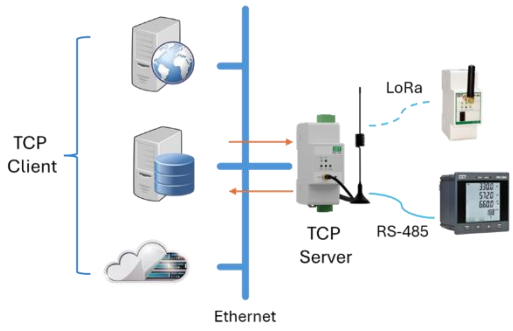
PMC-1202
Ethernet Serial/LoRa Gateway

Overview

The PMC-1202 is an Intelligent Ethernet Serial/LoRa Gateway that provides one 10/100BaseT Ethernet port, 2xRS-485 port, and one optional wireless LoRa port with configurable ISM Bands. Featuring DIN-Rail mounting and compact construction, it is an ideal equipment that serves as a gateway to connect RS-485 and/or LoRa enabled devices to an IP-based Ethernet LAN over an Ethernet network for any SCADA or Automation applications. It also supports Multiple Masters for Transparent Gateway function. Further, the PMC-1202 has been specifically designed with industrial automation in mind and therefore provides un-surpassed performance and reliability under the harshest industrial or commercial environments.

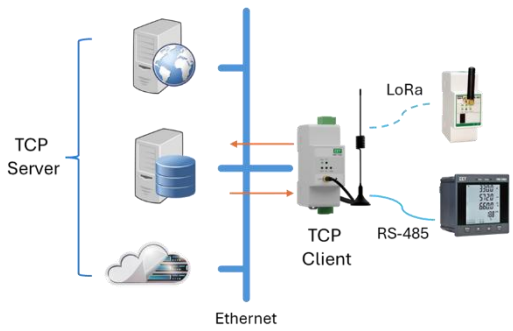
Typical Application Diagram

TCP Server Mode



In TCP Server mode, the TCP Clients can initiate and establish the connection. The TCP Server shall listen to the specified Local IP Port and wait for the TCP client to connect. The data sent by the downstream RS-485-enabled or LoRa devices will be transparently transmitted to all successfully connected TCP clients by the TCP server.

TCP Client Mode

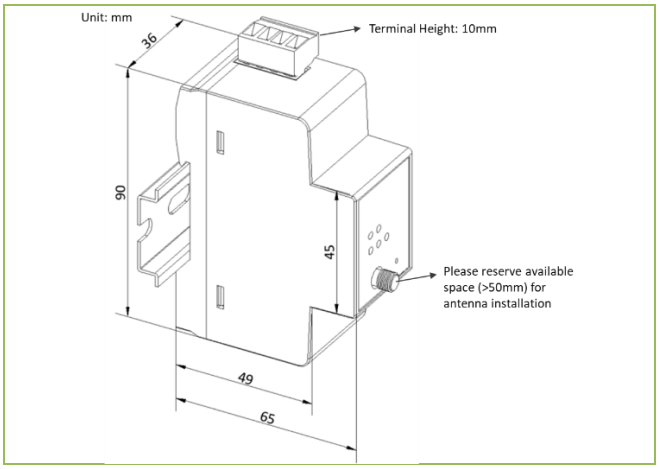


In TCP Client mode, the TCP Client initiates a TCP connection to the target IP address and port. If the connection fails, the TCP client will try to reconnect after the Reconnect Interval, until it succeeds. Afterwards, the RS-485-enabled or LoRa devices communicate bi-directionally with the TCP server through the TCP client.

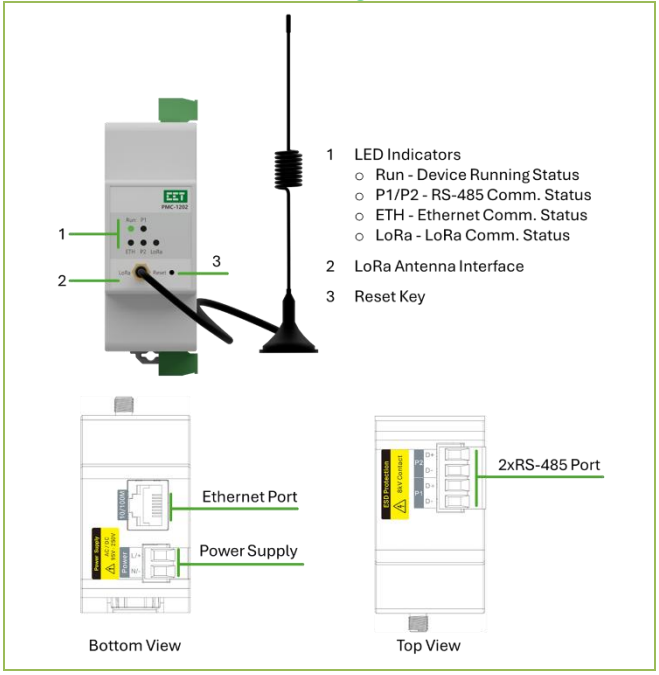
Features

- 1x10/100BaseT (RJ45) port with MDI/MDIX auto-detect, 1.5kV isolation protection
- 2xRS-485 port with 15kV (Air Discharge) & 8kV (Contact Discharge) ESD protection and 3kV isolation protection
- Optional LoRa port with configurable ISM Bands for EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923 and AS923-925
- Transparent Gateway between Ethernet port and RS-485/LoRa
  - TCP Server/Client and UDP Server/Client modes
  - Maximum 4 Masters per RS-485/LoRa port
  - Maximum 128 downstream LoRa devices per PMC-1202
- Modbus TCP to RTU Gateway
  - TCP Server and TCP Client modes
  - 32 Slave IEDs per RS-485 port
  - Maximum 4 Masters per RS-485/LoRa port
  - Supports caching up to 32 messages per RS-485/LoRa and max. 6 configurable function codes (Read-Only) under TCP Server mode
- WebSocket and HTTPD Client
- Communication Delay < 10 ms under normal operating conditions
- One-key Reset to Factory Default
- Built-in Web Interface for configurations
- Online firmware upgrade with free software via Ethernet
- DIN-Rail Mounting
- Extended operating temperature

Dimensions and Installation



Front Panel and Terminal Diagram



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Technical Specifications

Communication	
Ethernet Port	10/100 Mbps
Protocol	TCP, UDP, HTTP, WebSocket
RS-485 (P1, P2)	
Baudrate	300/600/1200/2400/4800/ 9600/19200/38400 bps
Data Bits	7, 8
Stop Bits	1, 2
LoRa (Optional)	
RF Range	860-935 MHz
ISM Bands	EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925
RF Output Power	18 dBm (Maximum)
Receiver Sensitivity	-136 dBm (Maximum)
Output Watts	0.03 (Typical)
FCC Part 15C	Certified by TCB
Power Supply (L/+, N/-)	
Standard	95-250VAC/DC ± 10%, 47-440Hz
Optional	12-36VDC
Burden	≤3W
Protection	
ESD Protection	15kV (Air) & 8kV (Contact)
Isolation Protection	3kV for RS-485 Ports 1.5kV for Ethernet Port
Environmental Conditions	
Operating Temp.	-25°C to +70°C
Storage Temp.	-40°C to +85°C
Humidity	5% to 95% non-condensing
Atmospheric Pressure	70kPa to 106kPa
Mechanical Characteristics	
Unit Dimensions	36x65x90mm
Mounting	DIN Rail

Ordering Information

Version 20241108

Product Code	Description
PMC-1202	Ethernet Serial/LoRa Gateway
Basic Function	
T	Modbus TCP/RTU Gateway and Transparent Gateway
Power Supply	
2	95-250VAC/DC ± 10%, 47-440Hz
3*	12-36VDC
Communication Ports	
T2	1x10/100BaseT Ethernet Port+2xRS-485 Port
LoRa	
N	None
7*	LoRa (860-935 MHz) configurable for EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925)
Language	
E	English

PMC-1202	-	T	2	T2	N	E	PMC-1202-T2T2NE(Standard Model)

* Additional charges apply

Standard of Compliance

Safety Requirements	
Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements	IEC 62368-1: 2014 + A1: 2017
Electromagnetic Compatibility CE EMC Directive 2014 / 30 / EU (EN 55035: 2017 + A11: 2020)	
Electrostatic Discharge	EN 61000-4-2: 2009
Radiated Fields	EN 61000-4-3: 2020
Fast Transients	EN 61000-4-4: 2012
Surges	EN 61000-4-5: 2014 + A1: 2017
Conducted Disturbances	EN 61000-4-6: 2014
Magnetic Fields	EN 61000-4-8: 2010
Voltage Dips and Interruptions	EN IEC 61000-4-11: 2020
Emission Tests	
Electromagnetic Compatibility of Multimedia Equipment-Emission Requirements	EN 55032: 2015 + AC: 2016 + A11: 2020
Limits for Harmonic Current Emissions for Equipment with Rated Current ≤16 A	EN IEC 61000-3-2: 2019 + A1: 2021
Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current ≤16 A	EN 61000-3-3: 2013 + A2: 2021
Emission Standard for Residential, Commercial and Light-Industrial Environments	EN 61000-6-4: 2007+A1: 2011
Radiated Emission and Conducted Emission	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-3 V2.3.2
Radio Equipment Directive (RED) 2014 / 53 /EU	
Assessment of Electronic and Electrical Equipment Related to Human Exposure Restrictions for Electromagnetic Fields (0Hz - 300 GHz)	EN IEC 62311: 2020
Short Range Devices (SDR) Operating in the Frequency Range 25 MHz to 1000MHz	ETSI EN 300 220-1 V3.1.1: 2017 ETSI EN 300 220-2 V3.1.1: 2017
Mechanical Tests	
Freefall	IEC 60068-2-31: 2008
Vibration	IEC 60068-2-6: 2007
Shock	IEC 60068-2-27: 2008

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Your Local Representative

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Designed For Reliability *Manufactured To Last*