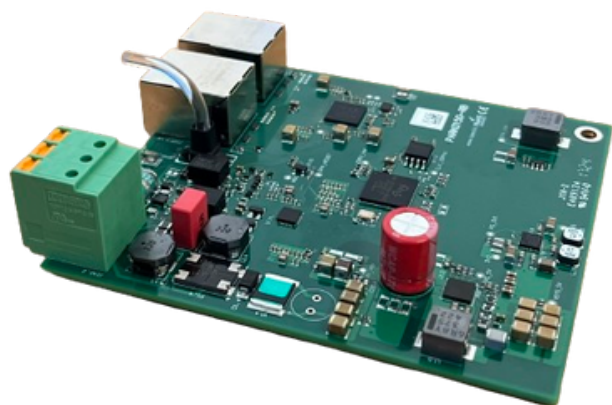# LineWave 1500

OVERVIEW

G.hn Wave-2 Powerline Communication

The LineWave 1500 offers an easy way to work with the G.hn network solution based on power-line communication (PLC).

This technology consists of using the power lines of any installation to transport information signals, this is possible thanks to MaxLinear's Wave-2 Digital Baseband processor and Analog Front End ICs.

LineWave 1500 is a multi-media, multi-interface G.hn industrial IoT module. It combines the G.hn transceiver solution with one Vishay regulators, a pre-programmed 3-output PMIC from MaxLinear and Texas regulator these regulators are responsible for supplying power to the module.
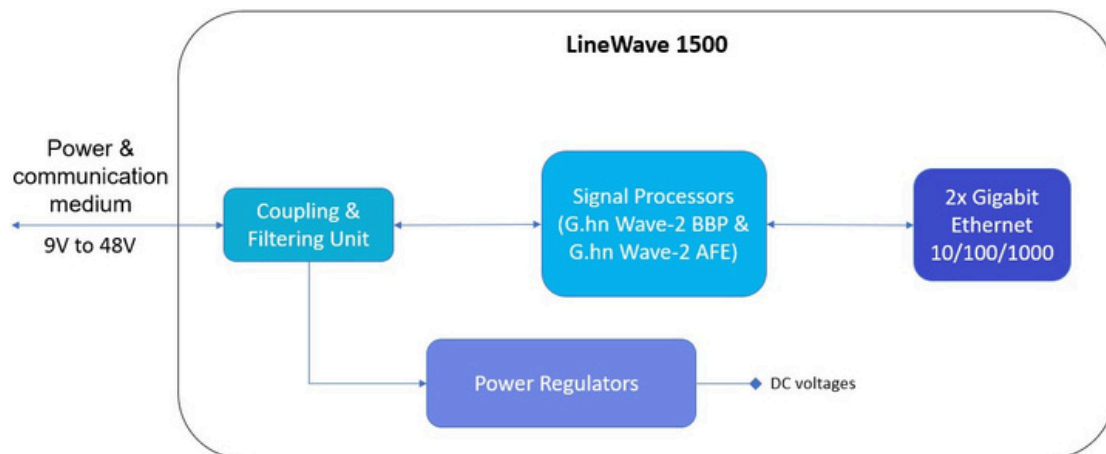
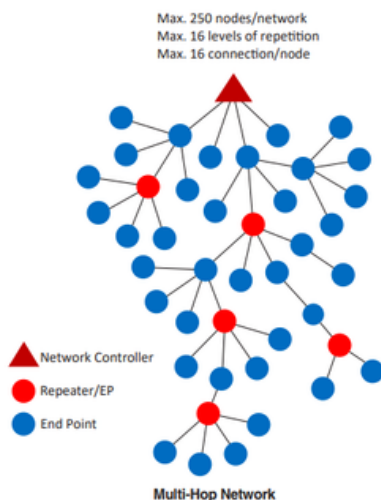To manage the communications this module has a Gb Ethernet switch.

TECHNICAL SPECIFICATIONS

Digital Baseband	MaxLinear G.hn Wave-2 digital baseband processor (88LX5153)
Analog Front End	MaxLinear G.hn Wave-2 analog front end (88LX2741)
Memory	**RAM:** Integrated DDR3 **Flash:** 32Mb SPI
Network	**Ethernet:** 2x 10/100/1000 Mbps
External Interfaces	**Buttons:** Reset and Configuration **Led:** Communication status
OS Support	**Firmware:** Wave-2 G.hn Spirit
Power Supply	**Power connectors:** From 12 V to 48 V
Thermal	**Industrial temperature:** -40°C to +80°C
Dimensions	**Size:** 96,70mm x 86,26mm

BLOCK DIAGRAM

LineWave 1500

Power & communication medium
9V to 48V

Coupling & Filtering Unit

Signal Processors (G.hn Wave-2 BBP & G.hn Wave-2 AFE)

2x Gigabit Ethernet 10/100/1000

Power Regulators → DC voltages

Wave-2 G.hn SPIRIT GRID

Max. 250 nodes/network
Max. 16 levels of repetition
Max. 16 connection/node

▲ Network Controller
● Repeater/EP
● End Point

Multi-Hop Network
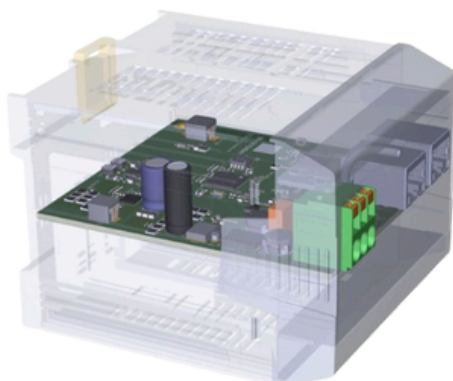
G.hn Spirit Grid software supports a large-scale, multi-hop network of up to 250 nodes in a single network domain. Spirit Grid's self-organize-network (SON) feature enables autonomous device installation and configuration, optimal signal path selection, and network self-healing capabilities.

It can also auto-configure the client to simultaneously perform the repeating function, which eliminates the need for a dedicated repeater that is typically needed by other broadband powerline technologies.

PLUG & PLAY INSTALLATION

In order to facilitate and reduce the installation time and to make the equipment adaptable to any environment where you decide to install this solution.

ISEE offers the possibility to encapsulate the equipment inside Custom DIN Rail Enclosure that facilitates the adaptation inside any power supply cabinet.

APPLICATIONS

G.hn Wave-2 powerline, twisted pair, or coaxial cable networking.

Smart elevator control.

Fire alarm control panel.

Smart parking system control.

Smart fuel dispenser system.

Building entry/access control.

Building security and surveillance.

Smart building data backbone.

ORDENING INFORMATION

Model	Reference	Description
IGEP PLC G.hn Wave-2	LineWave 1500	Power line communication G.hn Wave-2 mixer, Ethernet x2.

ISEE