

# *GL Communications Inc.*

## T3 / E3 / OC3/12 / STM1/4 Analysis Products Price List

Revised: Oct 26, 2021

Part Number	Description	Notes
	<b><i>OC3/12 STM1/4 Analysis and Emulation Related Hardware &amp; Software</i></b>	
LTS100 LTS105	Lightspeed1000™ - Dual OC3/12 STM1/4 PCIe Card Lightspeed1000™ - Portable Dual OC3/12 STM1/4 USB Unit	PCIe Card or Portable USB Unit with Quad Interfaces: 2 - OC3 / OC12 / STM1 / STM4, 2 - GigE, and a single USB 2.0; <b>requires</b> LTS200 or LTS201, or LTS300 or LTS301, or LTS501 or LTS502;
	<b><i>UnChannelized Analysis and Emulation Software Applications</i></b>	
LTS200 LTS201	OC3/STM1 ATM Monitor, BERT, Tx/Rx Test OC3/STM1 PoS Monitor, BERT, Tx/Rx Test	Basic ATM Monitoring, Test, and BERT Basic PoS Monitoring, Test, and BERT
LTS202	Record Playback for OC3/STM1 ATM	Wirespeed capture and playback to / from hard disk w/ time-stamping; STS-3C/VC-4
LTS203	Record Playback for OC3/STM1 PoS	Wirespeed capture and playback to / from hard disk w/ time-stamping; STS-3C/VC-4
LTS204 LTS205 LTS215	Protocol Analysis for OC3/STM1 ATM Protocol Analysis for OC3/STM1 PoS Packet Data Analysis (PDA) for PoS	AAL2, AAL5 Protocol Analysis PoS Protocol Analysis Packet Data Analysis (PDA) for PoS
LTS206 LTS216	Protocol Analysis for OC3/STM1 UMTS Packet Data Analysis (PDA) for UMTS	UMTS Protocol Analysis; requires LTS200 luCs Call Analysis for UMTS, also called PDA
LTS214	OC3/STM1 SSCOP Server	SSCOP Server Emulates ATM Layer 2 and Adaptation Layer (AAL2/5) Services – used with MAPS -luCs
LTS217	OC3/STM1 AAL2 Traffic Core	Traffic Simulation over AAL2 using various codecs, ability to Tx Rx voice files, tones, digits, etc, can be used with LTS220, requires additional codec licenses
LTS220	OC3/STM1 MAPS UMTS luCS over ATM	luCS Interface Emulation over ATM, simulates RNC and MSC, requires LTS214
LTS207 LTS208	Delay Emulaton for OC3/STM1 PoS payloads Delay Emulation for OC3/STM1 ATM payloads	Delay Emulation for PoS from 1 ms to 500 ms Delay Emulation for ATM from 1 ms to 500 ms
LTS209	SONET / Ethernet Converter	Converts ATM within SONET to ATM within Ethernet and vice versa; includes LTS115, LTS200, LTS202, SA005lts 1 RU mTOP enclosure for LightSpeed1000 with Windows 10/64 & TPM 2.0 chip, Intel NUC, 8GB RAM, USB 3.0 Hub, 240 GB SSD, custom software - TBD
LTS300	OC3/STM1/OC12/STM4 ATM Monitor, BERT, Tx/Rx Test	Basic ATM Monitoring, Test, and BERT, includes OC3/STM1
LTS301	OC3/STM1/OC12/STM4 PoS Monitor, BERT, Tx/Rx Test	Basic PoS Monitoring, Test, and BERT, includes OC3/STM1
LTS302	Record Playback for OC3/STM1/OC12/STM4 ATM	Wirespeed capture and playback to / from hard disk w/ time-stamping; STS-12C/VC-4-4C and STS-3C/VC-4
LTS303	Record Playback for OC3/STM1/OC12/STM4 PoS	Wirespeed capture and playback to / from hard disk w/ time-stamping;

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LTS304 LTS305 LTS315	Protocol Analysis for OC3/STM1/OC12/STM4 ATM Protocol Analysis for OC3/STM1/OC12/STM4 PoS Packet Data Analysis (PDA) for PoS	STS-12C/VC-4-4C and STS-3C/VC-4  AAL2, AAL5 Protocol Analysis PoS Protocol Analysis Packet Data Analysis (PDA) for PoS
LTS306 LTS316	Protocol Analysis for OC3/STM1/OC12/STM4 UMTS Packet Data Analysis (PDA) for UMTS	UMTS Protocol Analysis; requires LTS300 luCs Call Analysis for UMTS, also called PDA
LTS314	OC3/STM1/OC12/STM4 SSCOP Server	SSCOP Server Emulates ATM Layer 2 and Adaptation Layer (AAL2/5) Services – used with MAPS -luCs
LTS317	OC3/STM1/OC12/STM4 AAL2 Traffic Core	Traffic Simulation over AAL2 using various codecs, ability to Tx Rx voice files, tones, digits, etc, can be used with LTS320, requires additional codec licenses
LTS320	OC3/STM1/OC12/STM4 MAPS UMTS luCS over ATM	luCS Interface Emulation over ATM, simulates RNC and MSC, requires LTS314
LTS307 LTS308	Delay Emulaton for OC3/STM1/OC12/STM4 PoS payloads Delay Emulation for OC3/STM1/OC12/STM4 ATM payloads	Delay Emulation for PoS from 1 ms to 500 ms  Delay Emulation for ATM from 1 ms to 500 ms
<b><i>Channelized Analysis and Emulation Software Applications</i></b>		
LTE001 LTT001  LTS501 LTS502  LTS503 LTS504  LTS108 LTS116 LTS124 LTS164 LTS464  LTXXX LTTXXX	The following are only available for PCIe version of Lightspeed 1000  E1 Personality for Channelized T1 Personality for Channelized  OC3/STM1 RAW OC3/STM1/OC12/STM4 RAW  Record Playback for OC3/STM1 RAW Record Playback for OC3/STM1/OC12/STM4 RAW  Any 16 Ports Channelized Lic for OC3/12, STM1/4 Any 32 Ports Channelized Lic for OC3/12, STM1/4 Any 48 Ports Channelized Lic for OC3/12, STM1/4 All Ports Channelized Licenses for OC3, STM1 All Ports Channelized Licenses OC12, STM4  Channelized Options for E1 Channelized Options for T1	<b>Ports = Duplex for Analysis, Simplex for Emulation</b>  E1 Personality for Channelized T1 Personality for Channelized  Rx/Tx RAW – Channelized / Unchannelized Rx/Tx RAW – Channelized / Unchannelized  Wirespeed capture and playback to / from hard disk w/ time-stamping Wirespeed capture and playback to / from hard disk w/ time-stamping  Any 16 Ports Chan Lic for OC3/12, STM1/4, n=1 Any 32 Ports Chan Lic for OC3/12, STM1/4, n=2 Any 48 Ports Chan Lic for OC3/12, STM1/4, n=3 All Ports Chan Lic for OC3, STM1 (84x2 for T1, 63x2 for E1), n=3 All Ports Chan Lic for OC12, STM4 (84x4 for T1, 63x4 for E1), n=3  Channelized Options for E1 (ISDN, SS7, HDLC) Channelized Options for T1 (ISDN, SS7, HDLC)  See T1 E1 Price List for Channelized Options
LTS111	API Software Toolkit for Custom Development ( <b>Linux</b> )	Develop Custom Applications for OC3/12 STM1/4 Cards for Linux; Requires C++ dev skills
<b><i>OC3/12 STM1/4 Related Accessories and Cables</i></b>		

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IPN1310a	SFP Transceiver for OC-3/STM-1 and OC-12/STM-4 Optical, LC, Single-Mode, 1310nm	Generic SFP for Optical, Duplex LC Connector SM, 1310nm, IR (Intermediate Range, 15 km)
IPN850a	SFP Transceiver for OC-3/STM-1 and OC-12/STM-4 Optical, LC, Multi-Mode, 850 nm or 1310 nm	<b>NEEDS UPDATE – Do Not Quote - Generic SFP for Optical, Duplex LC Connector, MM, 850 nm or 1310 nm, SR (Short Range, 550m)</b>
SA019a	Fiber Optic Cable, Single-Mode, Duplex LC to LC, 2m	2m FO Jumper, 9/125 SM, Ø2mm
SA019b	Fiber Optic Cable, Single-Mode, Duplex LC to SC, 2m	2m FO Jumper, 9/125 SM, Ø2mm
SA019c	Fiber Optic Cable, Multi-Mode, Duplex LC to LC, 2m	2m FO Jumper, 50/125 MM, OM3 (10G), Ø2mm
SA019d	Fiber Optic Cable, Multi-Mode, Duplex LC to SC, 2m	2m FO Jumper, 50/125 MM, OM3 (10G), Ø2mm
SA019st	Fiber Optic T-tap, Duplex LC, Single-Mode	Fiber Optic T-tap for Non-Intrusive Monitoring, Duplex LC Connectors, 9/125 SM, 70/30 split, includes one SA019a; requires one SA019sc
SA019sc	Fiber Optic Analyzer 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	Fiber Optic T-tap, Duplex LC, Multi-Mode	Fiber Optic T-tap for Non-Intrusive Monitoring, Duplex LC Connectors, 50/125 MM, 70/30 split, includes one SA019c; requires one SA019mc
SA019mc	Fiber Optic Analyzer 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
SA019ska	<b>OC3/12, STM1/4</b> Fiber Optic Single-Mode T-tap Kit with Required Cables and SFP Transceivers	Kit Includes: (1) SA019st, (1) SA019sc, (2) IPN1310a, (2) SA019a, (2) SA019b
SA019mka	<b>OC3/12, STM1/4</b> Fiber Optic Multi-Mode T-tap Kit with Required Cables and SFP Transceivers	Kit Includes: (1) SA019mt, (1) SA019mc, (2) IPN850a, (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; multirate SFPs and FO cables extra / optional for multimode and/or singlemode; 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 singlemode SFPs and FO Cables	Six (6) - 10/100/1000 and 2.5 GigE singlemode SFPs and singlemode FO cables
<b>SonetExpert™ (OC-3/STM-1 OC-12/STM-4) Analysis and Emulation Related Hardware &amp; Software</b>		
SEU100	SonetExpert™ - Dual OC3/12 STM1/4 USB Unit	Portable USB Unit with 2 Optical Interfaces for Channelized OC3 / OC12 / STM1 / STM4 applications;  <ul style="list-style-type: none"> <li>- single USB 3.0;</li> <li>- includes OC3/OC12/STM1/STM4 SFPs (customer preference of MM or SM);</li> <li>- requires additional software for Unchannelized (SEU901/SEU902);</li> <li>- requires additional software for RAW (SEUE02/SEUT02) and T1 E1 personality (SEE001/SET001);</li> <li>- same platform as PXN100 / PXN101 and upgradeable to PacketExpert 10GX for Ethernet functionality</li> </ul>

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SEU110	SonetExpert™ Upgrade to PXN100	Upgrades the SonetExpert™ hardware platform to perform PXN100 functions
SEU120	SonetExpert™ Upgrade to PXN101	Upgrades the SonetExpert™ hardware platform to perform PXN101 functions, requires SEU110
	<b><i>UnChannelized Analysis and Emulation Software Applications</i></b>	
SEU901	UnChannelized BERT for OC3 / STM1 and OC12 / STM4 Rates	UnChannelized BERT on OC3 / STM1 and OC12 / STM4 Rates for SEU100
SEU902	UnChannelized BERT for OC3 / STM1, OC12 / STM4, OC48 / STM16, OC192 / STM64 Rates	UnChannelized BERT on OC3 / STM1, OC12 / STM4, OC48 / STM16, and OC192 / STM64 Rates for SEU100; includes SEU901
	<b><i>Channelized Analysis and Emulation Software Applications</i></b>	
	One "channel" is duplex: (one Tx, one Rx), or (two Rx), or (two Tx)	
SEUE02	OC3/STM1 RAW	OC3/STM1 Basic License; permits visibility into all channels
SEUT02	OC3/OC12 and STM1/STM4 RAW	OC3/STM1 and OC12/STM4 Basic Licenses; permits visibility into all channels
SEE001	<b>Basic Applications</b> SonetExpert™ Basic E1 Software	E1 Personality for Channelized; view / test all E1s, DS0s, includes MC-BERT
SET001	SonetExpert™ Basic T1 Software	T1 Personality for Channelized; view / test all T1s, DS0s, includes MC-BERT
	<b>Optional Application Licenses</b>	
SEU116	16 Channels for OC3/STM1	Any 16 T1 E1 Chan Lic for OC3/STM1
SEU132	32 Channels for OC3/STM1	Any 32 T1 E1 Chan Lic for OC3/STM1
SEU164	64 Channels for OC3/STM1	Any 64 T1 E1 Chan Lic for OC3/STM1
SEU128	128 Channels for OC3/STM1	Any 128 T1 E1 Chan Lic for OC3/STM1 (note, max for E1 is 126)
SEU196	All Channels (168 for T1, 126 for E1) for OC3/STM1	All (84x2 T1s, 63x2 E1s) Chan Lic for OC3/STM1
SEU416	16x4 Channels for OC3/STM1 and OC12/STM4, includes SEU116	Any 64 T1 E1 Chan Lic for OC3/OC12/STM1/STM4
SEU432	32x4 Channels for OC3/STM1 and OC12/STM4, includes SEU132	Any 128 T1 E1 Chan Lic for OC3/OC12/STM1/STM4
SEU464	64x4 Channels for OC3/STM1 and OC12/STM4, includes SEU164	Any 256 T1 E1 Chan Lic for OC3/OC12/STM1/STM4
SEU428	128x4 Channels for OC3/STM1 and OC12/STM4, includes SEU128	Any 512 T1 E1 Chan Lic for OC3/OC12/STM1/STM4
SEU464	All Channels (672 for T1, 504 for E1) for OC3/STM1 and OC12/STM4, includes SEU196	All (84x8 T1s, 63x8 E1s) Chan Lic for OC3/OC12/STM1/STM4
SEEXXX	Channelized Options for E1 in 16 Ch increments	Channelized Options for E1 (16, 32, ..)
SETXXX	Channelized Options for T1 In 16 Ch increments	Channelized Options for T1 (16, 32, ..)
		See T1 E1 Price List for Channelized Optional Apps
MT001	mTOP 1U Rack Mount Enclosure w/SBC	1U 19" Rack Mount Enclosure w/Rails, Multiple Interface

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MT001E	mTOP with i7	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
MT002	mTOP 1U Rack Mount Enclosure w/o SBC	Same as MT001 but with Intel Core i7;
MT003	mTOP 2U Rack Mount Enclosure w/SBC	w/o SBC, but for use with MT001 for Daisy Chain or other Rack PCs
MT004	mTOP 2U Rack Mount Enclosure w/o SBC	2U 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, T3/E3 units and LightSpeeds; Optional VGA to mini DP interface cable
MT005	mTOP Probe	w/o SBC, but for use with MT003 for Daisy Chain or other Rack PCs
MT005E	mTOP Probe with i7	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
<b>USB Based T3/E3 Analysis Related Hardware &amp; Software</b>		
TE3001	Dual T3 E3 / T1 E1 Hardware USB Base Unit ( <b>Price Reduction</b> )	Portable USB Unit – Requires TT3001 or EE3001; If supplied with Notebook PC, requires medical power supplies, 9v, 18 watts, 2A, to pass on ground to USB T3 E3.
TE3005	Rack Enclosure for T3/E3 System – up to 6 T3/E3s	2U - 19" Rack Enclosure, Power Supply, Fans, 4 Port USB Hub, Cables and Accessories, Accommodates three (3) Dual T3/E3 USB Units, Requires TT3001 or EE3001
TT3001	T3 / T1 / E1 Analyzer Basic Software	w/ Basic Software for WIN 7/10
EE3001	E3 / E1 Analyzer Basic Software	w/ Basic Software for WIN 7/10
TE3002	T3 E3 Hardware Warranty	N/A
TE3003	T3 E3 Hardware and Software Support	T3 E3 USB Extended 1 yr. Software and Hardware Warranty and Support – 10% of total system price
TT3020	T3 Record Playback Software (GUI)	File Record / Send over T3 – framed & unframed
EE3020	E3 Record Playback Software (GUI)	File Record / Send over E3 – framed & unframed
TT3090	T3 HDLC Tx/Rx Test + Analyzer (GUI)	Send Receive Analyze HDLC over T3
EE3090	E3 HDLC Tx/Rx Test + Analyzer (GUI)	Send Receive Analyze HDLC over E3
TT3135	T3 PPP Analyzer (GUI)	Analysis and decode of ML-PPP and PPP over T3
EE3135	E3 PPP Analyzer (GUI)	Analysis and decode of ML-PPP and PPP over E3
TT3130	T3 Frame Relay Analyzer (GUI)	Analysis and decode of Frame Relay over T3
EE3130	E3 Frame Relay Analyzer (GUI)	Analysis and decode of Frame Relay over E3

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TT3160	T3 ATM Analyzer (GUI)	Analysis and decode of ATM cells over T3
TT3200 TTT001 TTTxxx	Channelized T3 License for T1 Soft T1 Analyzer Application Channelized Options for T1	Direct T1 Analysis / Emulation for up to 28 T1s from T3 Required and Included Channelized Options for T1 – see T1 E1 Price List
TT3210 EEE001 EEExxx	Channelized T3 License for E1 Soft E1 Analyzer Application Channelized Options for E1	Direct E1 Analysis / Emulation for up to 21 E1s from T3 Required and Included Channelized Options for E1 – see T1 E1 Price List
EE3200 EEE001 EEExxx	Channelized E3 License for E1 Soft E1 Analyzer Application Channelized Options for E1	Direct E1 Analysis / Emulation for up to 16 E1s from an E3 Required and Included Channelized Options for E1 – see T1 E1 Price List
TT3600 EE3600	T3 Basic Client Server Scripted Control Software E3 Basic Client Server Scripted Control Software	Precise & Sequential Control of T3 Analyzer via Client Server – Uses TCP/IP Precise & Sequential Control of E3 Analyzer via Client Server – Uses TCP/IP
TT3610 EE3610	T3 Client Server Tx/Rx File E3 Client Server Tx/Rx File	Tx / Rx Files on Unframed or Unchannelized T3 Tx / Rx Files on Unframed or Unchannelized E3
TT3634 EE3634	T3 Client Server High Throughput HDLC Tx/Rx Test E3 Client Server High Throughput HDLC Tx/Rx Test	HDLC Simulation with Impairments HDLC Simulation with Impairments
TT3635 EE3635	T3 Client Server High Throughput PPP Tx/Rx Test E3 Client Server High Throughput PPP Tx/Rx Test	PPP Emulation, requires TT3634 PPP Emulation, requires EE3634
SA004A	T3 E3 Accessory Kit	Four SA007p BNC-to-BNC Cables (75 Ohm), Two SA017B RJ48C to RJ48C Crossover Cables, and Two T-taps with 20 dB Attenuator
	<b><i>Network Monitoring Software Options</i></b>	
	Refer NMS section under Packet Series Price List	

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