



OVERVIEW

G.hn Wave-2 Powerline Communication

The SmartWave 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.

SmartWave 1500 is a multi-media, multi-interface G.hn industrial IoT module. It combines the G.hn transceiver solution with two Vishay regulators, a pre-programmed 3-output PMIC from MaxLinear and Texas regulator these regulators are responsible for supplying power to the module.

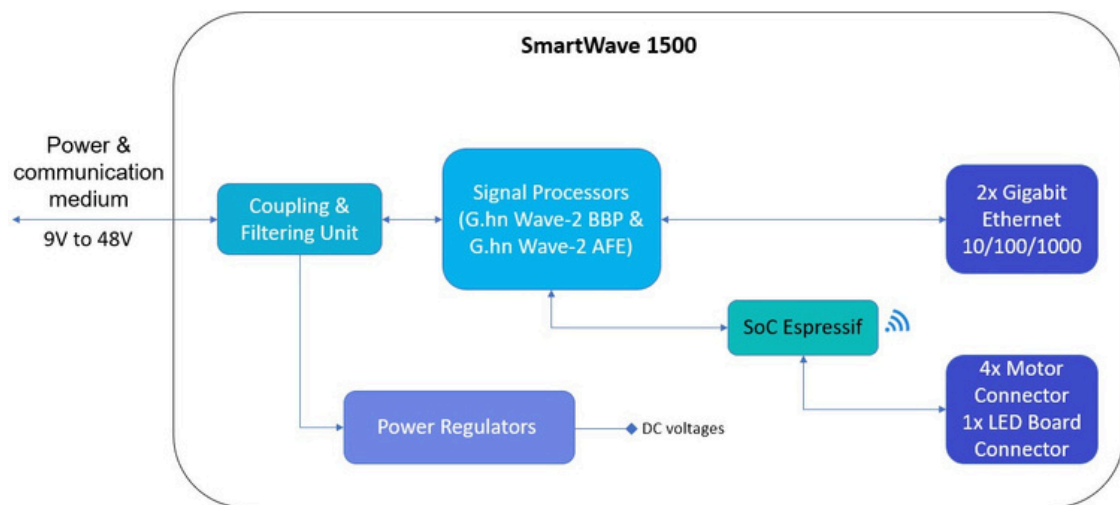
To manage communications, this module has a Gb Ethernet switch in tandem with an Espressif Wi-Fi/Bluetooth SoC.



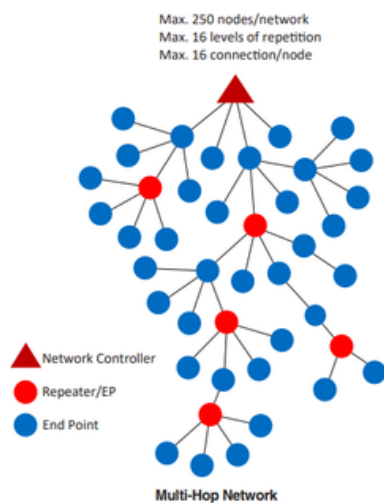
TECHNICAL SPECIFICATIONS

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 WiFi: Certified 802.11 b/g/n (Access Point: Yes)	Bluetooth: 4.2 + BLE
External Interfaces	Buttons: Reset and Configuration Led: Communication status and external board LED 2 x UART 2 x Stepper motor control	
OS Support	Firmware: Wave-2 G.hn Spirit	
Power Supply	Power connectors: From 15 V to 48 V	
Thermal	Industrial temperature: -40°C to +80°C	
Dimensions	Size: 130mm x 88.5mm	

BLOCK DIAGRAM



Wave-2 G.hn SPIRIT GRID



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.

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.

ORDERING INFORMATION

Model	Reference	Description
IGEP PLC G.hn Wave-2	SmartWave 1500	Power line communication G.hn Wave-2 mixer, Wifi/Bluetooth, Ethernet x2, 2 x UART, 2 x Stepper motor control, External board LED control.



630 René-Lévesque Blvd W
Montreal, QC, H3B 3C1
Canada
+1 (438) 880 2997
contact@iseetec.ca
<https://www.ghnsys.com/>