G.hn Industrial IoT Networking System

Transforms Existing Wiring into a High-Speed Networking System

OVERVIEW

Evaluation Kit	
DMI920	Mutli-Medium, Multi-Interface IIoT EVK

Supporting ICs	
88LX5153A	DBB
88LX2741	AFE

FEATURES

- Evaluation Kit Contents:
  - Two G.hn adapters and accessories
- Multi-medium EVK transmits data over:
  - AC or DC powerlines
  - Twisted pair
  - Coax cable

BENEFITS

- Transports high-speed IP data over new or existing Powerlines, Twisted Pair, or Coax
- G.hn network backbone delivers IP data to local network of Industrial IoT endpoint devices through Ethernet, USB, RS-485, RS-232, etc.

APPLICATIONS

- Smart Buildings
  - Smart Elevator Control, Building Entry/Access Control, Building Security and Surveillance, Smart Parking System Control, Data Backbone
- Smart Cities
  - Security Cameras, Intelligent Street Lights, Smart Fuel Dispenser Systems, Fire Alarm Control Panels, Smart parking
- Broadband Home Networking & Access
  - Gateways, Routers, STBs
- Factory Automation
- Smart Grid and Smart Metering

The MaxLinear G.hn Industrial IoT Networking System provides high-speed networking capabilities over any wired medium, including AC or DC powerlines, phonelines/twisted pair and coax cables. The MaxLinear G.hn Wave-2 platform is the fastest G.hn solution in the industry with gigabit+ network throughput

Performance Summary

Physical Medium	Supported G.hn Profiles	Max Net Throughput (Gbps)	Data Interfaces
Powerline	MIMO 100MHz, SISO 100MHz	1	RGMII (1G), SGMII (1G/2.5G)
Twisted Pair	SISO 200MHz, MIMO 100MHz	1.7	
Coaxial	Coaxial 200MHz	1.7	

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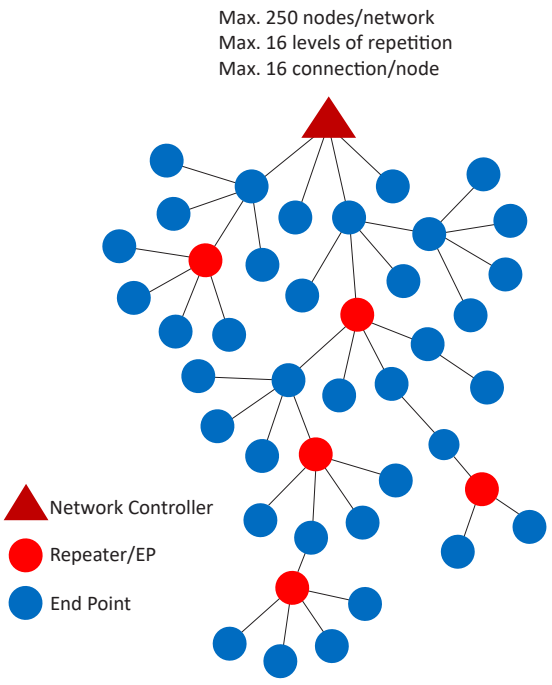
G.hn technology reliably transports high-speed data over new or existing AC or DC powerlines, twisted pair or coaxial cables

G.hn Spirit Grid Software

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.



Multi-Hop Network

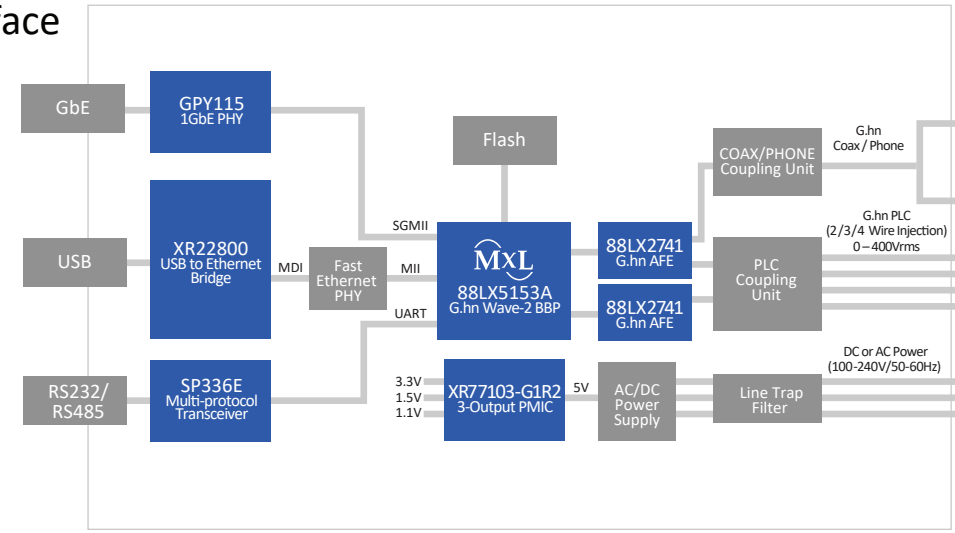
DMI920 G.hn Industrial IoT EVK

The DMI920 Evaluation Kit is MaxLinear's G.hn industrial IoT multi-medium, multi-interface EVK. It combines the G.hn transceiver solution with MaxLinear's pre-programmed 3-Output PMIC (XR77103-GR12), 1G Ethernet PHY (GPY115), USB to Ethernet Bridge (XR22800), and SP336E multi-protocol transceiver.

This turnkey EVK allows customers to quickly evaluate G.hn over coax, twisted pair, or powerline with various interfaces including Gigabit Ethernet, RS-485, RS232 and USB.

G.hn Industrial IoT EVK Evaluation Kit #DMI920

Multi-Interface



Multi-Medium

G.hn Coax

G.hn Phone

G.hn PLC

G.hn Industrial IoT EVK Block Diagram

G.hn Wave-2 Industrial IoT Networking Products

Part Number	Function	Ch.	Physical Medium	Supported G.hn Profiles	Max Net Throughput (Gbps)	Data Interfaces	Ordering Part Number[1]	Temp Range[2] (°C)	Package[1] (mm)
88LX5153A	Baseband	2	Powerline	MIMO 100MHz, SISO 100MHz	1	RGMII (1G), SGMII (1G/2.5G)	88LX5153A0-BUU2I000	-40 to 85	10 x 10 BGA-186
			Twisted Pair	SISO 200MHz, MIMO 100MHz	1.7				
			Coaxial	Coaxial 200MHz	1.7				
88LX2741	Analog Front End	1	Powerline	MIMO 100MHz, SISO 100MHz	N/A	N/A	88LX2741A0-NYC2I000	-40 to 85	4 x 4 QFN-28
			Twisted Pair	SISO 200MHz MIMO 100MHz	N/A				
			Coaxial	SISO 200MHz	N/A				

1. Visit www.maxlinear.com/88lx5153a or www.maxlinear.com/88lx2741 for most up-to-date Ordering and Environmental Information.
2. Ambient temperature range.
3. Visit www.maxlinear.com/products/connectivity/wired/g-hn for information on additional G.hn products for Home Networking and Broadband applications.

G.hn Wave-2 Industrial IoT Networking Evaluation Kit

Eval Kit	Physical Medium	Baseband Chip Used	Analog Front-End Used	Max Net Throughput	Supported G.hn Profiles	Data Interfaces	Kit Ordering Number[1]	# of Boards in Kit	Temp Range[2] (°C)
DMI920	Powerline (0-400Vrms), Twisted Pair, Coax	88LX5153A	88LX2741 (2x)	1000Mbps	Powerline MIMO 100MHz / SISO 100MHz; Twisted-Pair 200MHz SISO / 100MHz MIMO	1000Base-T	RD-GRID-2DMI920KIT-01	2	0-40

1. Visit www.maxlinear.com/dmi920 for most up-to-date Ordering and Environmental Information.
2. Ambient temperature range.
3. Visit www.maxlinear.com/products/connectivity/wired/g-hn for information on additional G.hn products for Home Networking and Broadband applications.

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