Luminex GigaCore 10t 10 Gigabit Ethernet Switch User Manual

Luminex
NETWORK INTELLIGENCE

GigaCore IOT

Preliminary
PRODUCT
SPECIFICATIONS

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APPLICATIONS

Gigabit Ethernet switch

The GigaCore 10t is a 10 Gigabit Ethernet switch for Professional touring applications in lighting, audio and video with a frequent tear-down & built-up requirement or for any other application where ruggedized connectivity is necessary.

It is designed to support the most advanced AV protocols out of the box and is the backbone for a converged network, allowing multiple applications to co-exist on the same network.

The combination of GigaCore 10t and Araneo software platform is the ideal solution to deploy an entire AV network in just a few clicks.

Each GigaCore switch can be configured by an intuitive built-in AV Web UI.

Araneo, the network monitoring, planning and management software will ensure consistent management across the entire Luminex network.

The use of Araneo together with GigaCore switches will increase your productivity and confidence in the network as well as significantly reduce commissioning time.

An e-ink display informs the user about important parameters of the switch also when the device is not powered.

GigaCore 10t is an indispensable part of any mobile AV network where reliability and a quick and easy setup are needed.

As a user, you don’t need to make choices nor tradeoffs as GigaCore manages most AV protocols for you out of the box: Pre-defined QoS/DiffServ (Quality of Service) settings, optimized IGMP (Internet Group Management Protocol) per group (VLAN) and pre-defined yet editable groups (VLANs) to easily separate your network in different applications making converged networks obvious, easy, and reliable.

Also included out of the box, is the advanced, automated redundancy protocol RLinkX that ensures redundant links and supports a ring topology within your GigaCore network.

Bandwidth, connectivity, and port availability are not an issue anymore with the option of 2 x rugged fiber connection ports capable of data transfer speeds of up to 10 Gbps and 8 x 1Gbps copper ports with rugged EtherCON connectors that ensure robust connectivity.

Time synchronization is crucial in many applications; GigaCore 10t offers you a hassle free PTPv2 enabled switch which will work for most major audio protocols (e.g., AES67, ST2110, Dante, Q-sys/Q-lan, …) without the need for making complicated configurations.

Furthermore AVB/MILAN is supported out of the box on the management group (VLAN) and can operate simultaneously with the aforementioned PTPv2 applications in a converged network on different Groups (VLANS).

Entertainment and touring setups constantly push the limits. The deployment of PoE powered devices is continuously increasing. GigaCore 10t is ahead of this trend by offering PoE++ as an option on all copper ports (90W per port with a total PoE budget of up to 450W.

Great care has been taken to ensure silent operation by means of intelligent fan control, giving you more options with peace of mind that no live audience or recording session would be disturbed.

GigaCore 10t is the ideal touring network solution offering rugged, out of the box performance, #convergednetworkingmadeeasy and with its half 19” format it is ideally suited to create a full A/B redundant AV network in a single rack space.

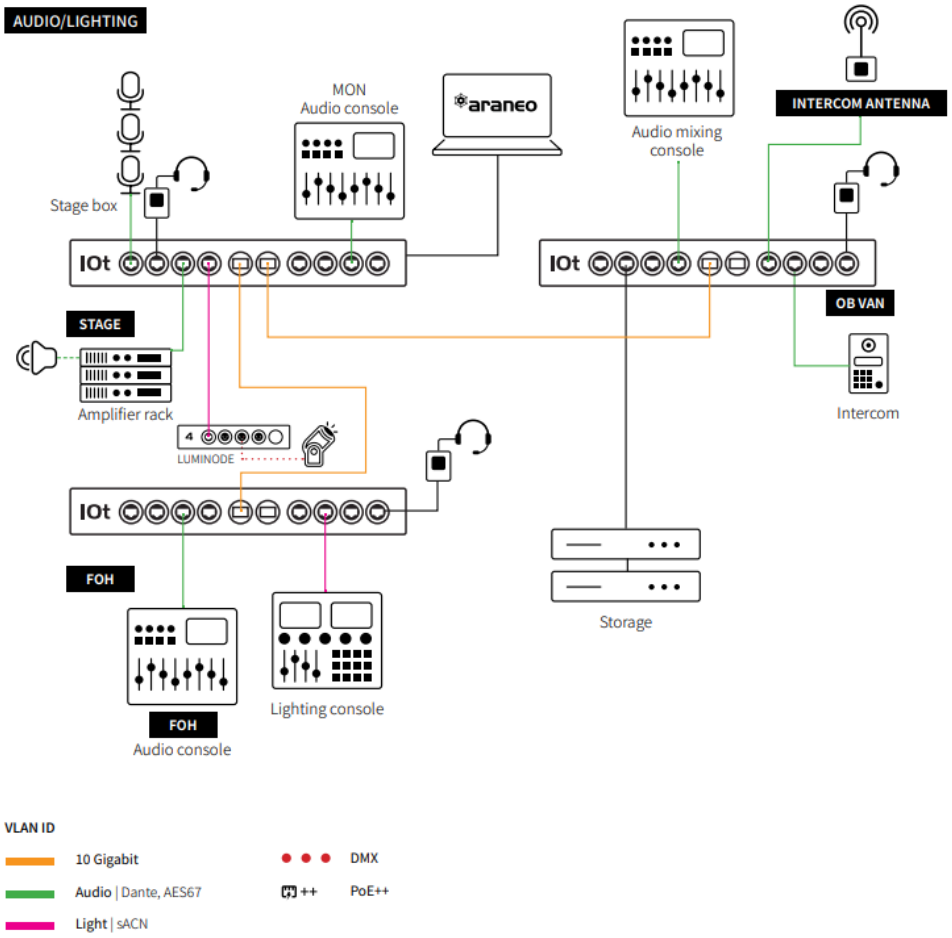
Applications:

- Live events
- Touring
- Convention centers
- Large system integrations
- Sports arenas
- Broadcast and recording studios, OB vans
- Theme parks
- …

ORDERING INFORMATION 10GB	
Product name:	Part numbers:
GigaCore 10t -10G-(Neutrik DUOMMF)	LU 01 00079-NDM-10G
GigaCore 10t -10G-(Neutrik DUOMMF + PoE++)	LU 01 00079-POE-NDM-10G
GigaCore 10t -10G-(NeutrikQUAD MMF)	LU 01 00079-NQM-10G
GigaCore 10t -10G-(NeutrikQUAD MMF + PoE++)	LU 01 00079-POE-NQM-10G
GigaCore 10t -10G-(NeutrikDUO SMF)	LU 01 00079-NDS-10G
GigaCore 10t-10G- (NeutrikDUO SMF + PoE++)	LU 01 00079-POE-NDS-10G
GigaCore 10t -10G-(NeutrikQUAD SMF)	LU 01 00079-NQS-10G
GigaCore 10t-10G- (NeutrikQUAD SMF + PoE++)	LU 01 00079-POE-NQS-10G
GigaCore 10t-10G- (Fiberfox 2ch MMF)	LU 01 00079-F2M-10G
GigaCore 10t-10G- (Fiberfox 2ch MMF)	LU 01 00079-POE-F2M-10G
GigaCore 10t-10G-(Fiberfox 4ch MMF)	LU 01 00079-F4M-10G
GigaCore 10t-10G-(Fiberfox 4ch MMF + PoE++)	LU 01 00079-POE-F4M-10G

ORDERING INFORMATION 1GB	
Product name:	Part numbers:
GigaCore 10t -1G-(8 etherCON)	LU 01 00079-1G
GigaCore 10t -1G-(8 etherCON + PoE++)	LU 01 00079-POE-1G
GigaCore 10t -1G-(Neutrik DUOMMF)	LU 01 00079-NDM-1G
GigaCore 10t -1G-(Neutrik DUOMMF + PoE++)	LU 01 00079-POE-NDM-1G
GigaCore 10t -1G-(NeutrikQUAD MMF)	LU 01 00079-NQM-1G
GigaCore 10t -1G-(NeutrikQUAD MMF + PoE++)	LU 01 00079-POE-NQM-1G
GigaCore 10t -1G-(NeutrikDUO SMF)	LU 01 00079-NDS-1G
GigaCore 10t-1G- (NeutrikDUO SMF + PoE++)	LU 01 00079-POE-NDS-1G
GigaCore 10t -1G-(NeutrikQUAD SMF)	LU 01 00079-NQS-1G
GigaCore 10t-1G- (NeutrikQUAD SMF + PoE++)	LU 01 00079-POE-NQS-1G
GigaCore 10t-1G- (Fiberfox 2ch MMF)	LU 01 00079-F2M-1G
GigaCore 10t -1G-(Fiberfox 2ch MMF + PoE++)	LU 01 00079-POE-F2M-1G
GigaCore 10t-1G-(Fiberfox 4ch MMF)	LU 01 00079-F4M-1G
GigaCore 10t-1G-(Fiberfox 4ch MMF + PoE++)	LU 01 00079-POE-F4M-1G

APPLICATION DIAGRAM



TECHNICAL SPECIFICATIONS

MECHANICAL	**GigaCore 10t**
Enclosure	Robust all metal housing
Dimensions (WxDxH)	220 x 330 x 44 mm (8,66″ x 13″ x 1,73″)
Material thickness	2mm
Surface	Powder coated
Mounting type	Rack mount, Truss mount M10 (2x)
Weight	3,4kg
Packaging dimensions	550 mm x 335mm x 68 mm
Packaged weight	TBC
CONNECTIVITY	
Network	2x 10 Gbps / 1 Gbps Rugged fiber connectors on front panel (Optional), indepen dent from other ports 4 x Gigabit (10/100/1000 BASE-T) EtherCON on front pan el 4 x Gigabit (10/100/1000 BASE-T) EtherCON on rear panel
Serial	N/A
Power	1x PowerCON True1 in

Backup power	N/A
Backup PoE	N/A
TEMPERATURE MANAGEMENT	
Intelligent control	Yes
Number of fans	2
Position of fans	Rear panel
Airflow direction	Front to rear
Noise level	TBC
USER INTERFACE	
Device status	RGB LEDs • OK • Power • RLinkX • PoE
Dynamic labeling	E-ink Display
Fiber port status	2x RGB LED Port Speed/Activity Port Status • Group indication
Cu Port Status	2x RGB LED Port Speed/Activity Port Status • Group indication • PoE
FIBER PORT SPECIFICATIONS	
Port speed	10G BASE-X or 1000 BASE-X
Port sensing	Fixed speed
COPPER PORT SPECIFICATIONS	
Port Speed	10/100/1000 BASE-T
Port Sensing	Auto Negotiation
Auto Crossover	MDI/MDIX (allows use of straight or cross wired cable)
Auto Sensing	Full or Half Duplex (Gigabit is Full Duplex)

POWER OVER ETHERNET	
Standards	802.3af 802.3at 802.3bt
PoE Ports	802.3af, 802.3at, 802.3bt
Total PoE power budget	450W

LLDP Support	Yes
Power allocation	User configurable: • Priority per port • Consumption vs Class/LLDP based
Power limit	• Total power budget firmware limit – port shutdown at overload based on port p riority • Per port hardware and firmware power limits based on classification – port shutdown at overload
SWITCH FEATURES	
Boot time	45 s
Redundant links	Yes
Group function	Yes
Ethernet compliance	IEEE 802.2 IEEE 802.3 IEEE 802.3u IEEE 802.3x Flow Control IEEE 802.3ab Gigabit Ethernet IEEE 802.3af PoE(optional) IEEE 802.3at PoE+(optional) IEEE 802.3bt PoE++ 90W(optional) IEEE 802.3ae IEEE 802.1p CoS IEEE 802.1d Spanning Tree IEEE 802.1w Rapid Spanning Tree IEEE 802.1s Multiple Spanning Tree IEEE 80 2.1Q VLAN IEEE 802.1Qav MVRP IEEE 802.1 BA-2011 -> AVB (Audio Video Bridging) IEEE 802.1ab LLDP IEEE 1588-2008 PTPv2
Jumbo frames	Yes, supported up to 12000 MTU (with restrictions when using AVB)
Supported protocols	Avnu AVB/Milan (Free of license) Dante RAVENNA/AES67 Ethersound Q-SYS/Q-LAN IPMX sACN ArtNet MANet HogNet RTTrPL (BlackTrax) …
Audio protocol compliance	Yes, low jitter and hardware timestamping (IEEE 1588-2008)
Ethernet switch type	Full non- blocking wire-speed switching performance
Memory	Flash 1 Gb RAM – 8 Mb NOR flash 4 Gb EMMC storage
Mac Adress table	16384 entries
Adress learning / aging	Self learning, Auto aging
Switching troughput	56 Gbps (10Gbps versions)
IGMP Querrier	Yes (V1|V2) (V3 compatible)

IGMP Snooping	Yes, enabled by default (V1|V2|V3)
MANAGEMENT	
Configuration	Built-in WebUI
Network wide configuration	Yes, with Araneo software
Firmware upgrades	Via WebUI or network wide with Araneo – Contingency option with second FW file stored
POWER	
Power input	100-240 VAC
Backup power	NA
Backup PoE	NA
Power consumption	TBC
ENVIRONMENTAL	
Operating temperature	0 to +50 °C
Storage temperature	-10 to +70 °C
Humidity (non condensing)	5 to 95% RH
APPROVALS PENDING	
Electromagnetic emmissions and immunity	FCC Part 15 CFR 47 class A CAN/ICES-003 EN 61000 EN 55032 EN 55024
Safety	IEC 62368-1 EN 62368-1 UL 62368-1 CAN/CSA-C22.2 No. 62368-1
Certificates and approvals	cSGSus Mark (UL) CE Mark UKCA Mark CB Certificate
Green	RoHS REACH

Description: Technical specifications GigaCore 10t | PRELIMINARY
Luminex reserves the right to modify the technical specifications at any given time without prior notice.
No rights can be claimed from these specifications.
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Documents / Resources

	Luminex GigaCore 10t 10 Gigabit Ethernet Switch [pdf] User Manual GigaCore 10t 10 Gigabit Ethernet Switch, GigaCore 10t, 10 Gigabit Ethernet Switch, Ethernet Switch, Switch

References

- Home - Luminex
- User Manual