offline Version), ROT; Optional with PKV170 Network Surveillance Base Software for SIP, Megaco, MGCP, H323, RTP Decode / Analysis; Additional Offline Protocol Decode Support for – SIGTRAN, GSMoIP, UMTSoIP, and LTE available with purchase of licenses.
PKV105	SIGTRAN Analyzer (Optional with PacketScan™)	IP decode of SS7 and ISDN signaling (w/dongle to enable SIGTRAN, requires PKV100)
PKV106	Offline SIGTRAN Analyzer (Optional with PKV101 Offline PacketScan™ and PKV170 NetSurveyorWeb™)	Decode/Analyze pre-captured SIGTRAN files. (w/dongle to enable Offline Analyzer), optional with PKV170 Network Surveillance Base Software for SS7 SIGTRAN Decode / Analysis
PKV103	IP Based GSM and UMTS Analyzer (Optional with PacketScan™)	Decodes of GSM & UMTS protocols over IP transport (w/dongle to enable GSM & UMTS Analysis, requires PKV100)
PKV109	Offline IP Based GSM and UMTS Analyzer (Optional with PKV101 Offline PacketScan™ and PKV170 NetSurveyorWeb™)	Decodes of GSM & UMTS protocols over IP transport, (w/dongle to enable Offline Analyzer, optional with PKV170 Network Surveillance Base Software for GSM and UMTS Decode / Analysis;)
PKV104	Optional - FaxDDT38	Decodes Fax Images from PCAP files; Works with PacketScan™ or independently of PacketScan™ (on DOS Command Line); Also works with PacketScan™ Offline, ROC

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PKV107	LTE (Long Term Evolution) Analyzer (Optional with PKV101 Offline PacketScan™ and PKV170 NetSurveyorWeb™)	Analysis/Decode of broadband wireless 4G protocols – (w/ dongle to enable LTE, requires PKV100)
PKV108	Offline LTE (Long Term Evolution) Analyzer (Optional with PKV101 Offline PacketScan™ and PKV170 NetSurveyorWeb™)	Decode / Analyze pre-captured LTE files – w/dongle to enable Offline Analyzer, optional with PKV170 Network Surveillance Base Software for LTE Decode / Analysis;)
PCD103	Optional Codec – AMR – Narrowband	AMR Codec - narrowband,
PCD107	Optional Codec – AMR - Wideband	AMR Codec – wideband,
PCD104	Optional Codec - EVRC	EVRC Codec,
PCD105	Optional Codec – EVRC-B	EVRC–B Codec,
PCD106	Optional Codec – EVRC-C	EVRC-C Codec,
PCD108	Optional Codec – EVS	EVS Codec,
PCD109	Optional Codec – Opus	Opus Codec
	Network Monitoring Software Options	
PKV169	Network Surveillance Lite Software	Probe Level WebServer for all Protocol analyzers (T1 E1, OC-3/STM-1, OC12/ STM-4, T3 E3, and PacketScan™), can be used only with Probe PC itself; requires respective real-time protocol analyzer licenses on the Probe PC based on the protocol selection; CDR storage limited to 9GB.
PKV170	Network Surveillance Base Software and Database (Perpetual License, Unlimited Users/Nodes),	Centralized Database Engine and Client – works with Protocol Analyzers, - includes database, - requires either PKV180/PKV181 - requires protocol analyzer licenses and CDR licenses based on the protocol selection (all on the NetsurveyorWeb™ System) – see PacketScan™ CDR, and protocol options. - protocol analyzer license options available – PKV175, PKV172, PKV173, PKV176, PKV092, PKV174, PKV177, PKV178 (see below for details)
PKV180	Hardware Rack Server Appliance	Dell PowerEdge 1U, R640, 1x Intel Xeon Silver 4210R (2.4 GHz, 10 Cores), 64 GB RAM, 500 GB SSD for OS, 2x1TB SSD, RAID 1, minimum, Redundant power, Windows Server 2019, Dual Port 10 Gig NIC - Optional Dual Processor 2x Intel Xeon (additional cost for hardware), - Additional storage based on traffic requirements (additional cost)
PKV181	Hardware Portable System	DuraPAC, 1x Intel Xeon Silver 4210R (2.4 GHz, 10 Cores), 64 GB RAM, 500 GB SSD for OS, 2x1TB SSD, RAID 1, minimum, Redundant power, Windows Server 2019, Dual Port 10 Gig NIC - Pelican Case - Optional Dual Processor (additional cost for hardware), - Additional storage based on traffic requirements (additional cost)
PKV175	T1 E1 Physical Line Monitoring Option for Network Surveillance	Provides T1 E1 Physical Layer Status with Network Surveillance Solution; requires PKV170 at the central site.
PKV172	ISDN/SIGTRAN Call Detail Record (CDR) Option for Network Surveillance	Provides ISDN/SIGTRAN CDR option for Network Surveillance Base Software (PKV170) - requires OLV100 at the central site.
OLV100	Offline / Remote ISDN Analyzer	Decode / Analyze ISDN option for Network Surveillance Base Software - requires PKV170 and PKV172

PKV173	SS7/SIGTRAN Call Detail Record (CDR) Option for Network Surveillance	Provides SS7 (ISUP and MAP) /SIGTRAN CDR option for Network Surveillance Base Software (PKV170) - requires OLV120 for SS7 and PKV106 for SIGTRAN at the central site.
OLV120	Offline / Remote SS7 Analyzer	Decode / Analyze SS7 option for Network Surveillance Base Software - requires PKV170 and PKV173
PKV106	Offline / Remote SIGTRAN Analyzer	Decode / Analyze SIGTRAN option for Network Surveillance Base Software - requires PKV170 and PKV173
PKV092	CAS Call Detail Records (CDR) Option for Network Surveillance	Provides CAS CDR option for Network Surveillance Base Software (PKV170) – requires OLV092 at the central site.
OLV092	Offline/Remote CAS Analyzer	Decode/Analyze CAS Option for Network Surveillance Base Software – requires PKV170 and PKV092
PKV174	GSM (TDM or IP) & TRAU Call Detail Record (CDR) Option for Network Surveillance	Provides GSM (TDM and IP) & TRAU (TDM) CDR option for Network Surveillance Base Software (PKV170) - requires OLV150 for GSM; and OLV153 for TRAU at the central site.
OLV150	Offline / Remote GSM Analyzer	Decode / Analyze GSM option for Network Surveillance Base Software - requires PKV170 and PKV174
OLV153	Offline / Remote TRAU Analyzer	Decode / Analyze TRAU option for Network Surveillance Base Software - requires PKV170 and PKV174
PKV176	Provides VoIP Protocol (SIP, MGCP, Megaco etc.) CDR option for Network Surveillance Base Software	Requires SIP, Megaco, MGCP, H323, RTP Specific Software at Probe Level; requires PKV101 at the central site.
PKV101	Offline / Remote PacketScan Analyzer	Requires SIP, Megaco, MGCP, H323, RTP Protocol Decodes at Central Site (w/ dongle) - requires PKV170 and PKV176
PKV177	Provides UMTS Protocol (IuCS and IuPS) CDR option for Network Surveillance Base Software	Requires UMTS IuCS, UMTS IuPS Specific Software at Probe Level; requires PKV109 at the central site.
PKV109	Offline IP Based GSM and UMTS Analyzer (Optional with PacketScan™)	Decode / Analyze UMTS option for Network Surveillance Base Software - requires PKV170 and PKV177
PKV178	Provides LTE Protocol CDR option for Network Surveillance Base Software	Requires LTE Specific Software at Probe Level; requires PKV108 at the central site.
PKV108	Offline LTE (Long Term Evolution) Analyzer (Optional with PacketScan™)	Decode / Analyze LTE option for Network Surveillance Base Software - requires PKV170 and PKV178
PKV171	Network Surveillance Agent Toolkit	Documentation, sample code (C++), and technical support for real-time connection to probes; works with GL's Protocol Analyzers
VBA032	**Voice Band Analyzer**	Analyze voice band parameters e.g., speech level, echo, noise, etc. – requires PC and dongle
	Ethernet, IP, VoIP Simulation Tools	
ETH100	**PacketCheck**™	10 / 100 / 1000 Ethernet Interface Testing – BERT testing at MAC, IP, and UDP layers; uses PC NIC (requires dongle)
ETH200	Dual PacketCheck™	Two PacketChecks™

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	Hardware Based Ethernet Tester	
	Basic Hardware Models	
PXE100	PacketExpert™	Quad Port 10/ 100/ 1000 Wirespeed Packet Analyzer and Emulator, two with 10/100/1000 electrical, two electrical or optical 1 G, w/ RFC 2544, Y.1564 testing, MPLS, Q-in-Q, and VLAN testing. Also, MAC, IP, and UDP BERT Testing with Smart Loopback; Electrical and Optical SFPs optional. Also available as portable mTOP probe packaged in a more compact design with support for a single GL board i3/i7 Intel NUC
PXN100	PacketExpert™ 10GX	Quad Port – Two with 10/100/1000 Electrical, or Two Optical 100M/1G; All Port BERT – 4x1G Ports; RFC 2544 – 2x1G Ports; Y.1564 testing; All Port Smart Loopback – 4x1G Ports; USB 3.0; Optionally 2.5G/10G functionality (costs extra); also optional and extra is a trigger board w/ TTL (up to 12); also optionally available are Electrical and/or Optical SFPs. Also available are portable and rack enclosures, mTOP probe/rack; Probe for a single GL board i3/i7 Intel NUC; Rack for up to three/six boards (or, total 12 / 24 ports).
PXN101	2.5G/10G option for PXN100	2.5G/10G option for PXN100: Enables 2.5G or 10G capability for all applications. Number of 2.5G or 10G ports supported varies based on the application. Note: All Port Bert – 2 2.5G/10G Ports, BERT/Loopback – 1 2.5G/10G BERT + 1 2.5G/10G Loopback, All Port Loopback – 2 2.5G/10G Ports, RFC2544 – 2 2.5G/10G Ports
PXX100	PacketExpert™ 100G Platform (1, 10, 25G)	Lunchbox, 16 GB RAM, 500 GB SSD, Dual Ports QSFP28 Cages with Adapters, Requires PXX101, includes 3-year support & warranty. Optional Electrical / Optical SFPs (QSFP28, SFP28, and SFP+) and cables - Approx price varies from - $4 K to $12 K - depending on MM or SM - includes loopback plugs, and adapters - may include multi-rate SFPs - may include the full complement of rates or just a subset * Contact us for a detailed quote and conditions
PXX101	Basic Software (Required for PXX100)	BERT, RFC 2544, Y.1564 and Smart Loopback applications over two ports of 1G, 10G and 25G; Required for PXX100 or PXX107.
PXX103	Additional 2-port card with Basic Software	Up to 4, 2-Port Cards (including the basic 2-Port Card) total per system for 8-Port testing; required for PXX107
PXX105	40, 50, 100 G Optional Software	Optional software to support additional rates of 40, 50, 100 G per system.
PXX107	PacketExpert™ 100 G - Two Card / 4 Port Platform	Lunchbox, 16 GB RAM, 500 GB SSD, Quad Ports QSFP28 Cages with Adapters, Electrical / Optical SFPs extra; Requires PXX101
PXX109	Optional Software for Test Automation using	Testing Automation:

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	Scripting with client-server APIs	- Automation with Python Scripting using Python Client APIs - Automation using REST APIs (using any client that supports REST APIs with JSON)
	Multi-port Hardware Models	
PXE104G	PacketExpert™ (4-Port) - Rackmount	Includes: 4-Port PacketExpert™ w/ one (1) PXE100, and one (1) mTOP, MT001 enclosure. If options, then 1 per unit (except CLI); Electrical and Optical SFPs optional
PXN104G	PacketExpert™ 10GX (4-Port) - Rackmount	Includes: 4-Port PacketExpert™ 10GX w/ one (1) PXN100, and one (1) mTOP MT001 enclosure. If options, then 1 per unit (except CLI); Electrical and Optical SFPs optional
PXE112G	PacketExpert™ (12-Port) - Rackmount	Includes: 12-Port PacketExpert™ w/ three (3) PXE100s, and one (1) mTOP, MT001 enclosure. If options, then 1 per unit (except CLI); Electrical and Optical SFPs optional
PXN112G	PacketExpert™ 10GX (12-Port) - Rackmount	Includes: 12-Port PacketExpert™ 10GX w/ three (3) PXN100s, and one (1) mTOP MT001 units enclosed (If options, then 1 per unit (except CLI)); Electrical and Optical SFPs optional
PXE124G	PacketExpert™ (24-Port) - Rackmount	Includes: 24-Port PacketExpert™ w/ six (6) PXE100s, and one (1) mTOP MT001 enclosure, and one (1) mTOP MT002 enclosure. If options, then 1 per unit (except CLI); Electrical and Optical SFPs optional
PXN124G	PacketExpert™ 10GX (24-Port) - Rackmount	Includes: 24-Port PacketExpert™ 10GX w/ six (6) PXN100s, and one (1) mTOP MT001 enclosure, and one (1) mTOP MT002 enclosure. If options, then 1 per unit (except CLI); Electrical and Optical SFPs optional
	Software Options	
CXE100	CLI Server for PXE100	CLI Server for PXE100 basic and optional software (PXE104, PXE105, PXE106, PXE107, PXE108)
CXN100	CLI Server for PXN100	CLI Server for PXN100 basic and optional software (PXN104, PXN105, PXN106, PXN107, PXN108)
PXE105	Wirespeed Record / Playback 1G	Wirespeed Ethernet frame capture & playback with timestamp & filter – up to 4 ports simultaneously
PXN105	Wirespeed Record / Playback – 1G and 2.5G / 10G	1G and 2.5G/10G - Wirespeed Ethernet frame capture & playback with timestamp & filter – up to 2 ports
PXE106	ExpertSAM – 1G	Single Port test to validate service-level agreements (SLAs) as per ITU-T Y.1564; included with basic hardware.
PXN106	ExpertSAM – 1G and 2.5G / 10G	1G and 2.5G/10G - Single Port test to validate service-level agreements (SLAs) as per ITU-T Y.1564; included with basic hardware.
PXE107	PacketBroker – 1G	Non-intrusive Wirespeed Ethernet Tap w/ advanced filtering for deep packet analysis.
PXN107	PacketBroker – 1G and 2.5G / 10G	1G and 2.5G/10G Non-intrusive Wirespeed Ethernet Tap w/ advanced filtering for deep packet analysis.
PXE108	Multi-Stream UDP/TCP Traffic Generator and Analyzer	ExpertTCP test methodology, based on the RFC 6349 to measure TCP throughput, RTT and optimal window size. Also includes capability to Generate and Analyze up to 12 UDP streams of traffic of various

		packet lengths.; **Requires 2 quantities of PXE100;**
PXN108	Multi-Stream UDP/TCP Traffic Generator and Analyzer 1G and 2.5G / 10G	ExpertTCP test methodology, based on the RFC 6349 to measure TCP throughput, RTT and optimal window size (1G Only). For 1G and 2.5G/10G capability to Generate and Analyze up to 16 UDP streams of traffic of various packet lengths; **Requires 2 quantities of PXN100;**
IPN507	IPNetSim & IPLinkSim Options for 1G, 2.5G and 10G	Imparts packet delay, errors, loss, duplication, reordering, throttling on two electrical 10/100/1000 copper or two optical 1 GigE, or two optical 2.5 GigE or two optical 10 GigE; IPLinkSim treats the entire path as one bidirectional stream; IPNetSim treats up to 16 unique bidirectional streams for 1G; up to 4 unique bidirectional streams for 2.5G and 10G; Available with rack option – see MT001. Requires PXN100 / PXN101 basic hardware & software;
	Cables and Accessories	
IPN1310	SFP Transceiver for 1 Gbps Optical, Duplex LC, Single-Mode, 1310nm	Generic SFP for 1 Gbps Optical, Duplex LC Connector, Single-Mode, 1310nm, 15km typical maximum range
IPN850	SFP Transceiver for 1 Gbps Optical, Duplex LC, Multi-Mode, 850nm	Generic SFP for 1 Gbps Optical, Duplex LC Connector, Multi-Mode, 850nm, 550m typical maximum range
IPN1310p	SFP+ Transceiver for 10 Gbps Optical, Duplex LC, Single-Mode, 1310nm	Generic SFP+ for 10 Gbps Optical, Duplex LC Connector, Single-Mode, 1310nm, 10km typical maximum range
IPN850p	SFP+ Transceiver for 10 Gbps Optical, Duplex LC, Multi-Mode, 850nm	Generic SFP+ for 10 Gbps Optical, Duplex LC Connector, Multi-Mode, 850nm, 300m typical maximum range
IPN801	SFP Transceiver for 1 Gbps, Electrical, RJ45	Generic SFP for 1 Gbps, Electrical w/ RJ45 Connector
IPN802	SFP+ Transceiver for 10 Gbps, Copper, RJ45	10GBase-T SFP+ copper transceiver offers 10 gigabit Ethernet communication and supports links up to 30m using Cat 6a/7 with an RJ45 connector.
IPN803	SFP Transceiver for 100 Base FX (Fast Ethernet)	Generic SFP for 100 Mbps Optical, 1301 nm SM, Duplex LC Connector, only available for PXN100 for Ports 1 and 2,
IPN804	SFP Transceiver for 2.5 Gbps, Electrical, RJ45	SFP for 2.5 Gbps, Electrical w/ RJ45 Connector
IPN100m	QSFP28 Transceiver Multi-Mode 100G	QSFP28 Transceiver, Multi-Mode, 850nm, 100m, for 100G, FTLC9551REPM or equivalent
IPN100s	QSFP28 Transceiver Single-Mode 100G	QSFP28 Transceiver, Single-Mode, for 100G, FTLC1151RDPL or equivalent
IPN040m	QSFP+ Transceiver Multi-Mode 40G	QSFP+ Transceiver for 40G, Multi-Mode, 850nm, 100m, FTL4C2QE1C or equivalent
IPN040s	QSFP+ Transceiver Single-Mode 40G	QSFP+ Transceiver for 40G, Single-Mode, FTL4C1QM1C or equivalent
SA019a	1 Gbps / 10 Gbps Fiber Optic Cable, Single-Mode, Duplex LC to Duplex LC	2m FO Jumper for 1 Gbps or 10 Gbps, 9/125 Single-Mode, Ø2mm.
SA019b	1 Gbps / 10 Gbps Fiber Optic Cable, Single-Mode,	2m FO Jumper for 1 Gbps or 10 Gbps, 9/125 Single-Mode, Ø2mm.

	Duplex LC to Duplex SC	
SA019c	1 Gbps / 10 Gbps Fiber Optic Cable, Multi-Mode, Duplex LC to Duplex LC	2m FO Jumper for 1 Gbps or 10 Gbps, 50/125 Multi-Mode, OM3, Ø2mm
SA019d	1 Gbps / 10 Gbps Fiber Optic Cable, Multi-Mode, Duplex LC to Duplex SC	2m FO Jumper for 1 Gbps or 10 Gbps, 50/125 Multi-Mode, OM3, Ø2mm
SA019e	40G / 100G Fiber Optic Cable, Multi-Mode	20 feet MPO (Female) Fiber Cable, 12 Fibers, QSFP, Multimode, for connection between 2 QSFP+ or 2 QSFP28 transceivers
SA019f	40G / 100G Fiber Optic Cable, Single-Mode	20 feet MPO (Female) Fiber Cable, 12 Fibers, QSFP, Single mode, for connection between 2 QSFP+ or 2 QSFP28 transceivers
SA019st	1 Gbps / 10 Gbps Fiber Optic Non-Intrusive T-tap, Duplex LC, Single-Mode	1 Gbps / 10 Gbps Fiber Optic T-tap for Non-Intrusive Monitoring, Duplex LC Connectors, 9/125 Single-Mode, 70/30 split – Should also order SA019sc or SA019sk2
SA019sc	Fiber Optic Analyzer Cable, (Special 'Y' Cable), Single-Mode, Duplex LC to Dual Duplex LC, 3m	3m FO Jumper, 9/125 SM, Duplex LC-Dual Duplex LC, Ø3mm, Special Analyzer Cable for use with SA019st
SA019mt	1 Gbps / 10 Gbps Fiber Optic Non-Intrusive T-tap, Duplex LC, Multi-Mode	1 Gbps / 10 Gbps Fiber Optic T-tap for Non-Intrusive Monitoring, Duplex LC Connectors, 50/125 Multi-Mode, 70/30 split – Should also order SA019mc or SA019mk2
SA019mc	Fiber Optic Analyzer Cable (Special 'Y' Cable), Multi-Mode, Duplex LC to Dual Duplex LC, 3m	3m FO Jumper, 50/125 MM, Duplex LC-Dual Duplex LC, Ø3mm, Special Analyzer Cable for use with SA019mt
SA019rt	Electrical Regeneration Tap for 10/100/1000Base-T (non-aggregation)	Wirespeed Non-aggregation replication and monitoring, passive access without packet tampering, traffic from all OSI layers available for analysis, no IP address, fail-safe bypass, redundant power option extra
SA019rta	Electrical Regeneration Tap for 10/100/1000Base-T (aggregation)	Wirespeed aggregation replication and monitoring, passive access without packet tampering, traffic from all OSI layers available for analysis, no IP address, fail-safe bypass, redundant power option extra
SA019sk2	1 Gbps Fiber Optic Single-Mode T-tap Kit with Required Cables and SFP Transceivers	Kit Includes: (1) SA019st, (1) SA019sc, (2) IPN1310, (2) SA019a, (2) SA019b
SA019mk2	1 Gbps Fiber Optic Multi-Mode T-tap Kit with Required Cables and SFP Transceivers	Kit Includes: (1) SA019mt, (1) SA019mc, (2) IPN850, (2) SA019c, (2) SA019d
SA019skp2	10 Gbps Fiber Optic Single-Mode T-tap Kit with Required Cables and SFP+ Transceivers	Kit Includes: (1) SA019st, (1) SA019sc, (2) IPN1310p, (2) SA019a, (2) SA019b
SA019mkp2	10 Gbps Fiber Optic Multi-Mode T-tap Kit with Required Cables and SFP+ Transceivers	Kit Includes: (1) SA019mt, (1) SA019mc, (2) IPN850p, (2) SA019c, (2) SA019d
PXN00	Optical Multiport Tap/Repeater	1x5 or 2x3 Optical Signal Tap/Repeater; repeats 10/100/1000, 2.5 GigE, OC3/STM1, OC12/STM4, OC48/STM16 optical signals; multi-rate SFPs and FO cables extra/optional for multimode and/or single mode; multiple units into MT002 rack enclosure optional
PXN01	Multirate multimode SFPs and FO Cables	Six (6) - 10/100/1000 and 2.5 GigE multimode SFPs and multimode FO cables
PXN02	Multirate single mode SFPs and FO Cables	Six (6) - 10/100/1000 and 2.5 GigE single-mode SFPs and multimode FO cables

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PKS101	SIP Core (additional)	2nd and Additional Instances (w/ dongle)
	RTP Traffic Options **_(Requires MAPS Signaling Software)_**	
PKS102	RTP Soft Core (additional)	2nd and Additional Instances (w/dongle), ROT
PKS103	RTP IuUP Softcore	RTP Voice Traffic Generation over IuUP; requires PKS102 and PCD103 – Used in UMTS Network at IuCS Interface
PKS200	RTP Pass Through Fax Emulation	RTP T.30 Pass-Through Fax Emulation, requires one of the licenses below, (w/dongle):
PKS202	Fax Port Licences	2 Fax Ports,
PKS203	Fax Port Licences	8 Fax Ports,
PKS204	Fax Port Licences	30 Fax Ports,
PKS205	Fax Port Licences	60 Fax Ports,
PKS206	Fax Port Licences	120 Fax Ports,
PKS211	T.38 Fax Simulation	T.38 Fax Simulation over UDPTL (up to 120 channels)
PKS107	RTP EUROCAE ED-137B	RTP Traffic Generation as per ED-137B – Interoperability Standards for VoIP ATM (Air Traffic Management) Components - PKS102 required.
PKS108	RTP Voice Quality Measurements	RTP Based Voice Quality (MOS and R-Factor) measurement for the received stream – PKS102 required, ROT.
PKS106	RTP Video Traffic Generation	RTP Video Traffic Generation – up to 500 simultaneous video streams using H.264 codecs. Requires PKS102 RTP Softcore
PCDxxx	See descriptions of Codecs under PacketScan	Optional Codec licenses
	RTP Toolbox	
PKB100	**RTP ToolBox™**	VoIP / RTP Simulation and Analysis with SIP signaling (w/dongle), ROT.
PCDxxx	See descriptions of Codecs under PacketScan	See descriptions of Codecs under PacketScan
PKB105	G.168 Echo Canceller Test Compliance Suite	Manual G.168 Echo Canceller Test Compliance Procedures and Codec Files (w/dongle to enable GLCView); includes PKB070.
PKB110	Client / Server for RTP Toolbox w/ C++ Client w/ TCL Client	Remote Control of RTP Traffic over IP Networks, uses TCP/IP (w/dongle), requires PKB100.
PKB067	Automated Echo Canceller Testing – All IP Version	Fully Automated EC testing per G.168 from the VoIP side – includes PKB110 – call for details and limitations (w/dongle version); includes PKB070 and AEC001
PKB080	Automated Echo Canceller Testing – TDM-VoIP	Fully Automated LEC Compliance Testing per G.168 for combined TDM-VoIP Interfaces, requires dongle (includes PKB100, PKB110, xx600, xx610, xx630 and requires additional PKV100, T1 E1 Card with xx062 and xx105); includes PKB070 and AEC001

PKB081	Automated **Acoustic** Echo Canceller Compliance Testing (Partial Tests)	Fully Automated AEC Compliance Testing per G.167 and P.340 for combined TDM –TDM and TDM-VoIP Interfaces, includes xx600, xx610, xx630, xx631; may require PKB100, PKB110, and Level Adjustment Unit; xx062 and xx020 recommended; includes PKB070.
AEC001	AutoECTest Viewer	Offline Viewing of AutoECTest Files / Results; included with PKB067 and PKB080
PKB070	Audio Processing Utility	Adds noise, creates line or acoustic echo, analyzes speech level and other useful functions; included with EMU037, PKB105, PKB081, PKB067, PKB080, and VBA032
	MAPS (Message Automation and Protocol Simulation)	***Protocol Simulation & Conformance Tools for IP*** (all Products in this Section are Dongle Licensed)
PKS109	MAPS High Density RTP Generator	High Density RTP Call Generator w/ 4x1 GigE Network Appliance (SA005n), Emulates up to 32,000 endpoints; Requires companion MAPS PKSXXX signaling product; Includes PKS102; For other traffic options e.g., fax, codecs, video, refer "RTP Traffic Options" section; SFPs optional; Also 8x1GigE variant available at an additional $11 K – for emulation up to 64,000 endpoints.
PKS111	MAPS Remote Controller	MAPS GUI client to control single or multiple MAPS instances.
PKS112	Message Session Relay Protocol for MAPS-SIP	MSRP protocol emulation for supporting session based instant messaging capability over SIP sessions. Requires PKS120
PKS113	MAPS Multiuser License for 4 Users	MAPS Server with multi-user capability (up to 4 users)
PKS114	MAPS Multiuser License for 10 Users	MAPS Server with multi-user capability (up to 10 users)
PKS170	CLI Support for MAPS	CLI Support for MAPS Products, includes TCL, Java, Python, and C#
PKS116	MAPS Administrator for ATM (Air Traffic Management) Test Beds	Includes pre-developed scripts to remote control of different components (PacketAnalyzer, AudioAnalyzer, Packetizer, Event Data Logger, Discrete Signal Logger and others) of the TM-ATM solution.
PKS117	MAPS for ED137 Recorder	MAPS for ED137 Recorder Emulation. Emulates Recorder interface as per ED-137B volume 4 defined by EUROCAE Working Group 67. Permits emulation of Recorder Interface at CWP/VCS, GRS, and Recorder elements.
PKS118	MAPS SIP for ED137 Radio	MAPS SIP for ED137 Radio Emulation. Emulates Air-to-Ground calls in Air Traffic Management defined by EUROCAE Working Group 67; Not included, but required platform - Win 7/64, i7,8 GB, Gigabit NIC, with Administrative Level Privilege to Install and Run Application, USB Port Dongle; Includes PKS102 and PKS107
PKS119	MAPS SIP for ED137 Telephone	MAPS SIP for ED137 Telephone Emulation. Emulates Ground-to-Ground calls in Air Traffic Management defined by EUROCAE Working Group 67; Not included, but required platform - Win 7/64, i7,8 GB, Gigabit NIC, with Administrative Level Privilege to Install and Run Application, USB Port Dongle; Includes PKS102.
PK1191	Addendum 1: Legacy Telephone Interworking ATS-R2, ATS-No.5 and ATS-QSIG	Simulates SIP User Agents to interwork with Legacy Telephone ATS-R2, ATS-No5 and ATS-QSIG as per ED-137 Volume 2 Telephone

		Addendum 1; Requires PKS119.
PK1192	Addendum 2: FAA Legacy Telephone Interworking	Simulates SIP User Agents to interwork with FAA Legacy Telephone as per ED-137 Volume 2 Telephone Addendum 2; Requires PKS119.
PK1193	Addendum 3: Instantaneous Access Call	Simulates Instantaneous Access calls as per ED-137 Volume 2 Telephone Addendum 3; Requires PKS119.
PK1194	Addendum 4: Override Call	Simulates Override calls as per ED-137 Volume 2 Telephone Addendum 4; Requires PKS119.
PK1195	Addendum 5: Voice Call	Simulates Voice calls as per ED-137 Volume 2 Telephone Addendum 5; Requires PKS119.
PK1196	Addendum 6: Extended Call Forward	Simulates Extended Call Forward features as per ED-137 Volume 2 Telephone Addendum 6; Requires PKS119.
PK1197	Addendum 7: Hotline Access Call	Simulates Hotline Access calls as per ED-137 Volume 2 Telephone Addendum 7; Requires PKS119.
PK1198	Addendum 8: Radio Intercom Call	Simulates Radio Intercom calls as per ED-137 Volume 2 Telephone Addendum 8; Requires PKS119.
PKS120	MAPS - SIP	SIP Protocol Emulation: For traffic options refer "RTP Traffic Options" section.
PKS126	MAPS SIP - I	SIP – I Protocol Emulation, Similar to MAPS SIP but can carry ISUP content as MIME body; For traffic options refer "RTP Traffic Options" section.
PKS127	MAPS SIP - IMS	Additional SIP Features for IMS Support
PKS121	SIP Conformance Test Suite	SIP Conformance Test Scripts, includes PKS120.
PKS122	MAPS - Megaco	Megaco Protocol Emulation, for traffic options refer "RTP Traffic Options" section.
PKS123	Megaco Conformance Test Suite	Megaco Conformance Test Scripts, requires PKS122.
PKS124	MAPS – MGCP Protocol Emulation with Conformance Test Suite	MGCP Protocol Emulation (Bulk Calling) with MGCP Conformance Test Scripts, for traffic options refer "RTP Traffic Options" section.
PKS129	SCTP Conformance Test Suite	Protocol Conformance test suites for SCTP protocol
PKS130	MAPS – SIGTRAN SS7 over IP	SIGTRAN Protocol Emulation – SS7(ISUP) over M3UA, M2UA and M2PA IP transport layers optional xx610 and xx620 for TDM traffic generation (refer T1 E1 price list); TDM Fax emulation supported (Optional - Refer XXXFT0) (refer T1 E1 price list)
PKS135	MAPS – SIGTRAN ISDN over IP	SIGTRAN Protocol Emulation – ISDN over IUA IP transport layer; optional xx610 and xx620 for TDM traffic generation (refer T1 E1 price list); TDM Fax emulation supported (Optional - Refer XXXFT0) (refer T1 E1 price list)
PKS136	MAPS – SIGTRAN SS7 INAP	SIGTRAN Protocol Emulation – SS7 INAP (CS1 and CS2) over M3UA, and M2PA IP transport layers
PKS152	MAPS – SIGTRAN ANSI MAP	SIGTRAN Protocol Emulation - IS-41 over IP on B, C, E, F, H, Q, and N

		interfaces.
PKS300	MAPS Multi-Interface MGC	Media Gateway Controller Emulation with SIGTRAN, MGCP, and Megaco interfaces; includes MAPS licenses for ISUP SIGTRAN (PKS130) for SG and MGCP (PKS124) or Megaco (PKS122) licenses for MG simulation; Does not include RTP Licenses*.

*GL recommends purchasing additional MG simulation using PKS124 or PKS122 with appropriate RTP licenses for traffic simulation. For traffic options refer "RTP Traffic Options" section |
PKS301	MAPS - LTE Multi-Interface Emulation	MME, SGW & PGW emulation to emulate complete LTE LAB. Requires additional protocol licenses.
PKS302	MAPS - UMTS Multi-Interface Emulation	HNGBW, MSC, SGSN, GGSN, MGC Node emulation to emulate complete UMTS LAB. Requires additional protocol licenses.
PKS303	MAPS - GSM Multi-Interface Emulation	BSC, MSC, SGSN, MGC Node emulation to emulate complete GSM/GPRS LAB. Requires additional protocol licenses.
PKS305	MAPS - 5G Multi-Interface Emulation	5G Multi-Interface Emulation support for AMF, UDM, SMF, AUSF and SMSF Nodes to emulate complete 5G Core network (5G Lab). Requires additional interface licenses.
PKS132	MAPS - MAP	Mobile Application Part (MAP) Protocol Emulation over M3UA and M2PA IP transport layers; interfaces supported -- B, C, D, E, F, G, H, Gc, Gr, Gf and Gd
PKS147	MAPS Lb Interface Emulator	Emulates BSC & SMLC over Lb Interface
PKS148	MAPS SLs Interface Emulator	Emulates MME & E-SMLC over SLs Interface
PKS153	MAPS IuPC Interface Emulator	Emulates SRNC & SMLC over IuPC Interface
PKS151	MAPS – CAP Emulation over IP	Customized Application for Mobile Network Enhanced Logic – CAMEL Application Part (CAP) over M3UA, and M2PA IP transport layers
PKS155	MAPS – BICC Emulator	BICC Protocol Emulation, optional PKS102 for traffic emulation over M3UA and M2PA IP transport layer; For traffic options refer "RTP Traffic Options" section.
PKS134	MAPS – Abis Emulator over IP	BSC to BTS Abis Emulation over TCP transport layer; For traffic options refer "RTP Traffic Options" section.
PKS137	MAPS – GSM A Emulation over IP	BSC to MSC A interface emulation over M3UA IP transport layer; For traffic options refer "RTP Traffic Options" section.
PKS131	MAPS – Gb Emulator over IP for BSC & SGSN	Gb interface emulation between BSC & SGSN; For traffic options refer "GTP Traffic Options" section.
PKS139	MAPS – Diameter Emulator Base License	Emulates Diameter protocol (Supports S6a (HSS-MME), S13 (MME-EIR), S13 (SGSN-MEIR) etc. interfaces over TCP and SCTP transport layer)
PK1390	MAPS Diameter CxDx Interface Emulator	Emulates Home Subscriber Server (HSS), I/S Call Session Control function (CSCF) to download user profiles and upload user-to-S-CSCF associations. All necessary subscriber profile information is loaded from

		the HSS; requires PKS139 base license.
PK1391	MAPS Diameter Gx Interface Emulator	Emulates Policy control Enforcement Function (PCEF) and Policy and Charging Rules Function (PCRF) to support provisioning and removal of Policy and Charging Rules and transmission of traffic plane events; requires PKS139 base license.
PK1392	MAPS Diameter Gy Interface Emulator	Emulates PDN GW (ChargingTrigger Function) and Online charging System (OCS) to support real-time content-based charging of data services; requires PKS139 base license.
PK1393	MAPS Diameter Rf Interface Emulator	Emulates IMS Charging Trigger Function (CTF) and Charging Data function (CDF) to support Session based and event based offline charging; requires PKS139 base license.
PK1394	MAPS Diameter Ro Interface Emulator	Emulates IMS Charging Trigger Function (CTF) and Online Charging System (OCS) to support Session based and event based online charging; requires PKS139 base license.
PK!395	MAPS Diameter Rx Interface Emulator	Emulates Policy and Charging Rules Function (PCRF) and Application Function (AF) to support Flow based charging control; requires PKS139 base license.
PK!396	MAPS Diameter Sh Interface Emulator	Emulates Home Subscriber Server (HSS) and Application Server (AS) to query or update user's data stored in HSS (XML profile); requires PKS139 base license.
PK1397	MAPS Diameter SLg Interface Emulator	Emulates GMLC and MME supporting subscriber location service; requires PKS139 base license.
PK1398	MAPS Diameter SLh Interface Emulator	Emulates GMLC and HSS supporting LCS Routing service; requires PKS139 base license.
PK1399	MAPS Diameter Zh Interface Emulator	Emulates Bootstrapping server Function (BSF) and Home Subscriber Server (HSS) to Fetch authentication vectors and User security settings from HSS; requires PKS139 base license.
PKS140	MAPS LTE – S1 Interface Emulation	MAPS LTE – S1 Interface Emulation, between eNodeB and MME; For traffic options refer "GTP Traffic Options" section.
PKS142	MAPS LTE – eGTP Emulation (S5 / S8 & S11 Interfaces)	MAPS LTE – eGTP Emulation (S5 / S8 and S11 Interfaces), between SGW and PGW or between MME and SGW; For traffic options refer "GTP Traffic Options" section.
PKS141	MAPS LTE – X2AP Emulation	X2AP Interface Emulation between eNodeBs
PKS146	MAPS SGs Interface Emulation	SGs Interface Emulation support for CS fallback features
PKS143	MMS Server	MMS Server – 10 simultaneous messages / min
PKS144	Central Control Center for GSM	Central Control Center for GSM Networks
PKS145	MSC / BSC Media Gateway	Media Gateway (within BSC or MSC) for conversion between E1 and IP
PKS160	MAPS UMTS – IuCs and Iuh Interface Emulation	MAPS UMTS – IuCs and Iuh Interface Emulation, between RNC and MSC or between HNB-GW and HNB; For CS (Circuit Switch) traffic options refer "RTP Traffic Options" section; For PS (Packet Switch) traffic options refer "GTP Traffic Options" section.

GL Communications Inc.
Packet / Ethernet Series Products Price List
Revised: Feb 29, 2024

PKS164	MAPS UMTS – IuPs Interface Emulation	MAPS UMTS – IuPs Interface Emulation, between RNC and SGSN; For traffic options refer "GTP Traffic Options" section.
PKS166	MAPS UMTS – Gn Interface Emulation	MAPS UMTS – Gn Interface Emulation; For traffic options refer "GTP Traffic Options" section.
PKS154	LTE S1 and X2 Conformance Test Suite	LTE S1 and X2 Conformance Test Scripts, requires PKS140 for S1 Conformance testing or PKS141 for X2 Conformance testing; as per 3GPP TS 36.413 (LTE S1) and as per TS 36.423 (LTE X2) specifications.
BTS001_S	Real BTS GSM Cell for 2G and 2.5 G	Real BTS hardware with Abis over IP; up to 8 Tx/Rx channels (approx.)
BTS001_B	Real Node B for 3G Systems	Real Node B hardware for 3G systems (approx.)
BTS001_e	Real eNodeB for 4G (LTE) Systems	Real eNodeB hardware for 4G (LTE) systems (approx.)
BTS001_gm	Real gNodeB for 5G Systems – Mini	Real gNodeB-mini hardware for 5G systems (approx.); Supports up to 500 UE, Uplink of 75 Mbps and Downlink of 200 Mbps
BTS001_gc	Real gNodeB for 5G Systems – Classic	Real gNodeB-classic hardware for 5G systems (approx.); Supports up to 1000 UE, Uplink of 150 Mbps and Downlink of 600 Mbps
UE002	5G Smartphone	5G Smartphone for BTS001_gc and BTS001_gm
UE003	SIM for 5G Smartphone	SIM for 5G Smartphone UE002
	GTP Traffic Options	
ETH101	MobileTrafficCore - GTP	Generates and Verifies User Mobile Data Traffic over GTPv1 and GTPv2 (Used with UMTS and LTE) (for simulated HTTP traffic generation over GTP)
ETH102	MobileTrafficCore - Gateway	Emulate SGSN / SGW (GTP to GTP) and GGSN / PDN-GW (GTP to IP) (acts as a real gateway)
ETH103	MobileTrafficCore for Gb Interface	Generates and verifies hundreds to thousands of sessions of http, ftp, etc. user mobile data traffic over GPRS Gb interface (for simulated HTTP traffic generation over IP)
	Data Traffic Generators	
PKS172	PacketLoad™ 4 x 1Gig, Data Traffic Generator	Data Traffic Generator - 1U Rack Appliance, 4 x 1Gbps, Wirespeed TCP/HTTP Stateful Traffic Generator with 445 K Transactions / Sec, 20M+ Concurrent TCP Flows, HTTP Payload Control using Custom Payload Files, PCAP Replay. Emulates Mobile Infrastructure Test Traffic with GTP-U Encapsulation while 10K+ Subscribers Add/Delete per Second along with MAPS System.
PKS174	PacketLoad™ 4 x 10Gig, Data Traffic Generator	Data Traffic Generator - 2U Rack Appliance, 4 x 10Gbps, Wirespeed TCP/HTTP Stateful Traffic Generator with 2M+ Transactions/Sec, up to 100M Concurrent TCP Flows, HTTP Payload Control using Custom Payload Files, PCAP Replay.

		Emulates Mobile Infrastructure Test Traffic with GTP-U Encapsulation while 10K+ Subscribers Add/Delete per Second along with MAPS System.
	5G	
PKS500	5G N1/N2 Interface Emulation	5G N1/N2 Interface Emulation, between gNB & AMF; for traffic options, refer to "GTP Traffic Options"
PKS501	5G N4 Interface Emulation	Emulates SMF & UPF on N4 interface.
PKS502	5G Service based Emulation	Prerequisite base license for all service based (Open API) interface emulations.
PKS503	5G N8 Interface Emulation	Emulates AMF & UDM on N8 interface. Requires PKS502
PKS504	5G N10 Interface Emulation	Emulates SMF & UDM on N10 interface. Requires PKS502
PKS505	5G N11 Interface Emulation	Emulates AMF & SMF on N11 interface. Requires PKS502
PKS506	5G N12 Interface Emulation	Emulates AMF & AUSF on N12 interface. Requires PKS502
PKS507	5G N13 Interface Emulation	Emulates AUSF & UDM on N13 interface. Requires PKS502
PKS508	5G N20 Interface Emulation	Emulates AMF & SMSF on N20 interface. Requires PKS502
PKS509	5G N21 Interface Emulation	Emulates SMSF & UDM on N21 interface. Requires PKS502
PKS510	5G N22 Interface Emulation	Emulates AMF & NSSF on N22 interface. Requires PKS502
PKS511	5G N29 and N51 Emulation	Emulates Network Exposure Function (NEF), Session Management Function (SMF) & Access and Mobility Function (AMF) on N29 & N51 interfaces
	Miscellaneous Tools	
FXT001 FXT002	GL Insight - Single Fax Analysis – TDM GL Insight - Single Fax Analysis – IP	Offline fax protocol and image analysis of captured PCM files from TDM and IP networks w/dongle – requires T1 E1 cards or PacketScan™
MDT001 MDT002	GL Insight - Single Modem Analysis - TDM GL Insight - Single Modem Analysis - IP	Offline modem protocol and data analysis of captured PCM files from TDM and IP networks w/dongle requires T1 E1 cards or PacketScan™
VQT035	Voice Recorder (FXO RJ11 Hardware Tap / 2-Wire Capture Software)	Used for capturing Audio files from RJ11 connections for GL Insight Fax / Modem Analysis, requires Dual UTA or USB T1E1 unit; includes FXO RJ11 Hardware Tap
MT001	mTOP 1U Rack Mount Enclosure w/SBC	1U 19" Rack Mount Enclosure w/Rails, Multiple Interface TDM/Optical/Packet w/Single Board Computer (SBC) (Specs: 240 GB SSD, 8GB RAM, i3 Equivalent, Win 10/64), USB 3.0 Hub, ATX Power Supply, Can house any combination of three (3) USB based units - PacketExperts, tProbes, Dual UTAs, and LightSpeeds; Optional VGA to mini DP interface cable

MT001E	mTOP with i7	Same as MT001 but with Intel Core i7.
MT002	mTOP 1U Rack Mount Enclosure w/o SBC	w/o SBC, but for use with MT001 for Daisy Chain or other Rack PCs
MT005	mTOP Probe	Portable stand-alone unit, includes i3 Intel NUC (w 8GB RAM, 256 GB HDD, Win 10/64); packaged in a more compact design with support for a single GL board; Can house any one of the USB based units - PacketExperts, tProbes, Dual UTAs, T3/E3 units and LightSpeeds; Optional VGA to mini DP interface cable. Dimensions: 264mm long, 76.6mm high, and 212.6mm wide
MT005E	mTOP Probe with i7	Same as MT005 but with Intel Core i7;
	Others	
PKA001	600 ohm to Sound Card Transformer/Adapter	Adapts Sound Card Interface to 600 Ohms
PKA006	VoIP Hub for testing and configuration purposes	Useful for connecting multiple PacketScan™
SA051	2U 19" Rackmount Kit for PXE104	One Hardware Kit for Rack mounting One PXE104. 19" Rackmount Kit occupying 2U.
PKX002	Packet Series Configuration, Setup, Testing (per day)	Exclusive of travel
PKX003	Software, Hardware Warranty and Support	Warranty and Comprehensive Support for Hardware and Software = 10% of PO – All Packet Ethernet Products
PKX104	Interrupted One Year Software Upgrade Extensions	Warranty and Comprehensive Support for Hardware and Software = 12% of PO – All Packet Ethernet Products
PKX100	VoIP Training (per day, exclusive of travel)	VoIP Training (PacketScan™, RTP Toolbox™, PacketCheck™, IPNetSim™, MAPS™ an
PKX101	Professional Services (per day, exclusive of travel)	Development or Testing Services (per day)