

3Q OM Smart PV Data Gateway / Transmitter

QC TS-OM

PRODUCT OVERVIEW

The 3Q OM Transmitter serves as the core data acquisition and communication gateway for Module-Level Power Electronics (MLPE) monitoring solutions. Utilizing high-efficiency Power Line Communication (PLC) technology, the device accurately captures and transmits key PV module operating data, including voltage, current, and temperature.

Multiple transmitters can operate synchronously. Power by adaptive Crosstalk Mitigation Technology. This effectively eliminates signal crosstalk between multiple transmitters, delivering highly reliable data support for downstream big data training and intelligent operations and maintenance (O&M).

ARCHITECTURE



Module-Level Data Collection

High-frequency real-time monitoring empowering big data analytics and system insights.

Adaptive Crosstalk Suppression

Suppresses signal crosstalk, ensuring maximum signal purity and transmission reliability

Multi-Dimensional Connectivity

Supports flexible Wi-Fi and LAN networking for seamless data uplink

CORE APPLICATION SCENARIOS

- **Data Acquisition & Transmission:** Reads PV module operating status in real time, acting as the central system communication gateway.
- **Smart Operations & Maintenance (O&M):** Quickly pinpoints faulty modules to enable precise and efficient maintenance support.
- **Big Data & AI Analytics:** Uploads high-precision module-level data to empower subsequent data modeling and AI algorithm training.

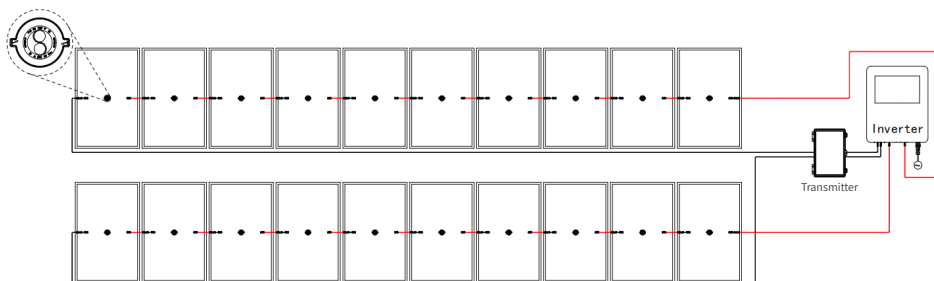
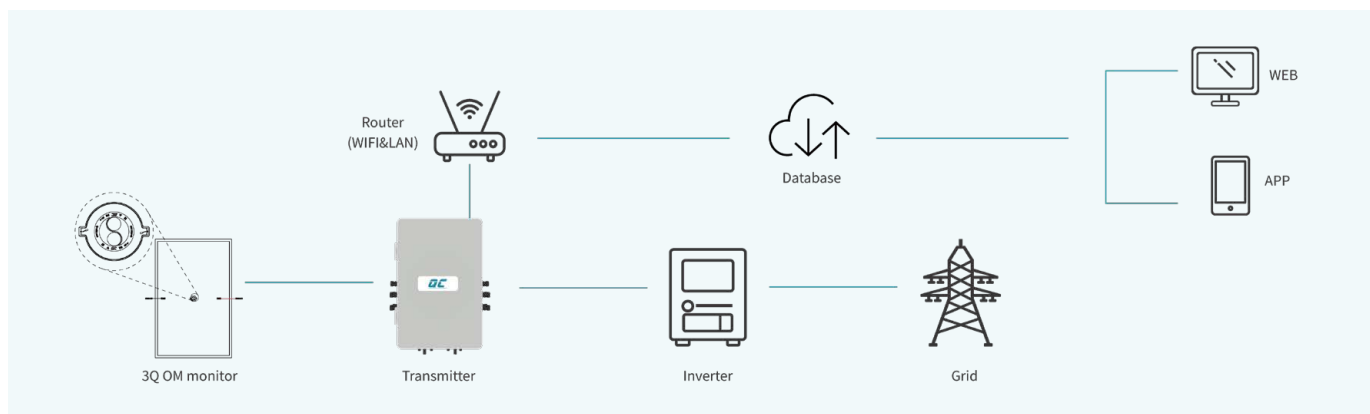
KEY FEATURES & ADVANTAGES

- **High Scalability:** Perfectly adaptable to residential distributed PV.
- **Flexible Configuration:** Supports single or dual core configuration; dual-color core design ensures accurate wire polarity connection.
- **High Compatibility:** Broadly compatible with mainstream inverter brands; supports customized customer requirements.
- **Simplified Installation:** Quick deployment by threading the PV DC negative cable through the core, reducing labor costs.

TECHNICAL SPECIFICATIONS

Category	Item / Parameter	Specification
Electrical Specifications	Transmitter Input Voltage	12V DC ($\pm 2\%$)
	Transmitter Input Current	1A
	Power consumption	Max 5.5W / Average 0.85W
Array & Capacity	Max String Voltage	1500V DC
	Max Number of Strings	2 Strings
	Max Supported PV Modules per String	24 Module
Mechanical & Env	Dimensions (W × D × H)	200 × 300 × 180 mm
	Operating Temperature	-40° C to +85° C (-40° F to +185° F)
	Enclosure Protection Rating	IP68 (High-grade Dustproof & Waterproof)
Communication	Downlink / Uplink Communication	PLC Carrier Communication / Supports Wi-Fi & LAN Uplink

APPLICATION SCENARIO & BLOCK DIAGRAM



Note:

1. Simply pass the negative line of the photovoltaic power supply through the magnetic ring