Light Stream Hub LITE

Product datasheet

Network gateway for RS-485 devices, part number LS-Hub. Light Stream Hub LITE connects RS-485 interface devices to a controller or a computer over a wired network or Wi-Fi. The gateway has two independent RS-485 ports, understands Modbus TCP, and can transparently pass any other protocols over the network unchanged. Powered by 9–28 V DC, with two power outputs for connected devices. The compact enclosure mounts on a DIN rail.



Features

Two separate RS-485 lines

Two independent RS-485 lines connect to the gateway. Each is configured separately — to match its own equipment.

Network over cable or Wi-Fi

The gateway connects to the network by cable or via Wi-Fi: it can create its own access point or join an existing network. If wireless communication is prohibited on site, Wi-Fi can be switched off completely.

Modbus and any other protocols

The gateway understands the common Modbus protocol, and forwards data from any other protocols over the network unchanged. Up to 8 systems can access each line at the same time.

Long-distance communication

Two gateways link remote sections of a line through a local network or VPN — without laying new cable.

Multiple systems on one line

The gateway caches the latest data from the line and distributes it over the network to other systems. Several systems can read the line at once without interfering with each other.

On-site line testing

Data exchange is visible right in the browser in real time, along with communication errors. From the same place you can send a command to any device — without a laptop or separate software.

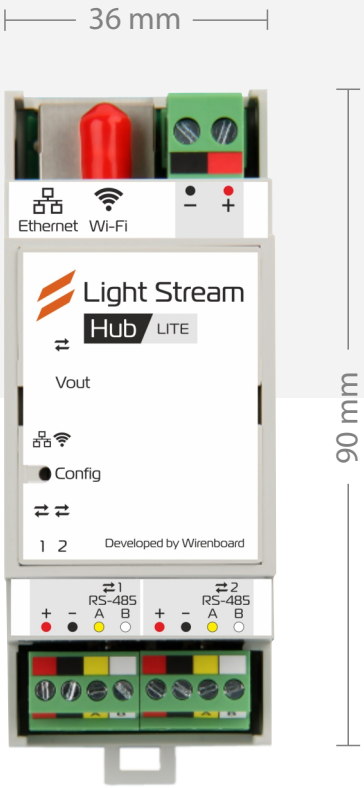
Simple setup and maintenance

Everything is configured in the browser, without jumpers or separate software. Settings are saved to a file and can be transferred to other gateways, firmware is updated in a couple of clicks, and a recovery mode restores operation after a failed update.

Line extension

The gateway's two ports work as a repeater: they extend the RS-485 line and restore the signal.

Dimensions



Technical specifications

Ergonomics

Mounting	35 mm DIN rail
Overall dimensions (W × H × D)	36 mm • 90 mm • 58 mm
Weight (with box)	105 g
Indication	status, power output, network exchange, exchange on each RS-485 port
Controls	Config button (reset to factory settings)

Interfaces

RS-485	2 independent ports
Ethernet	10/100 Mbit/s
Wi-Fi	4 GHz, access point or client, fully switchable off
Debug port	USB-C
Wire cross-section with ferrule	0.35–1 mm^2; two wires in one ferrule — 0.35–0.5 mm^2
Ferrule length	8 mm
Terminal screw tightening torque	0.2 N·m

Power

Supply voltage (Vin)	9–28 V DC
PoE	IEEE 802.3af, 802.3at, embedded module (optional)
Power input priority	the input with the higher voltage
Power consumption	1 W at 24 V
Power outputs Vout	2, switched on and off together; state is retained after reboot
Voltage at Vout	equal to the module's supply voltage; 24 V regulated when powered via PoE
Maximum Vout current (combined)	2.5 A; 500 mA continuous when powered via PoE
Vout protection	current above 2.5 A
Ready for operation after power-on	8 s

RS-485

Port modes	Modbus TCP, transparent bridge, port-to-port repeater
Default communication settings	9600 bps, 8 data bits, no parity, 2 stop bits
Terminator	120 Om, enabled in software
Line bias (failsafe bias	enabled in software
"Receive only" mode	software-disabled transmission

Modbus

Protocols	Modbus TCP — Modbus RTU; transparent passthrough of any protocol over RS-485 (e.g. Modbus RTU over TCP)
Default TCP ports	502 — RS-485-1, 503 — RS-485-2, 504 — cache server
Modbus TCP clients	up to 8 per port
Gateway's own address	Unit ID 255

Operating conditions

Operating temperature	от –40 до +70 °C
Relative humidity	up to 95%, non-condensing
Climate category (GOST 15150-69)	O2.1*
Service life	5 years

Connections

Terminal / connector	Purpose
Vin	9–28 V DC power supply
Ethernet	network; PoE power when the PoE module is installed
Vout	two power outputs for connected devices
RS-485-1, RS-485-2	two independent RS-485 lines
USB-C	debug port: diagnostics and firmware upload

If both power sources are connected, the gateway runs on whichever has the higher voltage. Run the RS-485 line as twisted pair, in a single daisy chain, with terminators at both ends. If devices on the line are powered from different sources, connect their GND terminals together.

Attention

- Passive PoE is only allowed at a voltage no higher than 24 V DC — a higher voltage will damage the gateway.
- The combined load on both Vout outputs must not exceed 2.5 A, or 500 mA when powered via PoE.

Maintenance

Connecting cables and wires must be in good condition and securely fastened. If the device works properly and no new features are needed, installing updates is not required. Before updating, it is recommended to back up the settings so that you can return to the previous version.

Safety

- Do not expose the device to rain or moisture — this will void the warranty.
- Do not remove the cover: there are no user-serviceable parts inside.
- Never connect the device to a dimmer.
- Never connect 0 V to electrical ground.

Package contents

- Light Stream Hub LITE

Warranty

1-year limited manufacturer's warranty

Warranty service is not provided:

- for mechanical and other damage to the product caused by the buyer;
- for lamps, fuses, galvanic isolation and protection components;
- if the product was repaired by the buyer or by third parties;
- if the design of the product was modified;
- for equipment operated in violation of the power quality and capacity requirements of GOST 13109-97, under emergency conditions, or exposed to lightning strikes, fire or other extreme conditions;
- for product accessories (including cables, external power supplies, packaging) and parts not included in the delivery;
- if the wiring diagram or the rules of storage, transportation and operation were violated;
- if the product was exposed to chemicals or abrasive cleaning agents;
- if the product was used for purposes other than those stated in the datasheet;
- for damage caused by natural disasters or fire;
- if the manufacturer's (supplier's) label is missing.