Internet of Things continues to be one of the key technology trends in the recent years and utilities representing the energy market understand its advantages. Well-thought integration of the IoT with existing smart grids will extend benefits beyond distribution, automation and monitoring, making energy use more efficient and saving billions of Euros. JPEmbedded’s JPE 61850 – papilio gateway is a cost saving, hardware solution allowing integration of various IoT devices with the grid.

IEC 61850 is an international standard describing data model and communication services for power grid devices. IEC 61850 improves interoperability between systems provided by diverse manufacturers.

**KEY FEATURES**

- Conversion of MQTT, Modbus RTU, Modbus TCP and IEC 60870-5-103 to IEC 61850.
- Certified IEC 61850 stack.
- Full IEC 61850 support including MMS, GOOSE, and SV communication.
- User friendly configuration interface.
- Connection of a few devices to IEC 61850 network at the same time (one-to-many).
- Low cost solution.
- Easy mapping and configuration by our Drosera application.

**APPLICATION**

Scan to meet Drosera
SYSTEM ARCHITECTURE

**PROTOCOLS**

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Modbus TCP</th>
<th>Modbus RTU</th>
<th>MQTT</th>
<th>IEC 60870-5-103</th>
<th>IEC 61850</th>
</tr>
</thead>
</table>

**TECHNICAL SPECIFICATION**

<table>
<thead>
<tr>
<th>System</th>
<th>Inputs and outputs</th>
<th>Mechanical</th>
<th>Power supply</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>ETH x 1</td>
<td>PCB dim.</td>
<td>DC</td>
<td>Operating Temp.</td>
</tr>
<tr>
<td>Memory</td>
<td>UART x 1</td>
<td>70x48x16 mm</td>
<td>5V - 12V</td>
<td>-20+60°C</td>
</tr>
<tr>
<td>OS</td>
<td>FreeRTOS</td>
<td></td>
<td></td>
<td>Storage Temp.</td>
</tr>
</tbody>
</table>

STM32F7 (216MHz)
FLASH (64 KB)
SRAM (320 KB)
SDRAM (8MB)
NOR Flash (2MB)
EEPROM
1 x UART
ETH Phy
1 x LED
5-12V Supply
RJ45
Header