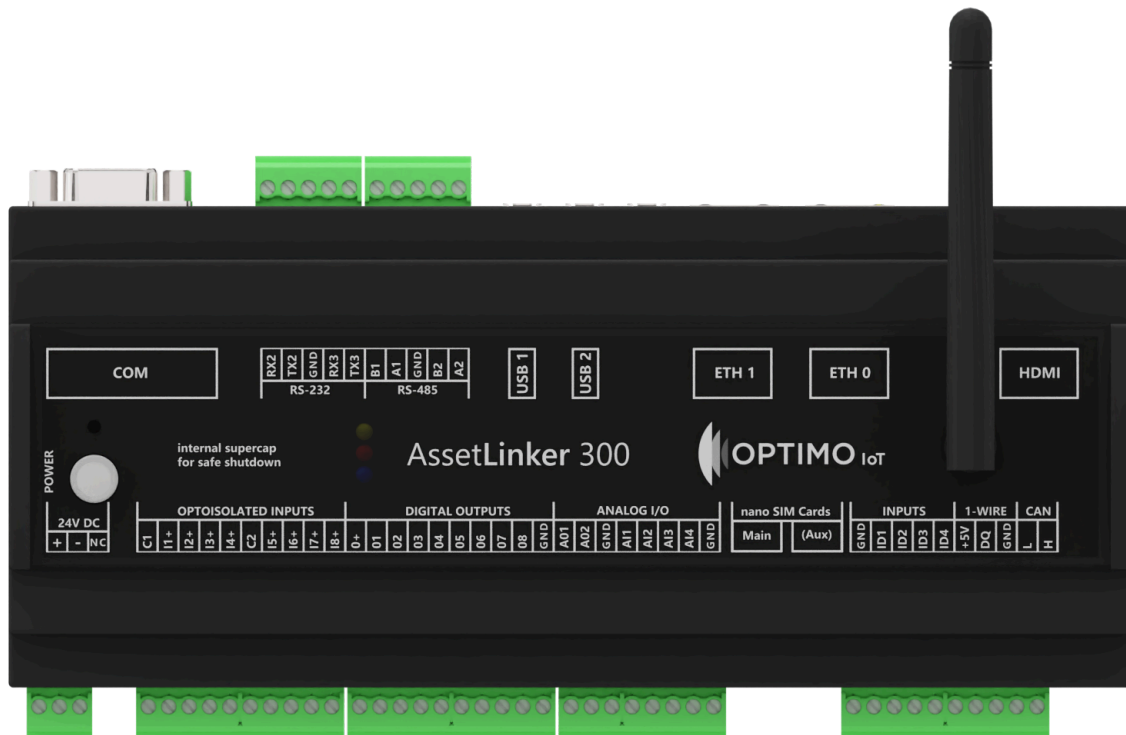


Optimo IoT AssetLinker 300 Gateway



AssetLinker 300 is an IoT gateway for civil and industrial applications based on Raspberry Pi CM4 and equipped with a pre-configured Linux operating system for bidirectional communication with the Optimo IoT cloud monitoring platform: **with AssetLinker 300 is now possible to quickly connect your systems to the cloud in an Internet of Things type system architecture.**

AssettLinker 300 is equipped with digital and analog I/O, drivers for communication on Modbus RS485 and TCP/IP serial channel, internet connectivity on Ethernet, WiFi and 4G mobile network with SIM, USB and HDMI ports, internal supercapacitors to guarantee shutdown and safe restart in case of power failure.

AssetLinker 300 has a local configuration interface through which it is possible to configure the gateway for internet access and for data acquisition from field devices via Modbus RTU or TCP protocol, OPC UA, direct reading of Siemens S300, S1200 and S1500 series PLCs or direct acquisition via I/O from the gateway.

AssetLinker 300 Features

- **Powered by Raspberry Pi CM4 compute module**
 - Broadcom BCM2711 quad-core
 - ARM Cortex-A72 64-bit SoC 1.5GHz
 - 4 GB RAM LPDDR4
 - 32 GB eMMC Flash
- **On board Inputs and Outputs**
 - 8 x digital opto-isolated inputs
 - 4 x dry contact inputs
 - 8 x open drain outputs
 - 4 x analog inputs 0-10V
 - 2 x analog outputs 0-10V
- **Field protocol interfaces**
 - 2 x Modbus RS 485
 - 2 x Modbus RS 232¹
 - 2 x USB 2.0 host
 - 1 x CAN¹
 - 1 x 1-Wire¹
 - 1 x HDMI
- **Network interfaces**
 - 2x Ethernet
 - WiFi
 - Modem 4G with nanoSIM interface
- **Real Time Clock**
 - Real Time Clock with supercapacitor backup
- **Robust industrial design**
 - 2 x Two watchdogs
 - Meets requirements of EN 61326-1:2013 for basic and industrial electromagnetic environments
 - Meets TPM main specification, family 2.0
 - 24V DC Power supply

- DIN rail enclosure with optional wall mount bracket

- **Integrated UPS**
 - Supercapacitor based UPS for reliable operation
 - Safe shut down procedure
 - Battery free design
- **Optimo IoT custom firmware**
 - Optimo IoT firmware for quick connection to the Optimo IoT cloud
 - Local interface for gateway set-up
 - Integrated webserver
 - VPN Optimo IoT

Main Applications

- Industry 4.0
- Vibration monitoring
- Predictive maintenance
- Industrial automation
- ESCO ed Energy Manager
- HVAC and POWER CENTER systems
- Photovoltaic systems
- Energy monitoring systems and CEER
- Machine manufacturers

¹ Available in future releases

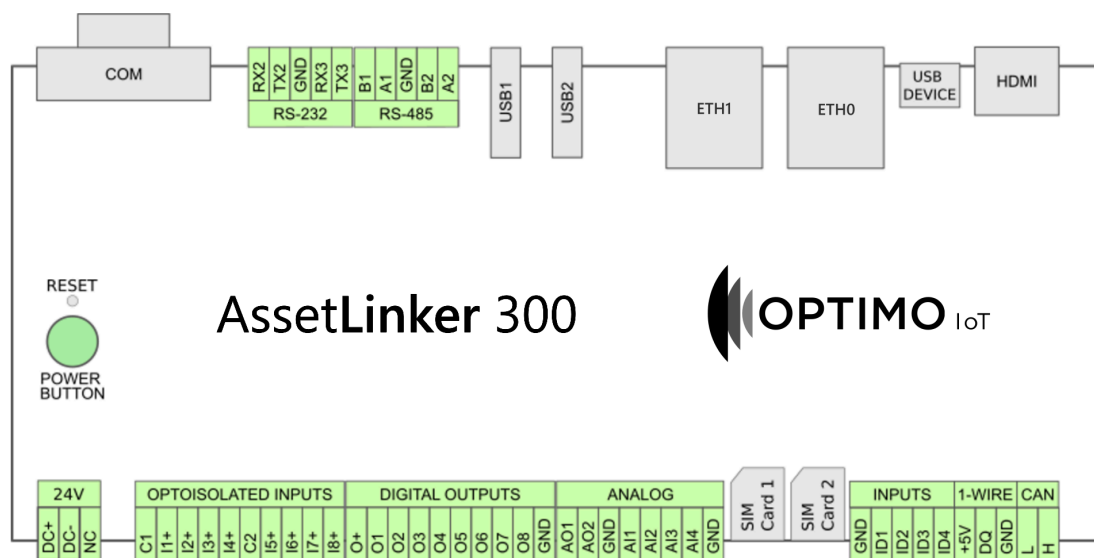
Technical Specifications

CPU & memory	
SoC	BCM2711, quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz1
RAM memory	4 GB LPDDR4
Flash memory	32 GB eMMC
Operating system	Yocto Linux based Optimo IoT Firmware
Power supply	
Supply voltage	24 V d.c. (20 32 V dc)
Current consumption	8,5 W
Power consumption	0,35 A @ 24V dc
Interfaces & I/O	
Ethernet	1 x RJ45 – 1 Gbit
	1 x RJ45 – 100 Mbit
Seriale per Modbus	2 x RS-485 – terminal blocks
	2 x RS-232 – terminal blocks
1-WIRE	1 x 1-WIRE – terminal blocks
CAN	1 x CAN – terminal blocks
I/O Digitali	8 x digital opto-isolated inputs
	4 x dry contact inputs
	8 x open drain outputs
I/O Analogici	4 x analog inputs 0/10 V
	2 x analog outputs 0/10 V
USB	2 x USB host 2.0 type A
HDMI	1 x HDMI
SIM	2 x slot nano SIM
TPM	TPM “Trusted Platform Module”

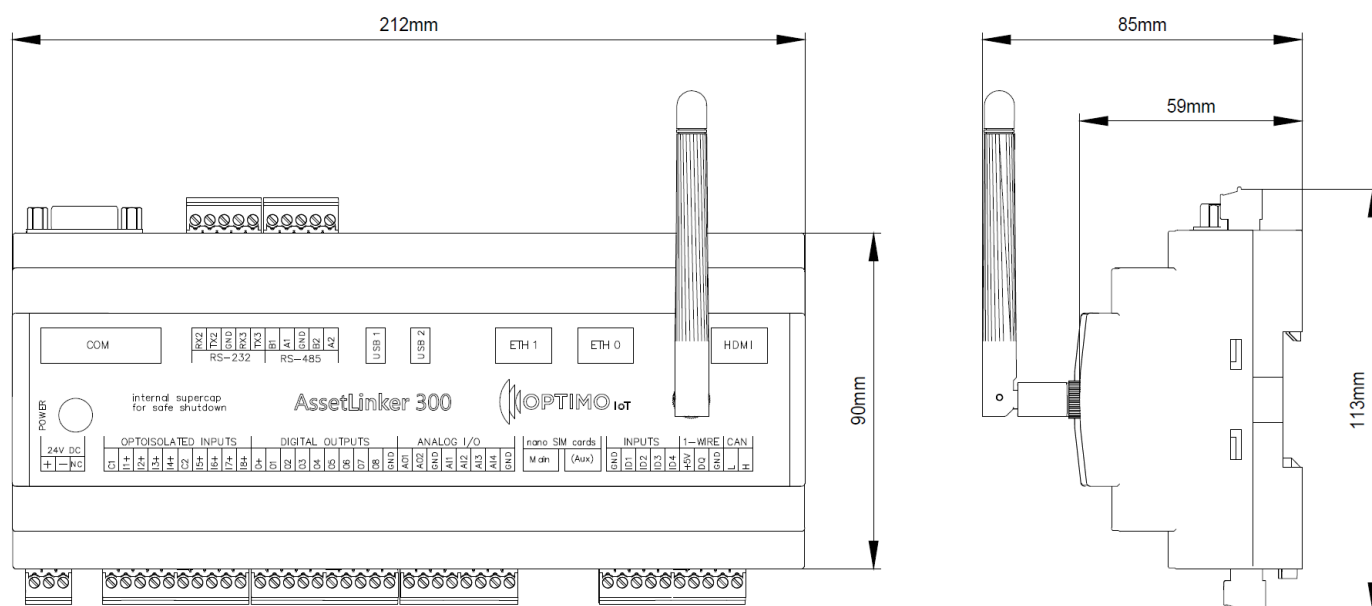
UPS	Supercapacitor based UPS	
Driver & connectivity		
Driver	Modbus TCP/IP, Modbus RS485	
	PLC Siemens with Siemens S7 protocol	
	OPC UA	
Connectivity	2 x network LAN Ethernet	
	1 x internal WiFi	
	1 x modem 4G	
Cloud connectivity	MQTT - X.509 authentication certificate	
VPN	VPN Optimo IoT	
Limiti di funzionamento I/O		
Digital opto-isolated inputs	Low-level input voltage	0 ... +5 V dc
	High-level input voltage	+10 ... +28 V dc
	Isolation voltage	kV _{RMS}
	Input resistance	>=10 kohm
Open drain outputs	Maximum current	mA
	Maximum voltage	V dc
Analog inputs	Voltage Range	0 ... +10 V dc
	Resolution	10 bit
Analog outputs	Voltage Range	0 ... +10 V dc
	Resolution	10 bit
5V output DC	Maximum current	0,10 A
Terminal blocks	Wire range	0,5 – 1,5 mm2 28-16 AWG
	Torque	0,2 Nm
	Strip length	7 mm
Standards		
EU standard	EN IEC 61326-1:2021	
EMC standards	Group 1 class A and class B equipment according to EN IEC 61326-1:2021	

	Industrial electromagnetic environment according to EN IEC 61326-1:2021
Environment	
Operating Temperature	0 °C – 50 °C
Operating Relative Humidity	5 – 90 %UR – non condensing
Storage Temperature	-25 °C – 50 °C
Protection Rating	IP20
Miscellaneous	
Watchdog	1 x watchdog SoC BCM2711 built-in
	1 x watchdog connected to GPIO
RTC backup battery	CR2032 – Tensione 3 V
Dimensions	
Dimensions	212 mm x 114 mm x 59 mm (incluso ingombro dei connettori a morsetti)
Weight	400 gr
Enclosures	Plastica ABS
Mounting	Montaggio su guida DIN
	Montaggio a parete
Notes	
AssetLinker 300 is not authorized for use in safety-critical applications	

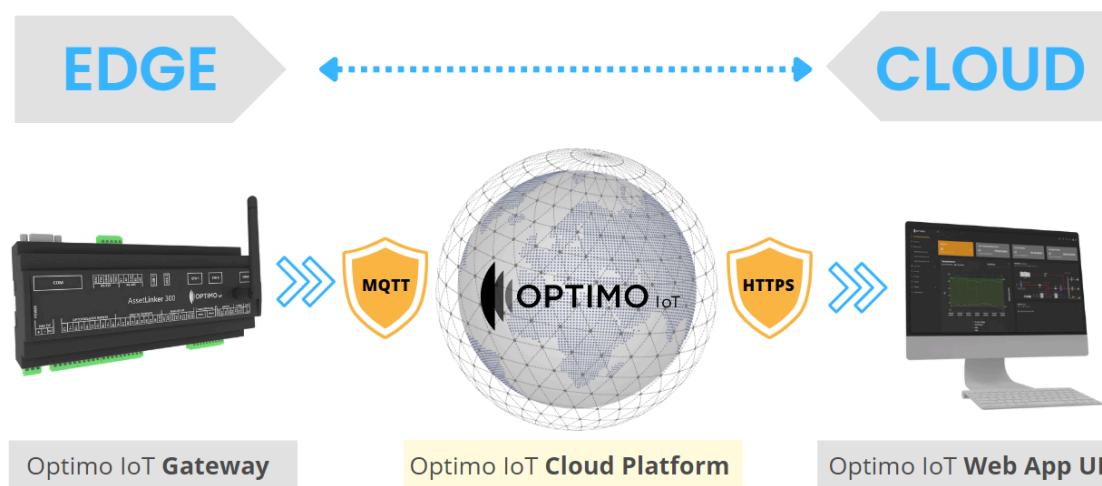
Connections



Dimensions



Optimo IoT Internet of Things Optimo Architecture



Order codes

Order codes	
Code	Description
OPT.GW.1001	Gateway Optimo IoT AssetLinker 300
OPT.GW.1002	Mobile 4G external antenna. Cable lenght 3,00m



Optimo IoT s.r.l.
 Via Francesco Restelli, 3 – 20124 Milano (MI)
 Tel 039 5969780 – Mail info@optimoiot.it
 P.IVA 03834900130 – www.optimoiot.it

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