



G3-PLC Module

Introducing G3-PLC, the pioneering power line communication module designed for seamless smart grid integration. Built on the robust foundation of OFDM modulation and fully compliant with G3 standards

The G3PLC module redefines power line communication with high-speed data transfer and exceptional anti-interference capabilities, outpacing traditional PLC solutions. G3-PLC not only enhances communication speed but also minimizes operational costs with its low-maintenance design. The self-organizing network features automatic addressing and route maintenance, ensuring smooth and efficient meter reading processes.

Effortlessly integrate G3-PLC into your smart electrical meters to unlock advanced AMI functionality, driving innovation and efficiency in your smart grid infrastructure.



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Specification:

Reference Voltage	110 ~ 240V
Operating Voltage Range	70% - 120% Un
Frequency	50Hz and 60Hz (fn) 47.5Hz to 63Hz
Modulation Mode	OFDM
Working frequency	CENELEC A (32kHz to 95kHz); FCC (154kHz to 487kHz)
Anti-attenuation capability	>78DB, related to the operating frequency band, the impedance of the test environment and the phenotype
Data speed	Maximum 300Kbps
Security	128-bit AES and AES
Standard support	IEEE1901.2; IEEE802.15.4-2006; 6LoWPAN; RFC4944
Mechanical dimension	Size (with enclosure): <ul style="list-style-type: none">• Single Phase Meter module: 70mm*50mm*24mm• Three Phase Meter module: 95mm*65mm*27.5mm
Relative Humidity dimension	Up to 95% non-condensing
Reference Voltage	110 ~ 240V



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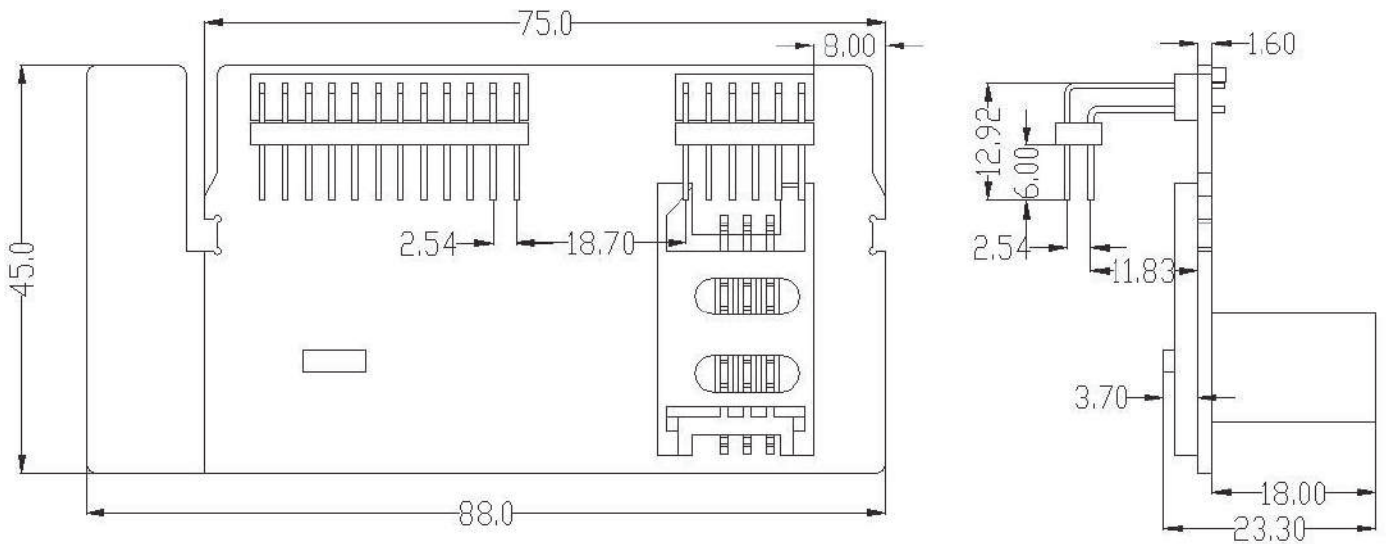
Features & Benefits:

Efficiency	OFDM-based PHY (BPSK, QPSK, 8PSK) - The "robust" mode of module improves communication under noisy channel conditions, operates at -15 dB SNR
Compliance	Compliant with world regulatory bodies such as CENELEC, ARIB, and FCC (10kHz - 490kHz) - Auto switch between CENELEC-A and FCC to adapt different scenario according to the DCU
Standards Based	<p>Standard in IEEE, ITU, IETF</p> <ul style="list-style-type: none">• Two layers of forward error correction (FEC) for robust data communication in harsh channels• Adaptive tone mapping for optimal bandwidth utilization• Channel estimation to select the optimal modulation scheme between neighboring nodes• IEEE 802.15.4-based MAC layer well suited to low data rates• 6LoWPAN adaptation layer to transmit IPv6 packets over power line channels• Support IPv6 to allow Internet-based energy management systems and applications
Security	AES-128 cryptographic engine for data security
Protocol	<p>Mesh routing protocol to determine the best path between remote network nodes</p> <ul style="list-style-type: none">• The maximum nodes 500• The maximum hops 14 <p>DLMS interface with meters</p>
Certification	G3-PLC alliance certified product
Upgrade	Support over the power line update for firmware (OTP)



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Dimensions:



EDMP

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