



opt.control // Central Control Unit



PRODUCT DESCRIPTION

This plug & play Olmatic Gateway **opt.control** is the intelligent control center for the future of the digital energy world and ensures platform-independent networking of all systems. Using open industry standards enables comprehensive communication between your devices and the cloud infrastructure. Based on AI with deep learning algorithms, your system learns to optimize energy requirements automatically.

Platform independent:

Interfaces: Ethernet/IP, WLAN, 6LoWPAN

Communication protocols: TCP/IP, OPC UA, MQTT, OCPP, ...

PLUG & PLAY

It connects energy consumers, as well as sources and storage sources and storage platforms and manufacturer-independent with each other and thus forms maximum transparency of all energy parameters in real time in combination with the wireless sensors. Through an interface to the Olmatic IoT Cloud, separated and secured by the on-premises infrastructure, this IoT edge gateway forms the link between the customer's on-premises system and the intelligent Olmatic IoT Cloud, which, in addition to an intuitive, graphical interface for visualizing any parameters also provides the functionality of dynamic and automatic load management via specifically developed deep learning algorithms. This bi-directional connection between consumer, source and storage power consumers on the customer side and the Olmatic IoT Cloud through a central IoT edge gateway enables the full functionality of creating maximum transparency, analysis and detection of optimization potentials, up to the implementation of dynamic and automatic load management.

INTELLIGENT CLOUD

The Olmatic IoT Cloud Infrastructure is the central control and management center for all IoT Edge Devices in Olmatic Power Tracking. Each device is automatically registered and equipped with the appropriate software modules including its own database – software or license updates run OTA without any problems via digital device twins. Our innovative frontend/UI allows you to visualize all data and access the backend to configure the system and individual workflows. The sophisticated security system provides comprehensive protection for all your data. Plug & Play into the Olmatic IoT.

TECHNICAL OVERVIEW

Power Supply	+7-48 VDC (terminal block)
Maximum Power Consumption	7W
Average Power Consumption	< 3W
Maximum Current Consumption	2A with activated charging circuit (Supercaps)
Average Current Consumption	< 1A
Size (W x D x H)	45 x 99 x 114.5 mm
Weight	0,14 kg
Protection class	IP40
Operation temperature	-40°C - +85°C (Industrial)
Storage temperature	-40°C - +85°C (Industrial)
Humidity	Operating: 10 to 90% r. H. non cond. / Storage 5 to 95% r. H. non cond.
Casing material	Polycarbonate
Galvanic Isolation	yes
Mounting DIN rail	DIN EN 60715:2018-07
Safety / EMC	EMC Directive 2014/30 / EU, IEC 62368-1: 2014, IEC 61140: 2016 / 2014/53/EU (Radio Equipment Directive)

CPU & INTERFACES

CPU	Intel® Apollo Lake / Intel® Pentium® N4200
DRAM (Dynamic Random Access Memory)	8GB 2400MT/s LPDDR4
Chipset	Integrated in SoC
Ethernet	2x Intel® I210 Industrial Gigabit Ethernet Controller
I/O Interfaces	2x RJ45, 1x Power Terminal, 1x PE Contact, 1x USB3.0 (internal)
Mass Storage	32GB eMMC 5.0 onboard flash
Board & System controller	Multistage watchdog / Smart Battery Management / ACPI 5.0 compliant
Wireless communication	WiFi, 6LoWPAN Smart Mesh
Communication protocols	TCP/IP, OPC UA, MQTT, OCPP, ...
Operating system	Ubuntu Server LTS
Lighting indicators	PWR, INIT, MS, NS, L/A 1+2