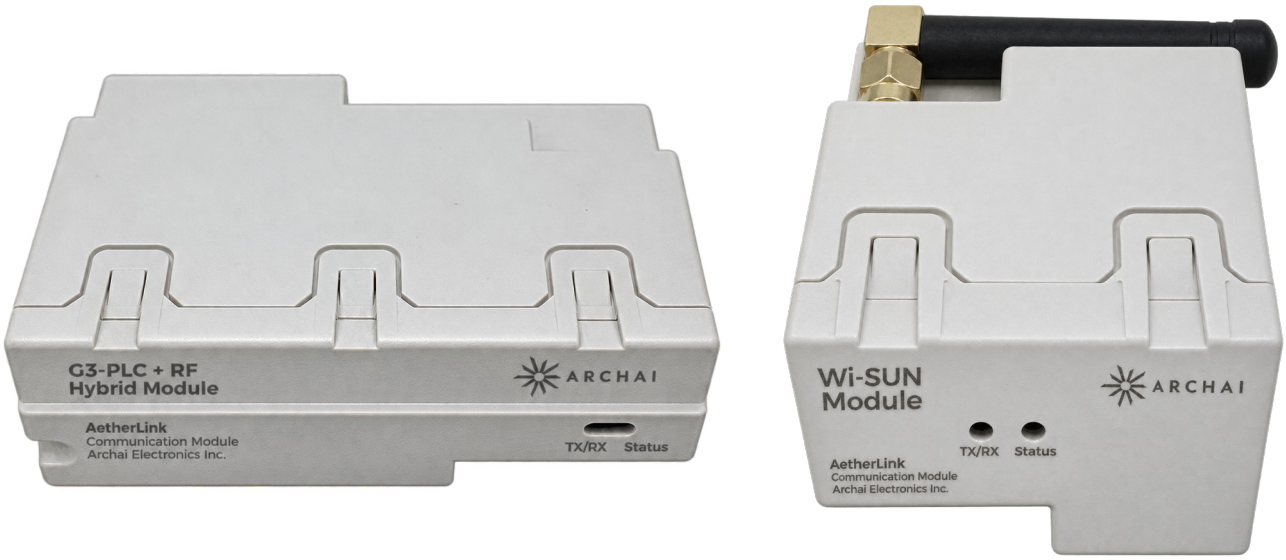
ARCHAI / COMMUNICATION MODULES / ENGLISH EDITION

AetherLink

Communication modules for smart-meter networks

Power line. Radio. Cellular. A communications choice for the network you are building.



Product visualisations · configuration-dependent appearance

A communications layer for AMI

AetherLink brings together plug-in communication modules for compatible smart meters and field devices. The range covers G3-PLC, broadband PLC, RF mesh, Wi-SUN, cellular and two hybrid PLC/RF options. Each option serves a defined communications role within an advanced metering infrastructure (AMI) implementation. Selection begins with the required network technology, then the host interface, gateway or operator, regional configuration and software integration.

The range

HYBRID	POWER LINE	WIRELESS	CELLULAR
G3-PLC + RF BPLC + RF	G3-PLC BPLC	Wi-SUN RF Mesh	GPRS / 3G / 4G By variant

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AETHERLINK / SELECTION GUIDE

Choose the communications path.

Start with the technology specified for the access network, then confirm the host, network equipment and regional configuration.

Where the module fits

FIELD DEVICE	ACCESS NETWORK	UPSTREAM CONNECTION
Compatible meter / field device	AetherLink module + selected medium	Compatible gateway or operator network

System context is illustrative. Host application protocols, upstream services and interoperability depend on the complete implementation.

Product selection

MODULE	MEDIUM / NETWORK	SELECTION CONTEXT
G3-PLC + RF	Power line + RF	Consider when both G3-PLC and RF are required within the project architecture.
BPLC + RF	Power line + RF	Consider when the project specifies broadband PLC together with an RF communication path.
Wi-SUN	Wi-SUN network	Consider where the project requires a Wi-SUN-based field communications network.
BPLC	BPLC power-line network	Consider when broadband PLC is specified for the meter-to-gateway communications path.
G3-PLC	G3-PLC power-line network	Consider when G3-PLC is the specified communications technology for the access network.
RF Mesh	RF mesh network	Consider when the project specifies RF mesh communication rather than a PLC or cellular access path.
Cellular	Operator mobile network	Consider when the meter requires a cellular access path through an operator network.

Select a configuration, not an enclosure

The range shares a product-family identity, not a universal electrical interface or guaranteed interchangeability. Select and validate the exact module configuration with its intended host and network equipment.

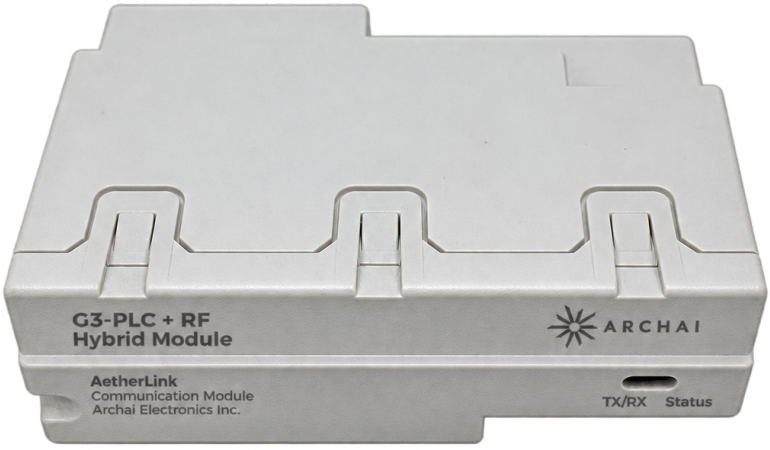
The following pages compare the hybrid, power-line, wireless and cellular options. The individual datasheets provide functional characteristics and integration considerations for each product.

AETHERLINK / PRODUCT RANGE

Hybrid communications.

The hybrid options combine a power-line path with high-frequency RF in a dual-channel module. Choose G3-PLC + RF or BPLC + RF to match the specified access network. Channel coordination is an implementation detail; two channels alone do not establish automatic failover or simultaneous traffic handling.

G3-PLC + RF Hybrid Module

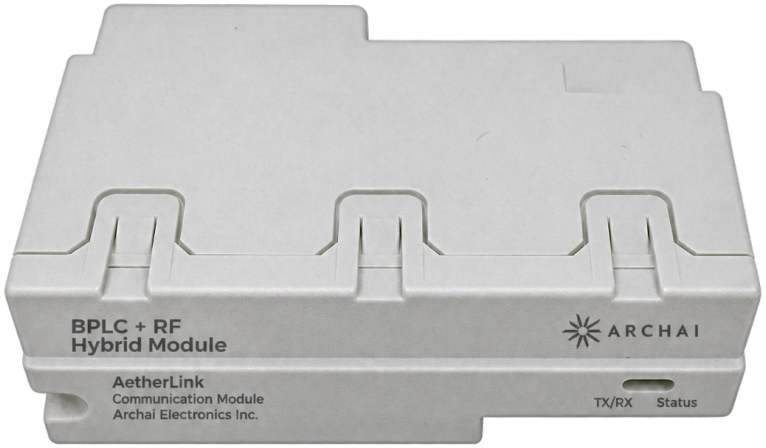


G3-PLC and radio communication in a plug-in module for compatible smart meters.

Consider when both G3-PLC and RF are required within the project architecture.

At a glance: Two communication media; Dual-channel architecture; OFDM and multi-frequency operation.

BPLC + RF Hybrid Module



Broadband power-line and radio communication for compatible smart-meter networks.

Consider when the project specifies broadband PLC together with an RF communication path.

At a glance: Broadband PLC with RF; Dual-channel design; OFDM and multi-frequency operation.

AETHERLINK / PRODUCT RANGE

Power-line communications.

The PLC options exchange data over the low-voltage power network and receive power from a compatible host meter. Choose the G3-PLC or BPLC implementation specified by the project and validate it with the intended gateway. Automatic recovery concerns communications restoration after disturbances; it does not define electrical fault withstand.

G3-PLC Module



G3-PLC communication over low-voltage networks for compatible smart meters.

Consider when G3-PLC is the specified communications technology for the access network.

At a glance: G3-PLC access networking; Meter-supplied power; Automatic recovery.

BPLC Module



Broadband power-line communication between compatible smart meters and gateways.

Consider when broadband PLC is specified for the meter-to-gateway communications path.

At a glance: Broadband power-line networking; Meter-supplied power; Automatic recovery.

AETHERLINK / PRODUCT RANGE

Wireless field networks.

Wi-SUN and RF Mesh are distinct product choices. Both support frequency hopping, automatic network recovery and remote upgrades, but their protocol configuration and gateway compatibility must be established separately. A similar enclosure does not establish interoperability.

Wi-SUN Module



Wi-SUN-based wireless communication for compatible smart meters and field devices.

Consider where the project requires a Wi-SUN-based field communications network.

At a glance: Wi-SUN-based connectivity; Frequency hopping; Automatic network recovery.

RF Mesh Module



RF mesh communication for compatible smart meters and connected field devices.

Consider when the project specifies RF mesh communication rather than a PLC or cellular access path.

At a glance: RF mesh networking; Frequency hopping; Automatic network recovery.

AETHERLINK / CELLULAR AND PROJECT DEFINITION

Connect through the mobile network.



GPRS / 3G / 4G Cellular Module

The cellular option connects the meter to an operator network using the technologies supported by the selected variant. GPRS, 3G and 4G are range options, not a promise that all three are present in every module. Confirm the supported combination and regional configuration before procurement.

Functions include cellular data communication, SMS transmission and reception, and remote upgrade support. Host integration and service availability depend on the selected module and network.

Define your project configuration

AREA	INFORMATION TO AGREE
Host integration	Meter model, connector and pin assignment, power limits, mechanical fit and firmware
Network implementation	PLC or radio profile, gateway compatibility, or the required cellular technologies and operator
Regional configuration	Destination market, operating bands, antenna or coupling arrangement and applicable approvals
Performance and environment	Required throughput, installation conditions, power budget, dimensions and environmental limits
Operations	Network recovery, remote-upgrade process where supported, and upstream application integration

Discuss your configuration

Share the host meter, destination market, network technology and integration requirements with Archai.

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