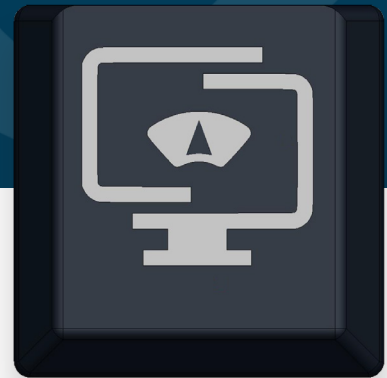
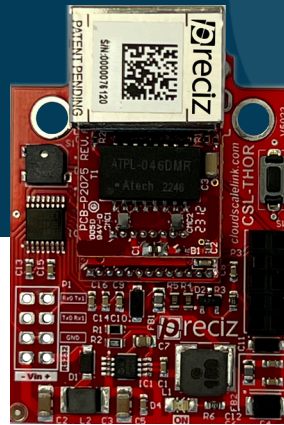


# CSL-THOR

**CloudScaleLink THOR** is a miniature RS-232/RS-485\* to Ethernet converter module. It is a link between an RS-232/RS-485\* device and Server, enabling two-way CLOUD communication over Ethernet.



## UNIQUE FEATURES

### CONNECTIVITY

Connects any device with RS-232 to cloud.

### PERFECT FIT

Due to its small size it fits inside the housing of almost any device.

### VERSATILITY

The module supports all the major communication protocols, so it can be used for various operations.

### LIGHTNING SPEED

Because of the powerful CPU it reaches response time up to 40ms, which makes it suitable for real time operations

### DEBUGGING

Real time debugging enables IT personnel to diagnose and monitor, send and receive data on serial interface as also on Ethernet/WIFI interface.

### CMP

**Cloud Management Platform** enables you to centrally monitor all your modules in real time and gives you the possibility to change the module settings remotely from anywhere in the world.

# CLOUD MANAGEMENT PLATFORM

CMP allows you to monitor, manage, ping, update or change settings on your modules remotely. All modules are connected into one centrally managed system.

Whether you are a distributor or IT personell you will be able to help users instantly from anywhere in the world to setup, configure or troubleshoot their CloudScaleLink modules.

Module ID	Module PIN	Device name	Model	Date created	Ethernet mac address	WIFI mac address	Activated	MQTT server IP/Host	MQTT server port	Note	Company	Status	
CSLX12	*****	DEMO	CSL-THOR	10.04.2024 18:21:11	CSL:77-AA-C7A1		No	wss://s2.scale-monitor.com:20684/cslc	1883			<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>	Settings
CSL234	*****	DEMO-ODIN	CSL-ODIN	10.04.2024 18:10:28		CS:01:74:57:C7-A4	No	wss://s2.scale-monitor.com:20684/cslc	1883			<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>	Settings
CSL678	*****	TEST	CSL-THOR	10.04.2024 18:07:23	CS:012:17:57:CB A7		No	wss://s2.scale-monitor.com:20684/cslc	1883			<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>	Settings

MID: J6J8A1 M: CSL-ODIN IP: 10.19.92.134

General | WiFi | TCP | Serial interface 1 | Serial interface 2 | MQTT | HTTP | Common | Modbus | Cloud scale link | Other

Device name: CSL-J6J8A1

Device model: CSL-ODIN

Version: 1.9.0

New PIN:

Confirm PIN:

PIN:

Save Save and reboot Reboot Factory reset Show OTP

**CLOUD based**

**NO download, installation or update**

**Manage all CSL's from one place**

DEBUG

Error messages  Event messages  Sent commands  Received messages

```

11:03:58:087 | REXT
11:03:58:224 | 1,ST, 241.4, 0.0, 0,g
11:04:01:255 | TARE
11:04:01:355 | OK
11:04:05:161 | REXT
11:04:05:314 | 1,ST, 397.2, 241.4, 0,g
11:04:08:703 | CLEAR
11:04:08:780 | OK
11:04:11:569 | REXT
11:04:11:708 | 1,ST, 638.4, 0.0, 0,g
    
```

Clear Stop Hide time Export Start:  End:  Length:  Number of lines shown:

READ Send

REXT Send

TARE Send

ZERO Send

CLEAR Send

Add

**Integrated test tool**

**Integrated DEBUGGER**

**Setup & configure CSL remotely**

**Remote monitoring**

Any IT person that was confronted with communication problems on the field knows how frustrating is solving issues without proper **diagnostic tool**. With this in mind we integrated in all CSL's special **debugging tool** which gives you all information about WIFI connection, MQTT connection, statuses of the socket and also shows you in real time commands and answers received on all sockets (TCP/IP, MQTT, HTTP, etc.) and serial port either RS-232 or RS-485.

**Integrated test tool**

You can also send commands to device via **integrated communication tool** which gives IT to test communication between RS-232/RS-485 and ERP, MESH, Andon systems etc.

# TECHNICAL FEATURES

## GENERAL

<b>Compatibility</b>	Any device with serial port RS-232/RS-485*
<b>Dimensions</b>	52×36×17mm LxWxH (Without housing)
<b>Power supply</b>	5 to 24Vdc, max absorption: 250 mA @ 5 Vdc - without any additional boards
<b>Operating temperature</b>	-20 ~ +50°C
<b>Humidity range</b>	10%~85% without condensation
<b>Buttons</b>	Dedicated button to initialize settings or reset device
<b>Onboard LEDs</b>	Yellow /Green Ethernet; Red/Green data indicator
<b>Other</b>	<ul style="list-style-type: none"> <li>- Integrated buzzer</li> <li>- Freely configurable RS-232/RS-485*</li> <li>- Remote firmware update – Ethernet/WIFI</li> </ul>

## CONNECTIVITY

<b>RS-232/RS-485*</b>	
Baudrate	1200/2400/4800/9600/19200/38400/57600/115200bps
Parity	none, even, odd
Data bits	7/8
<b>Ethernet</b>	Ethernet 10/100BaseT auto-MDIX RJ45 Ethernet port
<b>Wi-Fi</b>	
Frequency	Wi-Fi 2.4 Ghz a/b/g/n Wi-Fi 5Ghz a/n
Encryption	Open/WEP64/WEP128/WPA/WPA2

\*Only CSL-THOR-485 model supports RS-485 connection  
\*\*Optional Wi-Fi module required for Wi-Fi connection

## PROTOCOLS

<b>MQTT</b>	MQTT v.3.1.1
<b>ModBus</b>	RTU to TCP/IP RTU to MQTT v.3.1.1
<b>TCP/IP</b>	Server/Client
<b>HTTP/REST</b>	HTTPD server for configuration and POST/GET methods for RS232 data exchange via REST services
<b>OTHER</b>	DNS, IP, DHCP, ICMP, ARP

# SUPPORTED PROTOCOLS

## RS-232 TO MQTT

V. 3.1.1 – with freely configurable topic, device id, option to subscribe to topic, and optional authentication with username/ password, last will message, message on connect, etc. – supports bi-directional communication



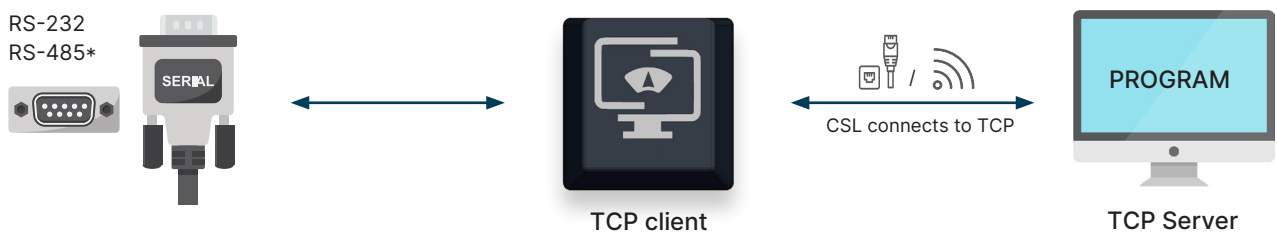
## RS-232 TO HTTP

REST POST/GET with response in JSON format including device id which is freely configurable – supports bi-directional communication



## RS-232 TO TCP/IP CLIENT

mode with configurable TCP client IP and port – supports bi-directional communication



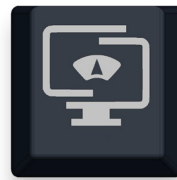
# SUPPORTED PROTOCOLS

## RS-232 TO TCP/IP SERVER

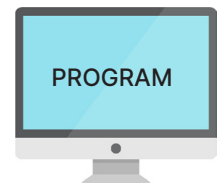
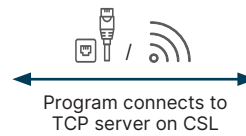
mode with configurable TCP server port – supports bi-directional communication



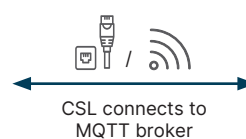
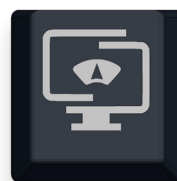
## MODBUS



TCP Server



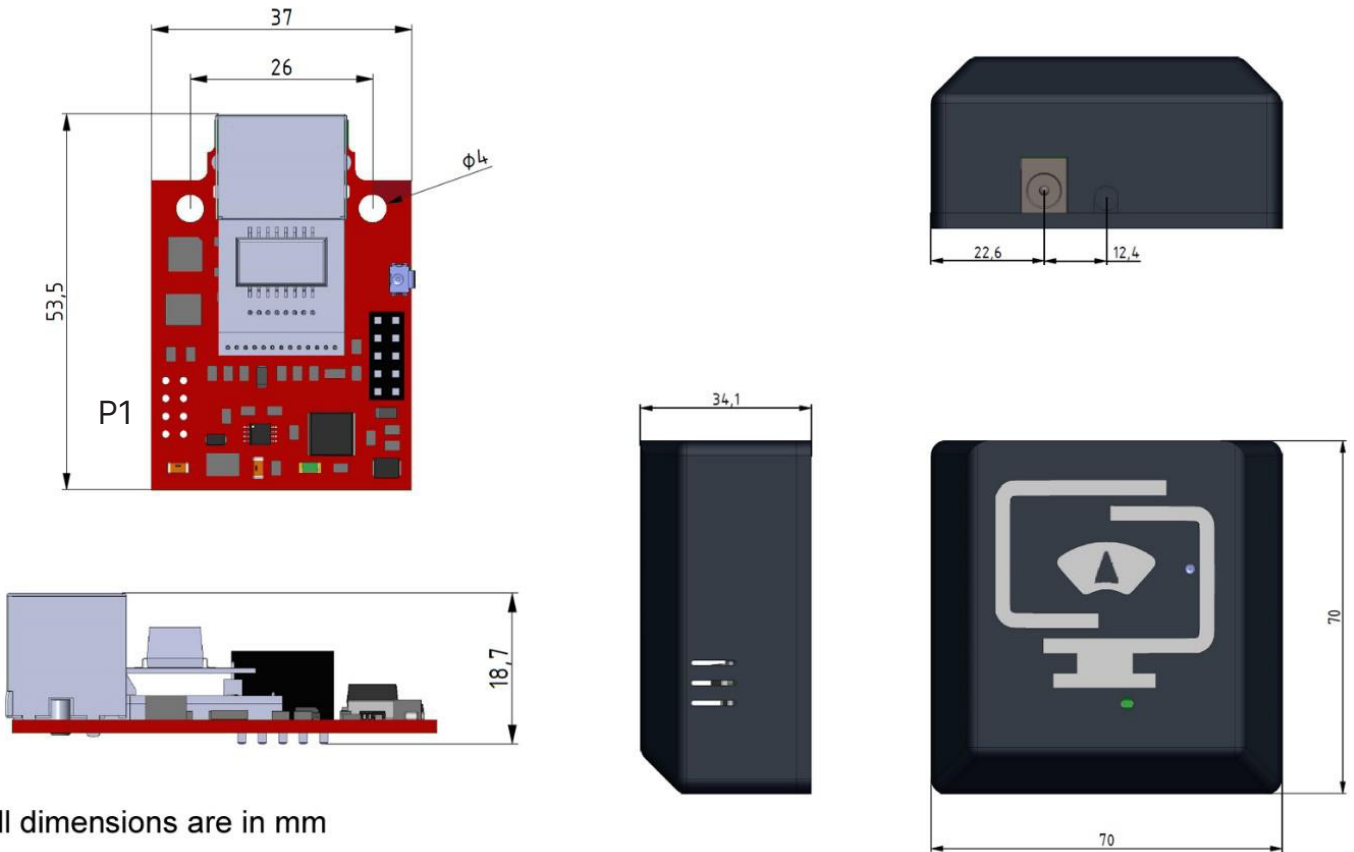
TCP Client



MQTT Broker

\* Only CSL-THOR-485 model supports RS-485 connection

# OUTLINE DIMENSIONS



\*All dimensions are in mm

P1 connector:

#	Description	#	Description
Rx0	Serial port 1 - receive RX	Rx1	Serial port 2 - receive RX
Tx0	Serial port 1 - transmit TX	Tx1	Serial port 2 - transmit TX
GND	Ground	GND	Ground
-Vin	0 Vdc	+Vin	5-24Vdc

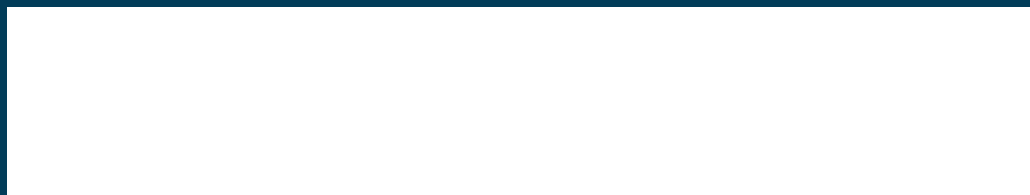
# Connecting scales

around the globe.



CloudScaleLink

Your local partner



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