Luminex
NETWORK INTELLIGENCE

Preliminary

PRODUCT SPECIFICATIONS

GigaCore 16t

Description: Technical specifications GigaCore 16t | PRELIMINARY

MADE IN BELGIUM

1. APPLICATIONS

Gigabit Ethernet switch

The GigaCore 16t is a **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 16t 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 16t 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.

Road tested connectivity, and port availability are not an issue with **8 x 1Gbps** copper ports with rugged **EtherCON** connectors. An additional **8 x 1Gbps** copper ports with **RJ45** connectors offer increased flexibility for routing and connectivity within the rack or patch panels. Luminex' **LED extension/patch panel**, available as an accessory, with room for D-type connectors can be linked to GigaCore 16t, offering even more connectivity possibilities.

Time synchronization is crucial in many applications; GigaCore 16t 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 16t 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 500W – stand-alone unit or up to 1000W - when used in conjunction with a separate RPSU unit).
Alternatively, this separately available RPSU unit can also guarantee redundant power if a large total PoE budget is not needed for the application.
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 16t is the ideal touring network solution offering rugged, out of the box performance and **#ConvergedNetworkingMadeEasy**

1. APPLICATIONS

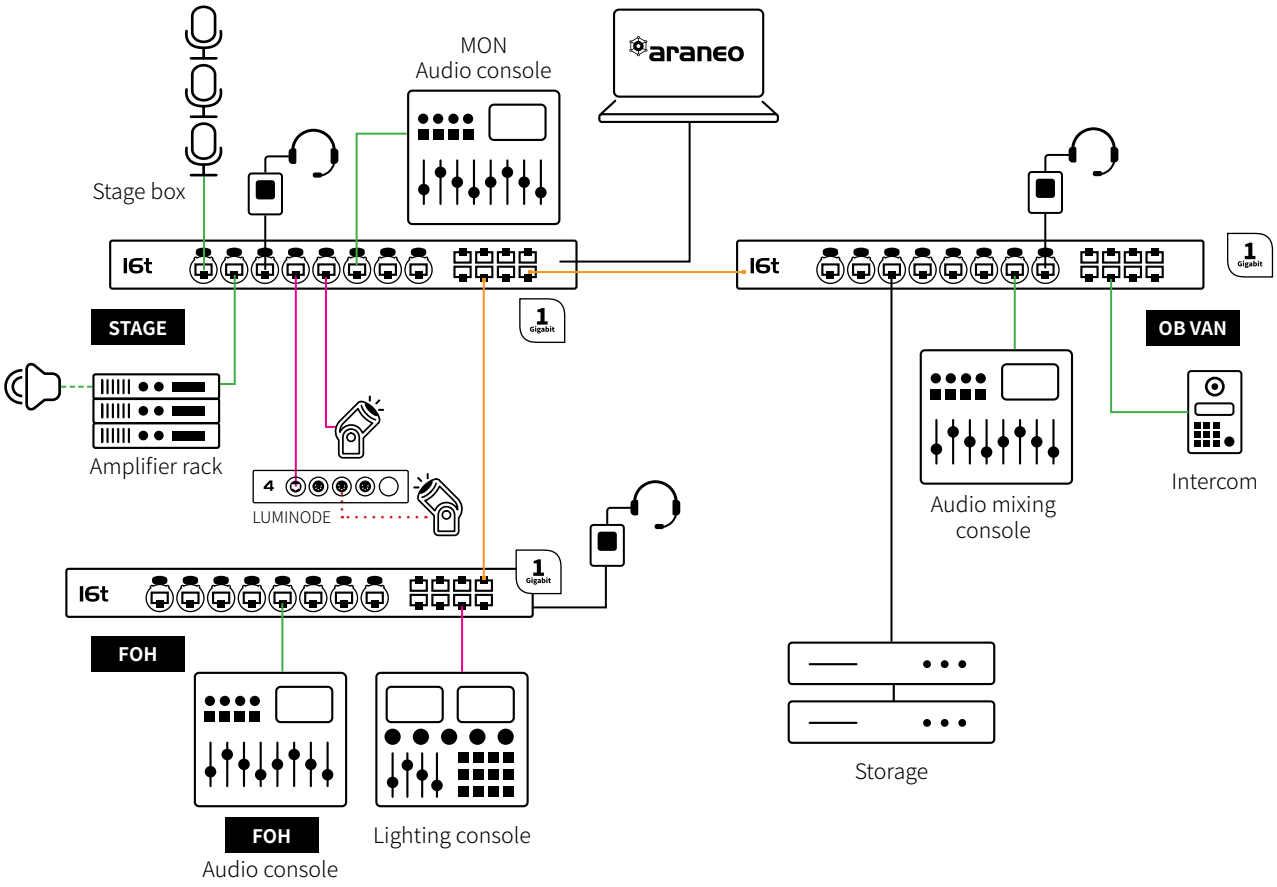
Applications:

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

ORDERING INFORMATION	
Product name:	Part numbers:
GigaCore 16t – 1G	LU 01 00097-1G
GigaCore 16t – 1G – PoE++	LU 01 00097-1G-P500

2. APPLICATION DIAGRAM

AUDIO/LIGHTING



VLAN ID

- 1 Gigabit
- Audio | Dante, AES67
- Light | sACN
- DMX
- ++ PoE++

3. TECHNICAL SPECIFICATIONS

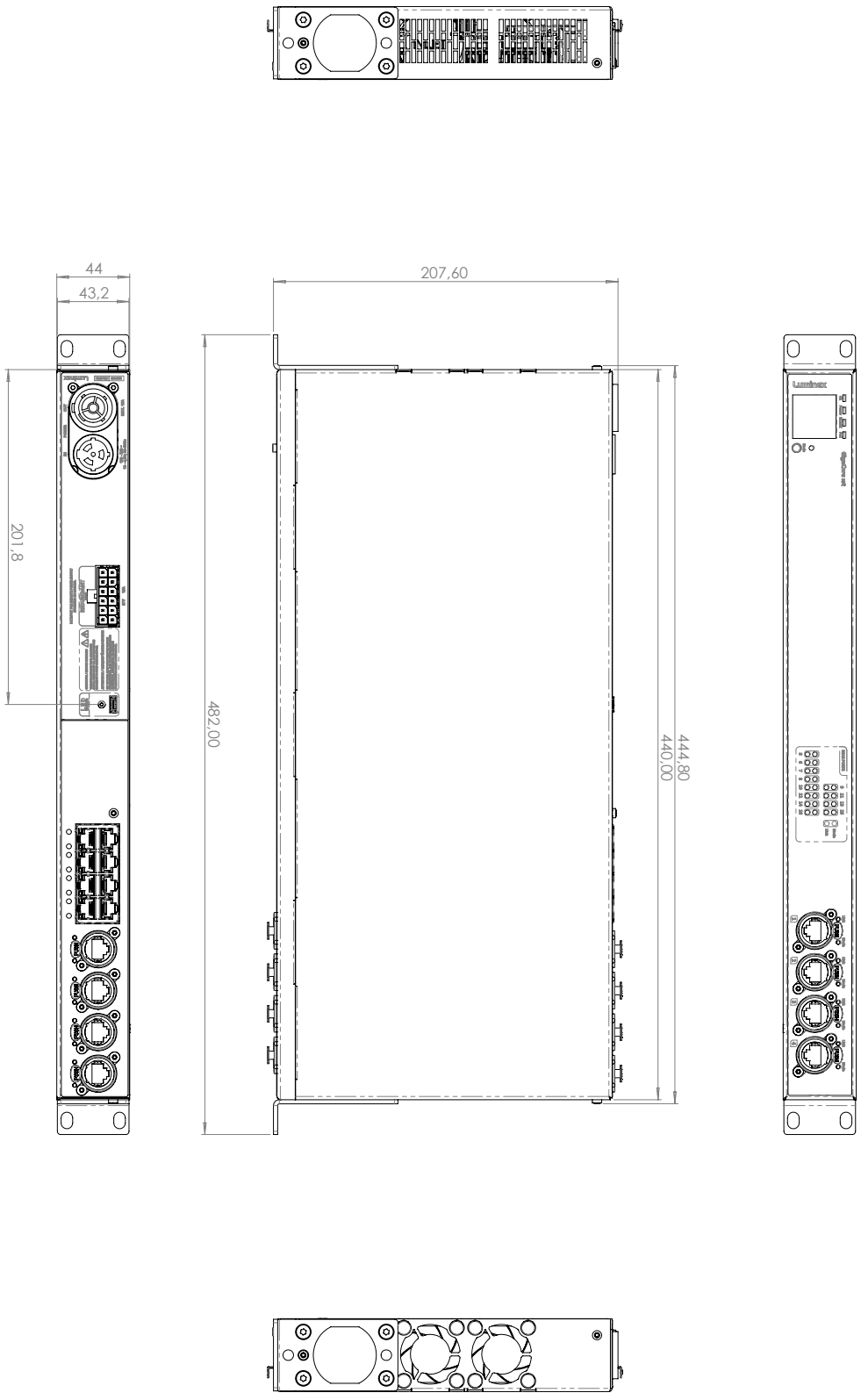
MECHANICAL	GigaCore 16t
Enclosure	Robust all metal housing
Dimensions (WxDxH)	482 x 216,95 x 44 mm (19" x 8.54" x 1,73")
Material thickness	2 mm
Surface	Powder coated
Mounting type	Rack mount
Weight	TBC
Packaging dimensions	TBC
Packaged weight	TBC
CONNECTIVITY	
Network	4x Gigabit (10/100/1000 BASE-T) EtherCon connectors on front panel 4x Gigabit (10/100/1000 BASE-T) EtherCon connectors on rear panel 8x Gigabit (10/100/1000 BASE-T) Copper RJ45 connectors on rear panel
Extension	1x LED extension port
Power	1x PowerCON True1 in/out
Backup power	Yes
Backup PoE	Yes
TEMPERATURE MANAGEMENT	
Intelligent control	Yes
Number of fans	2
Position of fans	side panel
Airflow direction	Right to left
USER INTERFACE	
Device status	RGB LEDs • OK • Power • RLinkX • PoE
Dynamic labeling	E-ink Display
Copper port status	2x RGB LED Port Speed/Activity Port Status • Group indication • PoE
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 On ports 1-16
Total PoE power budget	500 W 1000 W (With additional power supply unit)
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 priority • 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 802.1Q 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	168 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	-
Backup power	-
Backup PoE	-
Power consumption	-
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

GigaCore 16t

Units in mm.



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