# iDERMS RTU

**DERs management system / Hardware and data service**

| | | | | | | |
|---|---|---|---|---|---|---|
| **01** | **02** | **03** | **04** | **05** | **06** | **07** |
| High Security & Reliability | Granular Data Acquisition | High Compatibility | Self Data Recovery & Protection | Remote Configuration | Automated Calibration | Edge Computing |

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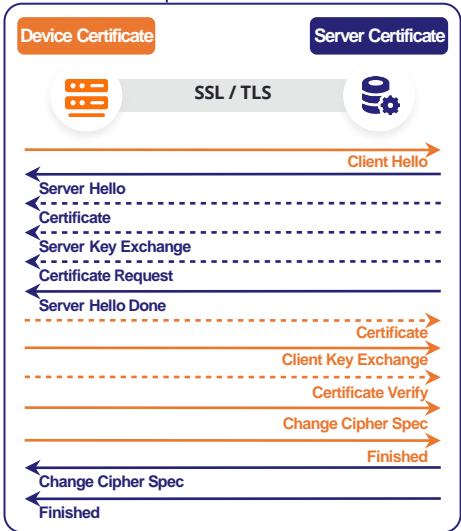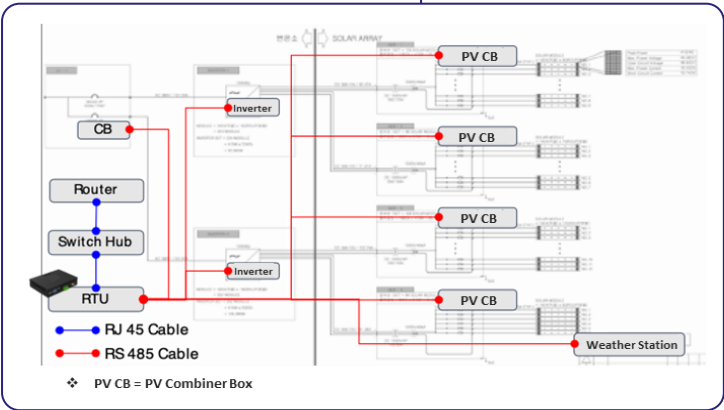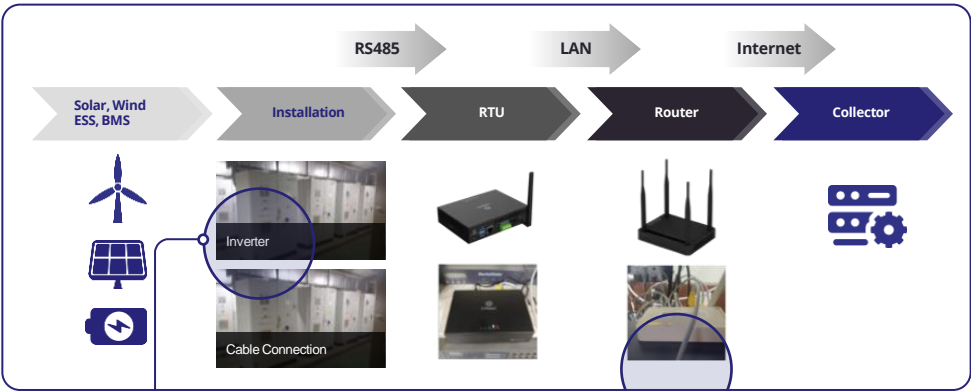**ENCORED**

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# SPECIFICATIONS



- iDERMS RTU (Remote Terminal Unit)
- Complete connection of over 80 inverter models, PCS, BMS, etc.
- Supports edge computing within device itself

| | | |
|---|---|---|
| **GENERAL DESCRIPTION** | **Type** | Energy Data Gateway (RTU) |
| | **Gathering Target** | Inverter / Meter/ PCS/ BMS, etc. (Minimum Data Collection Interval : 1 sec.) |
| | **Number of Devices** | ~15 |
| | **Transmission Interval** | 1~15 minute |
| | **Communication** | Wire / Wireless Connectivity |
| | **Dimension** | 150 x 110 x 39 (mm) |
| **ELECTRICAL SPECIFICATIONS** | **Power Supply** | DC 5V |
| | **Operation Temperature** | 0℃ ~ 50℃ (Recommended) |
| | **Power Consumption** | ~15W |
| **COMMUNICATION** | **Connectivity** | • Front-haul : Serial, Ethernet<br>• Back-haul:<br>    • Wi-Fi : 2.4GHz/5GHz IEEE 802.11b/g/n/ac<br>    • Ethernet : RJ45 (~1Gbps)<br>    • LTE: Optional |
| | **Port Interface** | • Serial : RS485 x3<br>• Ethernet : RJ45 x1<br>• Wi-Fi / LTE (Optional) : Intenna / Antenna |
| | **Protocol** | Modbus RTU/TCP, HTTP(S), MQTT, DLMS/COSEM, SNMP, proprietary inverter protocols |
| **MAIN FEATURES** | **Interaction** | LED |
| | **Data Backup** | 1 month |
| | **Firmware Upgrade** | FOTA / USB |
| | **Data Security** | SSL, PKI, HSM |
| | **Warranty** | 1 year |
| **CERTIFICATION** | **FCC** | 210200079SEL-EMC2 (Class A) |
| | **KC** | R-R-EdT-SGWBWB |
| | **UL** | 5022322 |

# Data Acquisition

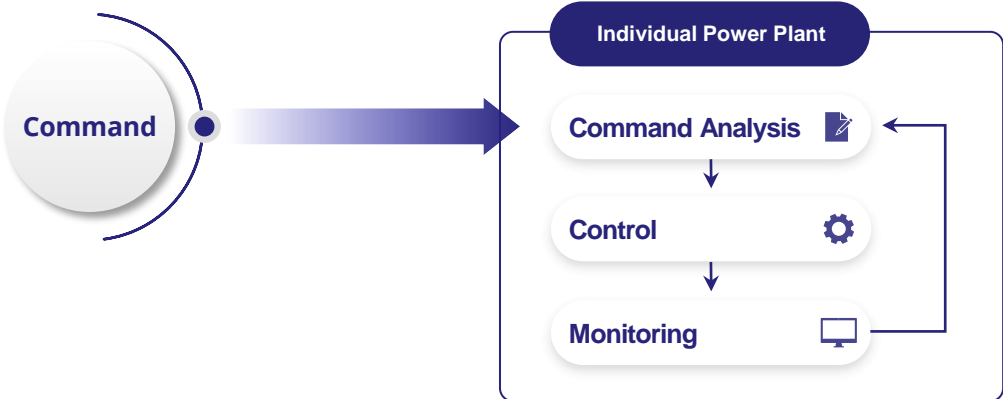- In-depth and comprehensive knowledge and experience on data acquisition
- High-end RTU to enable robust data logging and control



RS485 → LAN → Internet

| Solar, Wind ESS, BMS | Installation | RTU | Router | Collector |

Inverter

Cable Connection

**Device Certificate**  **Server Certificate**

SSL / TLS

Client Hello
Server Hello
Certificate
Server Key Exchange
Certificate Request
Server Hello Done
Certificate
Client Key Exchange
Certificate Verify
Change Cipher Spec
Finished
Change Cipher Spec
Finished

PV CB
Inverter
CB
Router
Switch Hub
RTU
Weather Station
RJ 45 Cable
RS 485 Cable

❖ PV CB = PV Combiner Box

# Power Plant, PCS Control

**Delivery of control command from central/local level**

- Output control of power plant based on bidding result
- ESS charging/discharging
- Emergent control by embedded rules at local level

Command

**Individual Power Plant**

**Command Analysis**

**Control**

**Monitoring**

# ENCORED

**www.encoredtech.com**

For more information about our
hardware and data platform,
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