TRIDONIC

lichtMONITOR server x5

Gateway

Product description

_ Cost-effective with fanless and cableless design
_ Intel® Pentium® processor N4200, reliable F1 stepping version CPU
_ 4 isolated COM, 4 USB, 2 GbE LAN
_ 8-bit programmable DIO for IoT compact PC applications
_ Wide operating temperature range from -40 to +70 °C
_ 12 to 24 VDC wide range power input
_ OVP, UVP, OCP, RPP power protection design
_ 5 years guarantee (conditions at https://www.tridonic.com/en/int/services/manufacturer-guarantee-conditions)

Website

http://www.tridonic.com/28004946

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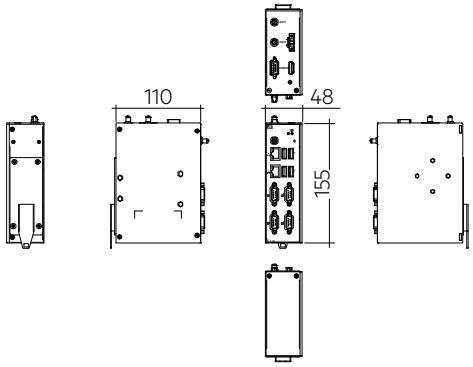


Ordering data

Type	Article number	Packaging, carton	Weight per pc.
lichtMONITOR server x5	**28004946**	10 pc(s).	0.8 kg

Technical data

Rated voltage range DC	9 – 48 V
Supply current DC	1.34 – 2.82 A
Power consumption	6 W
CPU	Intel® Pentium® N4200 4C @1.1 GHz
Chipset	SoC integrated
System memory	1 x DDR3L-1866 SO-DIMM, up to 8GB
BIOS	AMI
TPM	TPM 2.0
EOS Support	Windows® 10 IoT, Linux
Software Support	eAPI
Serial Interface (I/O)	4 x DB9 Isolated RS-232/422/485
Display (I/O)	1 x HDMI (up to 1920 x 1200 @60Hz)
USB (I/O)	4 x USB 3.0
Ethernet (I/O) ①	2 x RJ-45 isolated 10/100/1000 Mbps Ethernet (Intel® i211-AT)
DIO (I/O)	1 x DB9 8-bit programmable DIO
Other (I/O)	3 x Antenna opening
Extension Interface ②	2 x Full-size Rev. 1.2 PCI Express Mini Card slot
Storage ③	SATA Drive
Watchdog Timer	255 levels, 1 to 255 sec.
Status indicators LED	1 x LED indicator for SATA drive activity, 1 x LED indicator for power
Operating temperature	-40 … +70 °C
Storage temperature ts	-40 … +85 °C
Humidity	0 … 95 %
Mounting	Tabs with screw terminals; DIN rail kit available
Housing colour body	Silver
Housing material	Extruded aluminum and heavy-duty steel
Type of protection	IP30
Dimensions L x W x H	110 x 48 x 155 mm

Approval marks

FC CE RoHS

Standards

EN 55032, IEC 61000-3-2, IEC 61000-3-3, EN 55035, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, EN 62368-1, EN 60950-1, CISPR 32

① Isolation voltage: 1.5 kV.
② 1 x USB/PCIe with SIM socket, 1 x mSATA/USB/PCIe.
③ 1 x mSATA (occupied 1 x PCI Express Mini Card slot), 1 x Internal 2.5“ SATA drive (9.5 mm height).

1. Standards

EN 55032
IEC 61000-3-2
EN 61000-3-3
EN 55035
IEC 61000-4-2
IEC 61000-4-3
IEC 61000-4-4
IEC 61000-4-5
IEC 61000-4-6
IEC 61000-4-8
IEC 61000-4-11
EN 62368-1
EN 60950-1
CISPR 32 Ed.2

2. Common

2.1 Overview

lichtMONITOR server x 5 is an IoT compact PC used as a dedicated PC for running lichtMONITOR Software containing a total of 5 licences for 5 different application sceneCOM EVO controllers.
The lichtMONITOR server is an embedded system that utilizes a low power Intel® Pentium® N4200 4C @1.1 GHz that supports complete features for permanently running the lichtMONITOR Web Application and saving data for energy monitorting, due to its DDR3L system memory with up to 8GB delivering high performance.

2.2 System Memory and Storage

System Memory:
One DDR3L 204-pin SO-DIMM (1.35V) slot.
Supports 1333/1600 MHz up to 8GB.

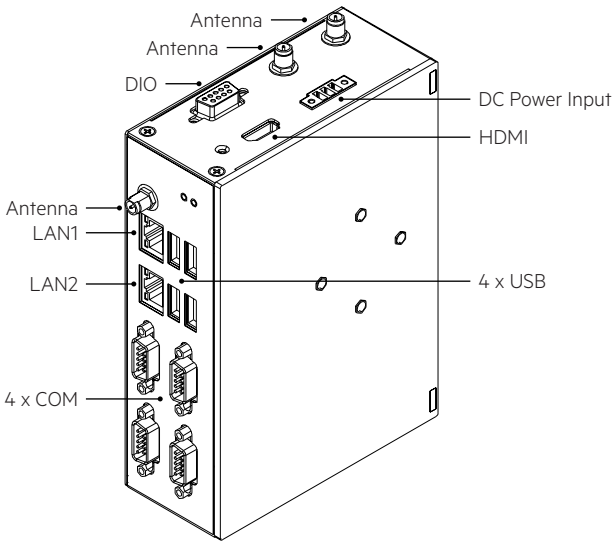
Storages:
1 x 2.5“ SATA drive bay.
1 x mSATA.

2.3 LED

Act LED:
When the storage status is indicated, Act LED will show solid green and if the storage is accessed, this LED will flash.

Power (PWR) LED:
If power on the DC input is acceptable, the power LED will show solid yellow.

2.4 Device overview



3. Interfaces

3.1 Ethernet Ports

LAN Chip: Intel Ethernet Controller I211-AT.
LAN 1 and LAN 2.

The board has dual RJ-45 connectors, support 10/100/1000 Base-T with 1.5 kV magnetic isolated protection.

3.2 Wireless

2 x Full size Mini Card slot supports module with USB and PCIe Interface.
1 x SIM Card Socket.
3 x Antenna holes.

To use wireless, insert a SIM card and set up a wireless network. lichtMONITOR server x 5 has 2 slots for this, via USB and PCIe.

3.3 USB

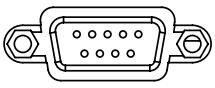
4 x USB 3.0
USB Pin Define:

Pin	Signal USB Port 0/1	Pin	Signal USB Port 2/3
1	Vcc	10	Vcc
2	D–	11	D–
3	D+	12	D+
4	GND	13	GND
5	SSRX–	14	SSRX–
6	SSRX+	15	SSRX+
7	GND	16	GND
8	SSTX–	17	SSTX–
9	SSTX+	18	SSTX+

3.4 COM

4 ports DB9 support RS-232/422/485 which can be selected by BIOS.
Supports Auto Flow Control in RS485 mode.
Serial Port Pin Define: (DB9 Male) as below.

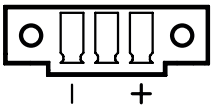
Pin	RS-232	RS-422	RS-485
1	DCD	TX–	Data–
2	RXD	TX+	Data+
3	TXD	RX–	–
4	DTR	RX+	–
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	RI	–	–



3.5 Power

Wide-range 12 - 24V DC power input i. with terminal block.
OVP and Reverse protection.

Pin	Signal
1	+
2	NC
3	–



4. Installation

4.1 Safety instructions

The device may only be used for the specified area of application.

Relevant health and safety regulations must be observed.

The voltage supply must be disconnected when the device is being assembled and installed.

Only qualified personnel may assemble, install and commission the device.

Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen.

Do not leave this equipment in an uncontrolled environment where the storage temperature is below -45 or above 85 °C. It may damage the equipment.

Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

- Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
- When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

Risk of explosion if battery is replaced by an incorrect type dispose of used batteries according to the instructions.

Hot Surface Do Not Touch.
Restricted access area: The equipment should only be installed in a Restricted Access Area.

This product is intended to be supplied by a Listed Power Adapter or DC power source, output meets SELV, rated 12 – 24 Vdc, minimum 2.42 – 1.29 A, Tma = 70 °C and the altitude of operation = 5,000 m.

If need further assistance with purchasing the power source, please contact to manufacturer for further information.

5. Miscellaneous

5.1 Disposal

According to the WEEE directive return old equipment at appropriate collection facilities.

5.2 Additional information

Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.