PRODUCT SPECIFICATIONS

GIGACORE 10t-IP

MADE IN BELGIUM

1. Applications

A weatherproof 10-Gigabit Ethernet switch designed to withstand the elements.

The GigaCore 10t-IP is a weather proof 10 Gigabit Ethernet switch for professional touring applications in lighting, audio and video with a frequent tear-down & built-up requirement and for any outdoor application where rugged connectivity is necessary. With an IP65 rating, the GigaCore 10t-IP is specifically designed for reliable outdoor use, offering passive cooling, a sufficient PoE budget, and resistance to extreme temperatures, rain, liquid splashes, and dust.

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-IP 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.

NFC connectivity allows status monitorring and configuration to be loaded from and to the unit with an NFC compatible smartphone even when the device is not powered.

GigaCore 10t-IP 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 two rugged fiber connection ports, and a choice of factory fitted fiber connectors, capable of data transfer speeds of up to 10 Gbps and 8 x 1Gbps copper ports with IP rated EtherCON TOP connectors all to ensure robust and waether proofed connectivity.

Time synchronization is crucial in many applications; GigaCore 10t-IP 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, …) in transparent, boundary or replicated clock modes 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-IP is ahead of this trend by offering PoE++ on all copper ports (90W per port with a total PoE budget of up to 210W).

The GigaCore 10t-IP is fanless and passively cooled, ensuring silent operation. With no active fans, the unit is more robust and less prone to requiring maintenance.

GigaCore 10t -IPis the ideal touring network solution offering rugged, out of the box performance, **#convergednetworkingmadeeasy.**
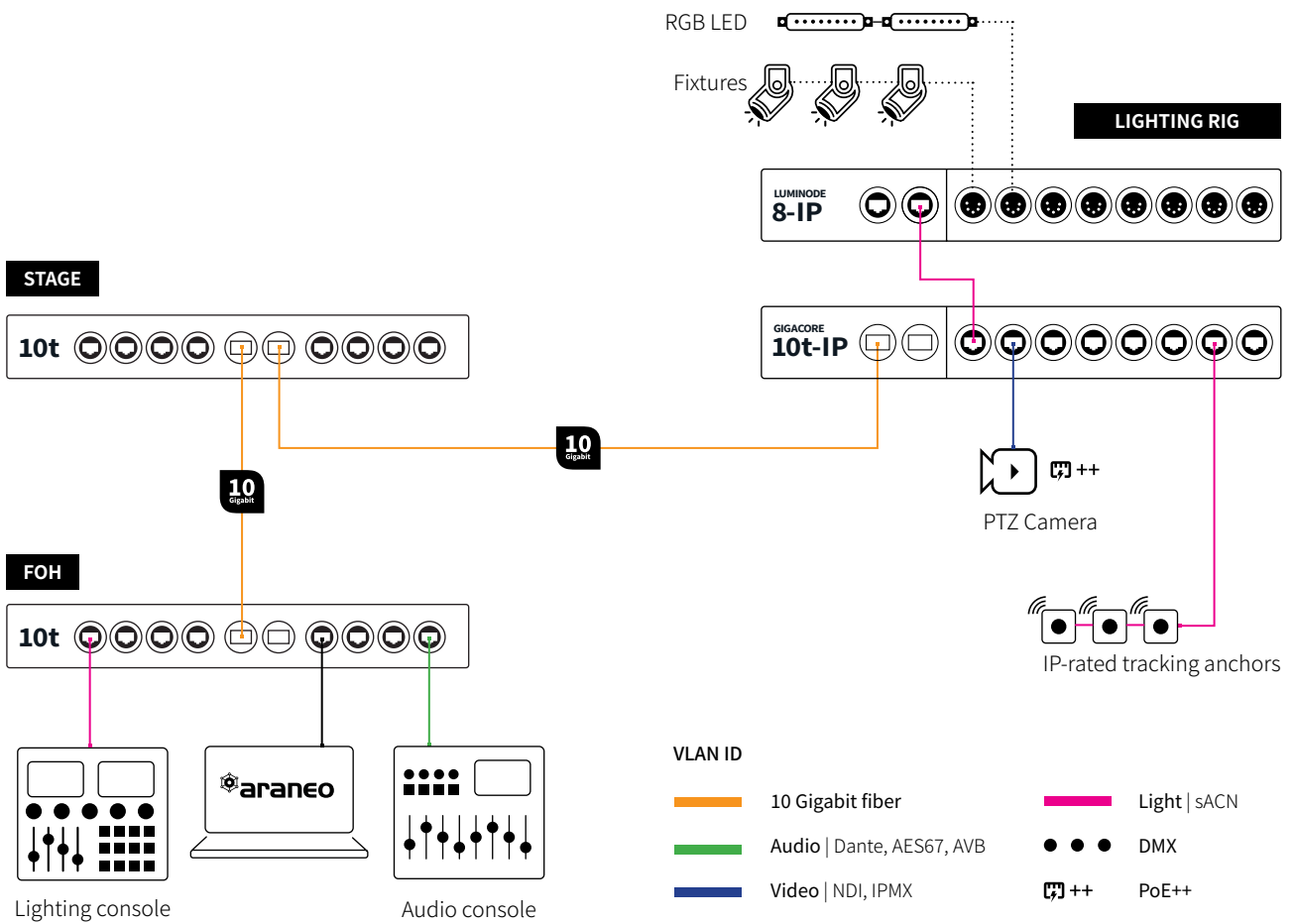
Industries

- Live events
- Touring
- Sports arenas
- Outdoor Broadcast and recording
- Theme parks
- …

Ordering information	
Product name:	Part numbers:
GigaCore 10t-IP 1G PoE NDM/NDM	LU 01 00098-1G-POE-NDM/NDM
GigaCore 10t-IP 1G PoE NQM/0M	LU 01 00098-1G-POE-NQM/0M
GigaCore 10t-IP 1G PoE NDS/NDS	LU 01 00098-1G-POE-NDS/NDS
GigaCore 10t-IP 1G PoE NQS/0S	LU 01 00098-1G-POE-NQS/0S
GigaCore 10t-IP 1G PoE F2M/F2M	LU 01 00098-1G-POE-F2M/F2M
GigaCore 10t-IP 1G PoE F4M/0M	LU 01 00098-1G-POE-F4M/0M
GigaCore 10t-IP 10G PoE NDM/NDM	LU 01 00098-10G-POE-NDM/NDM
GigaCore 10t-IP 10G PoE NQM/0M	LU 01 00098-10G-POE-NQM/0M
GigaCore 10t-IP 10G PoE NDS/NDS	LU 01 00098-10G-POE-NDS/NDS
GigaCore 10t-IP 10G PoE NQS/0S	LU 01 00098-10G-POE-NQS/0S
GigaCore 10t-IP 10G PoE F2M/F2M	LU 01 00098-10G-POE-F2M/F2M
GigaCore 10t-IP 10G PoE F4M/0M	LU 01 00098-10G-POE-F4M/0M

2. Application Diagram

OUTDOOR LIVE EVENT NETWORK INFRASTRUCTURE

RGB LED

Fixtures

LIGHTING RIG

LUMINODE 8-IP

STAGE

10t

GIGACORE 10t-IP

10 Gigabit

PTZ Camera

10 Gigabit

FOH

10t

IP-rated tracking anchors

araneo

Lighting console

Audio console

VLAN ID

10 Gigabit fiber		Light | sACN	
Audio | Dante, AES67, AVB		• • • DMX	
Video | NDI, IPMX		++ PoE++	

3. Technical Specifications

MECHANICAL	GIGACORE 10t-IP
Enclosure	Robust all-aluminium housing - IP65 rated
Dimensions (WxDxH)	281 x 358 x 90 mm (11,06” x 14,09” x 3,54”)
Mounting type	Truss mount M10 inserts (3x), 10x10 VESA mount inserts, Multiple devices stackable
Weight	7,8kg
CONNECTIVITY	
Network	2x 10 Gbps / 1 Gbps Rugged fiber connectors (Optional), independent from other ports - 8 x Gigabit (10/100/1000 BASE-T) EtherCON TOP on front panel
Power	1x PowerCON True1 TOP
TEMPERATURE MANAGEMENT	
Passive Fan-less Cooling	Yes
USER INTERFACE	
Device status	RGB LEDs • OK • Power • RLinkX • PoE
NFC + Mobile app	Mobile app (Android/IOS) • Status • Config
Fiber port status	2 x LED Port Speed/Activity Port Status • Group indication
Copper Port Status	2 x LED Port Speed/Activity Port Status • Group indication • PoE • RLinkX
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	GIGACORE 10t-IP
Standards	802.3af
	802.3at
	802.3bt
PoE Ports	802.3af, 802.3at, 802.3b
Total PoE power budget	210 W
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 (RLinkX)	Yes
Link Aggregation (MultiLinkX)	Yes
Group function (VLANS)	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
	IEEE 802.3at PoE+
	IEEE 802.3bt PoE++ 90W
	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 Address table	16384 entries
Address learning / aging	Self learning, Auto aging
Switching Capacity	104Gbps (10Gbps versions)
Switching (throughput) (Capacity)	1G Models : 20 Gbps
	10G Models : 56 Gbps
Switching throughput 64 Byte	1G Models : 14881 Mpps
	10G Models : 41667 Mpps
IGMP Querrier	Yes (V1|V2) (V3 compatible)
IGMP Snooping	Yes, enabled by default (V1|V2|V3)
MANAGEMENT	
Configuration	Built-in WebUI, NFC app
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	Maximum 18W - Maximum 250W (Depending on configuration)
ENVIRONMENTAL	
Operating temperature	-20 to +60 °C
Storage temperature	-40 to +70 °C
Humidity (non condensing)	5 to 95% RH
Noise level @ 1m	Silent fanless operation
APPROVALS	
Electromagnetic emissions 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
IP Rating	65
Green	RoHS
	REACH

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358 mm / 14,09"

281 mm / 11,06"

90 mm / 3,54"

M10 mounting hole

M10 mounting hole

100 mm x 100 mm - M4 VESA mounting holes

M10 mounting hole