Manuals+ — User Manuals Simplified.

Pulse HB, HXB Discrete Ethernet Overview

Pulse HB, HXB Discrete Ethernet Overview Owner's Manual

Contents

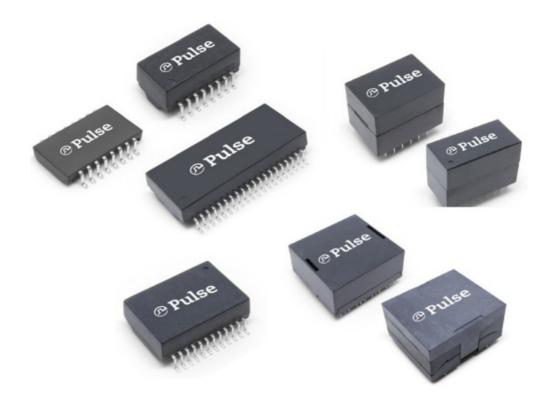**Pulse HB, HXB Discrete Ethernet Overview**
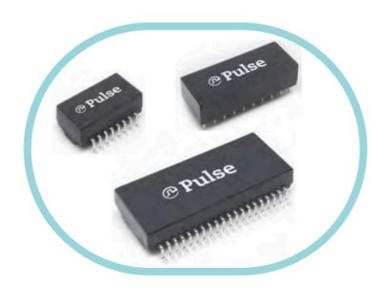
Wired Communications Mission Statement
Our goal is to be the preferred technology partner for copper connectivity interface solutions to leading suppliers of communication.

Core Skills

- Demonstrated design/engineering and high-volume expertise
- Strong relationships with leading electronic OEMs, CEM & PHY companies
- Excellent value and outstanding quality products delivered from high-volume production facilities
- Geographic proximity to customers' design and production sites
- Worldwide distribution support

FAST ETHERNET PRODUCTS

SMT and THT Single, Dual, and Quad Port FE Transformer Modules

Features

- Wide selection of SMT and THT designs in 16pin, 20pin (THT) and 40pin Headers
- Footprint (mm) Single : 12.7 x 9.6 and 12.8 x 9.3
- Dual (THT): 25.4 x 10.0
- Quad (SMD): 28.0 x 16.1
- Support PHY featuring AutoMDIX
- Optimized for Power over Ethernet 30W (2pair)
- Extended Temperature operating range

Pulse's 1Gigabit Ethernet isolation SMT and THT modules are fully RoHS compliant and offer lead and halogen-free designs. Qualified at major PHY suppliers for 100BASE-Tx and Industrial 100Mbps protocols like EtherCAT, Profibus, and Powerlink as well as the latest for TSN communications and backward compatibility with connection to slower 10Base-Tx ports.

Each transformer module is optimized for LAN Ethernet connectivity for commercial and industrial applications providing electrical circuit isolation that meets IEEE 802.3u while maintaining signal integrity and if needed, Power over Ethernet (PoE) up to 30W (over 2 pairs) for critical communications and data transmission.
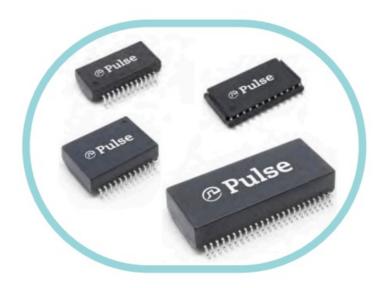
Applications
Industrial Test and Measurement, Robotics, Automation SoHo Switches and Routers, Access, Security Cameras, Building Sensing and Control, Notebooks, Gaming, and Smart IOT devices.

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB2003HLT	1	16 Pin SMD	10/010 Base-TX	12 .80	9.30	5.65	1500Vrms	3wCMC / XCF	0 to+ 70°C	30W
HB3002HLT	1	16 Pin SMD	10/010 Base-TX	12.70	9.60	2.00	1500Vrms	XFM / 2 HCMC	0 to+ 70°C	N/A
HB3003HLT	1	16 Pin SMD	10/010 Base-TX	12.70	9.60	2.00	1500Vrms	CMC/XFM, XFM/CMC	0 to+ 70°C	N/A
HB3004HLT	1	16 Pin SMD	10/010 Base-TX	12.80	9.30	5.65	1500Vrms	XFM / 2 HCMC	0 to+ 70°C	N/A
HB3005HLT	1	16 Pin SMD	10/010 Base-TX	12.80	9.30	5.65	1500Vrms	2wCMC / XCF	0 to+ 70°C	N/A
HB3006HLT	1	16 Pin SMD	10/010 Base-TX	28.00	16.10	5.70	1500Vrms	XFM / 2 wCMC	0 to+ 70°C	N/A
HXB2001HLT	1	16 Pin SMD	10/010 Base-TX	12.80	9.30	5.65	1500Vrms	2wCM / XCF	-40 to + 85°C	30W
HXB2002HLT	1	16 Pin SMD	10/010 Base-TX	12.80	9.30	5.65	1500Vrms	XFM / 2wCMC	-40 to + 85°C	30W
HB3601NL	2	20 Pin THT	10/010 Base-TX	25.40	10.00	6.60	1500Vrms	XFM / 2wCMC	0 to+ 70°C	N/A
HB3602NL	2	20 Pin THT	10/010 Base-TX	25.40	10.00	6.60	1500Vrms	2wCMC/ XCF	0 to+ 70°C	N/A

1GIGABIT ETHERNET PRODUCTS
SMT Single and Dual port 1G PoE Transformer modules

Features

- Wide selection of SMT designs in standard 24pin and 48pin MSL1 open Headers
- Footprint (mm) Single: 15.6×9,5 (PCMCIA)

- Single : 15.1 x10.0 and 17.6×9.3
- Quad: 27.8×15.21
- Optimized for Power over Ethernet 30W (2pair)
- Extended Temperature operating range
- High Isolation and Surge compliant

Pulse's 1Gigabit Ethernet isolation modules are fully RoHS compliant and offer lead and Halogen-free designs. Qualified at major PHY suppliers for 1000BASE-T and backward compatible with connection to slower 10/100Base-Tx ports – they can also double as high-density Fast Ethernet dual-port modules. Each transformer module is optimized for Gigabit Ethernet connectivity for commercial and industrial applications providing electrical circuit isolation that meets IEEE 802.3ab while maintaining signal integrity and if needed, Power over Ethernet (PoE) up to 30W for critical communications and data transmission.
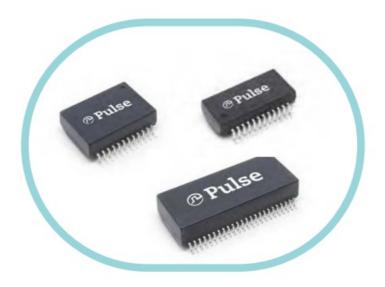
Applications

Industrial Test and Measurement, Robotics, Automation SoHo Switches and Routers, Remote Access, Security Cameras, Building Sensing and Control.

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB5004HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.0	1500Vrms	XFM/ 2wCMC	0 to +70°C	30W
HB5005HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.0	1500Vrms	XFM/ 2wCMC	0 to +70°C	30W
HB5006HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.0	1500Vrms	2wCMC / XFM	0 to +70°C	30W
HB5009HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.0	1500Vrms	3wCMC / XFM	0 to +70°C	30W
HB5010HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.0	1500Vrms2	XFM/ 2wCMC	0 to +70°C	30W
HB5011HLT	1	24 Pin SMD	1Gigabit	15.60	9.47	2.30	1500Vrms	XFM/ 2wCMC	0 to +70°C	30W
HB5012HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC	0 to +70°C	N/A
HB5013HLT	2	48 Pin SMD	1Gigabit	27.80	15.20	7.20	3000Vrms1	XFM / 2wCMC	0 to +70°C	N/A
HB5014HLT	2	48 Pin SMD	1Gigabit	27.80	15.20	7.20	4000Vrms1	2wCMC / XFM	0 to +70°C	N/A
HXB5008HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.00	1500Vrms	XFM/ 2wCMC	-40 to +85°C	30W
HXB5007HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.00	1500Vrms	2wCMC / XFM	-40 to +85°C	30W
HXB5011HLT	1	24 Pin SMD	1Gigabit	15.60	9.47	2.30	3000Vrms1	2wCMC / X FM	-40 to +85°C	30W
HXB5012HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC	-40 to +85°C	30W
HXB5017HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	4.00	1500Vrms	2wCMC / X FM	-40 to +85°C	30W

1GIGABIT ETHERNET PRODUCTS
SMT Single and Dual port 1G PoE/PoE+ Transformer Modules

Features

- Wide selection of SMT designs in standard 24pin and 48pin MSL1 open Headers
- Footprint (mm) Single: 15.6×9,5 and 17.6×9.3
- Quad : 27.8×15.21 and 32.8×18.5
- Optimized for Power over Ethernet 90W (4pair)
- Extended Temperature operating range
- High Isolation and Surge compliant

Pulse's high Power PoE 1Gigabit Ethernet isolation modules are fully RoHS compliant and offer lead and halogen-free designs. Qualified at major PHY suppliers for 1000BASE-T and backward compatible with connection to slower 10/100Base-Tx ports – they can also double as high-density Fast Ethernet dual-port modules.

Each transformer module is optimized for network connectivity where remote DC Power over Ethernet cabling for commercial and industrial applications if needed. They provide electrical circuit isolation that meets IEEE 802.3ab/af/at/bt while maintaining signal
integrity with 1Amp current loading, supplying up to 90W of PoE for critical communications and data transmission.
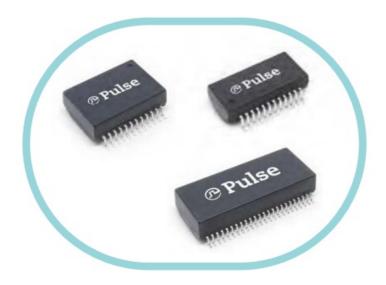
Applications
Industrial Sensors, Automation, PoE Switches and Routers, Remote Access, Security Cameras, Building Sensing and Control, RANs, WAPs and Base Stations

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB6002HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC /Shunt	0 to +70°C	60W
HB6003HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC	0 to +70°C	60W
HB6006HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	5000Vrms	XFM/ 2wCMC	0 to +70°C	30W
HB6007HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	5000Vrms1	XFM/ 2wCMC	0 to +70°C	60W
HB6010HLT	2	24 Pin SMD	1Gigabit	27.80	15.20	7.20	1500Vrms	2wCMC / XFM	0 to +70°C	30W
HB6011HLT	2	48 Pin SMD	1Gigabit	27.80	15.20	7.20	1500Vrms	XFM/ 2wCMC	0 to +70°C	30W
HB6012HLT	2	48 Pin SMD	1Gigabit	27.80	15.20	7.20	1500Vrms	XFM/ 2wCMC	0 to +70°C	60W
HXB6004HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC	-40 to + 85°C	60W
HXB6005HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	2wCMC / XFM	-40 to + 85°C	60W
HXB6008HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms	2wCMC / XFM	-40 to + 85°C	90W
HXB6009HLT	1	24 Pin SMD	1Gigabit	17.55	15.90	6.00	1500Vrms3	2wCMC / XFM	-40 to + 85°C	60W
HXB6013HLT	2	48 Pin SMD	1Gigabit	27.80	15.20	7.20	3000Vrms2	2wCMC / XFM	-40 to + 85°C	60W
HXB6014HLT	2	48 Pin SMD	1Gigabit	27.80	15.20	7.20	1500Vrms	2wCMC / XFM	-40 to + 85°C	60W
HXB6015HLT	2	48 Pin SMD	1Gigabit	32.80	18.50	7.30	1500Vrms	2wCMC / XFM	-40 to + 85°C	90W
HXB6020HLT	1	24 Pin SMD	1Gigabit	15.10	10.00	5.80	1500Vrms	2wCMC / XFM	-40 to + 85°C	60W

MULTI-RATE 2.5 GIGABIT PRODUCTS

SMT Single and Dual port 2.5G PoE/PoE+ Transformer Modules

Features

- Wide selection of options in standard 24 and 48-pin, MSL1 open Header designs Footprint (mm)
- Single: 15×10 and 17.5×16.0
- Dual : 27.8×15.2 and 32.8×17.6
- Optimized for Power over Ethernet – up to 90W
- Commercial and Extended operating
- Temperature High Isolation and surge-compliant designs

Pulse's Multi-Rate Gigabit Ethernet isolation modules are fully RoHS compliant and offer lead and halogen-free designs. Qualified at major PHY suppliers for 2.5GBASE-T and backward compatible with connection to the slower 1000Base-T port. they comply to
IEEE802.3bz

Each transformer module is optimized for network connectivity and a few designs support remote DC Power feeding over Ethernet cabling for commercial and industrial applications if needed. They provide electrical circuit isolation that meets IEEE 802.3 while maintaining signal integrity with over 1Amp current loading, supplying up to 90W of PoE for critical communications and data transmission.

Applications
Industrial Sensors, Automation, PoE Switches and Routers, Remote Access, Security Cameras, Building Sensing and Control, RANs, WAPs and Base Stations

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB4009HLT	1	24 Pin SMD	2.5Gigabit	15.10	10.00	4.00	1500Vrms	2wCMIC X FM	0 to +70°C	N/A
HB4010HLT	1	24 Pin SMD	2.5Gigabit	17.55	15.90	6.00	1500Vrms	2wCMIC X FM	0 to +70°C	N/A
HB4011HLT	1	24 Pin SMD	2.5Gigabit	17.55	15.90	6.00	3000Vrms3	2wCMIC X FM	0 to +70°C	N/A
HB4012HLT	2	24 Pin SMD	2.5Gigabit	27.80	15.20	7.20	1500Vrms	2wCMIC X FM	0 to +70°C	N/A
HB4013HLT	1	24 Pin SMD	2.5Gigabit	17.55	15.90	6.00	1500Vrms	2wCMIC X FM	0 to +70°C	60W
HB4015HLT	1	24 Pin SMD	2.5Gigabit	17.55	15.90	6.00	1500Vrms1	XFM/ 2 wCMC	0 to +70°C	60W
HB4018HLT	2	24 Pin SMD	2.5Gigabit	32.80	18.50	7.30	1500Vrms	2wCMIC X FM	0 to +70°C	60W
HXB4009HLT	1	24 Pin SMD	2.5Gigabit	15.10	10.00	4.00	1500Vrms	2wCMIC X FM	-40 to +85°C	N/A
HXB4016HLT	1	24 Pin SMD	2.5Gigabit	17.55	15.90	6.00	1500Vrms	2wCMIC X FM	-40 to +85°C	90W
HXB4017HLT	1	24 Pin SMD	2.5Gigabit	17.55	15.90	6.00	1500Vrms2	2wCMIC X FM	-40 to +85°C	90W
HXB4019HLT	2	48 Pin SMD	2.5Gigabit	32.80	17.60	7.30	1500Vrms	2wCMIC X FM	-40 to +85°C	90W

MULTI-RATE 5 GIGABIT PRODUCTS

SMT Single and Dual port 5G PoE/PoE+ Transformer Modules

Features

- Wide selection of options in standard 24 and 48-pin, MSL1 open Header designs Footprint (mm)
- Single: 17.5×16.0
- Dual : 27.8×15.2 and 32.8×17.6
- Optimized for Power over Ethernet – up to 90W
- Commercial and Extended operating
- Temperature High Isolation and surge-compliant options

Pulse's Multi-Rate Gigabit Ethernet isolation modules are fully RoHS compliant wind offer lead and halogen-free designs. Qualified at major PHY suppliers for 5Gigabit and backward compatible with connection to slower 2.5G and 1000Base-T ports. Each transformer module is optimized for network connectivity and a few designs support remote DC Power feeding over Ethernet cabling for commercial and industrial applications if needed. They provide electrical circuit isolation that meets IEEE 802.3 while maintaining signal integrity with over 1Amp current loading,
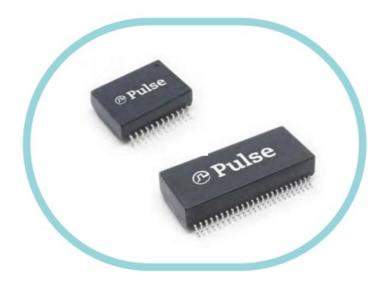
supplying up to 90W of PoE for critical communications and data transmission.

Applications
Industrial Sensors, Automation, PoE Switches and Routers, Remote Access, Security Cameras, Building Sensing and Control, RANs, WAPs and Base Stations

MULTI-RATE 10GIGABIT PRODUCTS
SMT Single and Dual port 10G PoE/PoE+ Transformer Modules

Features

- Wide selection of options in standard 24 and 48-pin, MSL1 open Header designs
- Footprint (mm) Single: 17.5×16.0
- Dual : 27.8×15.2 and 32.8×17.6
- Optimized for Power over Ethernet – up to 90W
- Commercial and Extended operating
- Temperature High Isolation and surge-compliant options

Pulse's 10Gigabit Ethernet isolation modules are fully RoHS compliant and offer lead and Halogen-free designs. Qualified at major PHY suppliers for 10Gigabit and backward compatible with connection to slower 2.5/5G and 1000Base-T ports. Each transformer module is optimized for network connectivity and a few designs support remote DC Power feeding over Ethernet cabling for commercial and industrial applications if needed. They provide electrical circuit isolation that meets IEEE 802.3 while maintaining signal integrity with over 1Amp current loading, supplying up to 90 W of PoE for critical communications and data transmission.
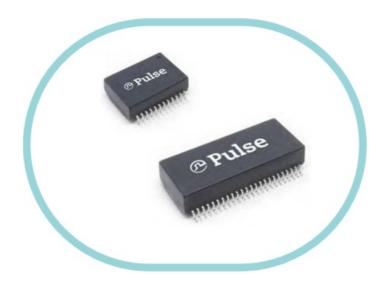
Applications
Industrial and Commercial Servers, Switches and file storage devices, Routers, Remote WAPs and Base Stations

Part Number	Number of Ports	Mounting Style	Date Range	Length	Width	Height	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB5G005HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC	0 to +70°C	N/A
HB5G006HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	1500Vrms	2wCMIC X FM	0 to +70°C	N/A
HB5G007HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	4000Vrms1	XFM/ 2wCMC	0 to +70°C	N/A
HB5G009HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	4000Vrms2	2wCMIC X FM	0 to +70°C	N/A
HB5G015HLT	1	24 Pin SMD	5Gigabit	27.80	15.20	7.20	1500Vrms	2wCMIC X FM	0 to +70°C	N/A
HXB5G010HLT	2	24 Pin SMD	5Gigabit	17.55	15.90	6.00	1500Vrms	2wCMIC X FM	-40 to +85°C	60W
HXB5G011HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2wCMC	-40 to +85°C	60W
HXB5G012HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	4000Vrms2	2wCMIC X FM	-40 to +85°C	60W
HXB5G013HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	1500Vrms	2wCMIC X FM	-40 to +85°C	90W
HXB5G014HLT	1	24 Pin SMD	5Gigabit	17.55	15.90	6.00	1500Vrms3	2wCMIC X FM	-40 to +85°C	90W
HB5G016HLT	1	48 Pin SMD	5Gigabit	27.80	15.20	7.20	1500Vrms	2wCMIC X FM	0 to +70°C	60W
HB5G018HLT	2	48 Pin SMD	5Gigabit	32.80	17.60	7.30	4000Vrms1	2wCMIC X FM	0 to +70°C	N/A
HB5G019HLT	2	48 Pin SMD	5Gigabit	32.80	17.60	7.30	4000Vrms1	2wCMIC X FM	0 to +70°C	60W
HXB5G008HLT	2	48 Pin SMD	5Gigabit	32.80	18.50	7.30	1500Vrms	2wCMIC X FM	-40 to +85°C	60W
HXB5G017HLT	2	48 Pin SMD	5Gigabit	27.80	15.20	7.20	1500Vrms	2wCMIC X FM	-40 to +85°C	60W
HXB5G020HLT	2	48 Pin SMD	5Gigabit	32.80	17.60	7.30	1500Vrms	2wCMIC X FM	-40 to +85°C	90W

1 GIGABIT ETHERNET PRODUCT

THT Single and Dual port 1G PoE Transformer modules

Features

- Wide selection of options in standard 18, 24, 36, and 48-pin, closed DIP Header designs
- Footprint (mm) Single: 15.65×11.0(18pin) and 16.8×8,5(18pin)
- Dual : 32.5×8.5(36pin) and 28.1×11.1(48pin)
- Optimized for Power over Ethernet – up to 90W
- Commercial and Extended operating temperature

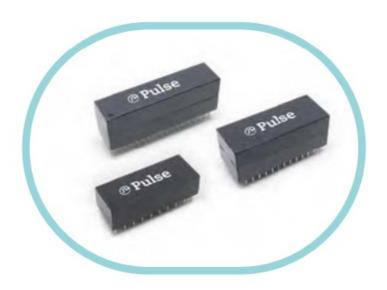## High Isolation and surge-compliant options

Pulse's 1Gigabit Ethernet isolation modules are fully RoHS compliant and offer lead and Halogen-free designs. Qualified at major PHY suppliers for the latest 1GBASE-T silicon and backward compatible with connection to slower data rates they comply with 10/100Base-Tx and IEE802.3at/bt for PoE Each transformer module is optimized for network connectivity and a few designs support remote DC Power feeding over Ethernet cabling for commercial and industrial applications if needed. They provide electrical circuit isolation that meets IEEE 802.3, while maintaining signal integrity with over 1Amp current loading, supplying up to 90W of PoE for critical communications and data transmission.

Applications
industrial Servers, NIC cards for file storage, and data handling. Medical and Industrial image processing, LTE WAPs, and Base Stations

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HXB7008HLT	1	24 Pin SMD	10Gigabit	17.55	15.90	6.00	1500Vrms2	2wCMI XFM	-40 to +90°C	N/A
HXB7009HLT	1	24 Pin SMD	10Gigabit	17.55	15.90	6.00	1500Vrms	XFM/ 2 HCMC	-40 to +90°C	N/A
HXB7010HLT	1	24 Pin SMD	10Gigabit	17.55	15.90	6.00	4000Vrms1	2wCMC / XFM	-40 to +90°C	N/A
HXB7011HLT	1	24 Pin SMD	10Gigabit	17.55	15.90	6.00	1500Vrms	2wCMC / XFM	-40 to +90°C	60W
HXB7012HLT	1	24 Pin SMD	10Gigabit	17.55	15.90	6.00	1500Vrms	2wCMC / XFM	-40 to +90°C	90W
HXB7013HLT	2	48 Pin SMD	10Gigabit	32.80	18.50	7.30	1500Vrms	2wCMC / XFM	-40 to +90°C	N/A
HXB7014HLT	2	48 Pin SMD	10Gigabit	32.80	18.50	7.30	4000Vrms1	2wCMC / XFM	-40 to +90°C	N/A
HXB7015HLT	2	48 Pin SMD	10Gigabit	32.80	18.50	7.30	1500Vrms	2wCMC / XFM	-40 to +90°C	90W
HXB7016HLT	2	48 Pin SMD	10Gigabit	32.80	18.50	7.30	1500Vrms	2wCMC / XFM	-40 to +90°C	60W

1 GIGABIT ETHERNET PRODUCT

THT QUAD port 1G PoE/PoE+ Transformer Modules

Features

- Wide selection of THT options in standard 72pin, 88pin, and 96pin closed DIP Header designs
- Footprint (mm) 72pin: 17.5×16.0
- 88pin : 29.0×26.5

- 96pin : 29.0×33.5
- Optimized for Power over Ethernet – up to 90W
- Commercial and Extended operating temperature High Isolation and surge-compliant options

Pulse's 1Gigabit THT Ethernet isolation modules are fully RoHS compliant and offer lead and Halogen-free designs. Qualified at major PHY suppliers for the latest silicon and backward compatibility with connection to slower data rates they comply to10/100Base-Tx and IEE802.3at/bt for PoE Each transformer module is optimized for network connectivity and a few designs support remote DC Power feeding over Ethernet cabin for commercial and industrial applications if needed. They provide electrical circuit isolation that meets IEEE 802.3, while maintaining signal integrity with over 1Amp current loading, supplying up to 90W of PoE for critical communications and data transmission.

Applications
Industrial Servers, and NIC cards for file storage and data handling. Medical and Industrial image processing, LTE WAPs, and Base Stations

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB5601NL	1	24 Pin DIP	1Gigabit	15.65	11.00	11.20	1500Vrms	2wCMC / XFM	0 to +70°C	N/A
HB5602NL	1	24 Pin DIP	1Gigabit	15.65	11.00	11.20	4000Vrms1	2wCMC / XFM	0 to +70°C	N/A
HB5604NL	1	18 Pin DIP	1Gigabit	16.80	8.50	11.60	1500Vrms	XFM/ 2wCMC	0 to +70°C	N/A
HB5605NL	2	48 Pin DIP	1Gigabit	28.10	11.10	11.00	1500Vrms	XFM/ 2wCMC	0 to +70°C	N/A
HB5606NL	2	48 Pin DIP	1Gigabit	28.10	11.10	11.00	1500Vrms	2wCMC / XFM	0 to +70°C	N/A
HB5608NL	2	36 Pin DIP	1Gigabit	32.50	8.50	11.60	1500Vrms1	XFM/ 2wCMC	0 to +70°C	N/A
HB5609NL	2	36 Pin DIP	1Gigabit	32.50	8.50	11.60	1500Vrms	XFM/ 2wCMC	0 to +70°C	N/A
HB6601NL	2	48 Pin DIP	1Gigabit	28.10	11.10	11.00	1500Vrms	XFM/ 2wCMC	0 to +70°C	30W
HB6602NL	2	48 Pin DIP	1Gigabit	28.10	11.10	11.00	4000Vrms1	2wCMC / XFM	0 to +70°C	30W
HXB5603NL	2	18 Pin DIP	1Gigabit	16.80	8.50	11.60	1500Vrms2	2wCMC / XFM	-40 to +85°C	N/A
HXB5607NL	2	36 Pin DIP	1Gigabit	32.50	8.50	11.60	1500Vrms2	XFM / 2wCMC	-40 to +85°C	N/A

2.5/5G AND 10G GIGABIT ETHERNET PRODUCTS
THT QUAD port 2.5/5G and 10G PoE/PoE+ Transformer modules

Features

- Wide selection of THT options in a standard 96pin closed DIP
- Header design Footprint (mm) : QUAD: 29.0 x 33.5
- Commercial and Extended operating temperature up to +105oC with PoE loading Optimized for Power over
- Ethernet – up to 90W IEEE802.3 an/bz
- compliant for mGIG Ethernet

Pulse's newest range of high-density through-hole (THT) products for 2.5G/5G and 10G multi-rate Ethernet is now released. These isolation modules are fully RoHS compliant and offer lead and halogen-free designs. Qualified at major PHY suppliers for easy design-in and ideal for Industrial or commercial switches and routers.

Each transformer module is optimized for network connectivity where a high port density is needed. The THT design can be wave or hand-soldered alongside the 1xN or 2xN RJ45 connector saving process costs. They provide electrical circuit isolation that exceeds the IEEE 802.3an/af/at/bt/bz standards while maintaining signal integrity with up to 1Amp current loading, supplying 90W of PoE for critical communications and data transmission.

Applications
Industrial, Commercial, and Consumer PoESwitches and Routers, SoHo WAPs and DSL Modems

Part Number	Number of Ports	Mounting Style	Date Rate	Length (mm)	Width (mm)	Height (mm)	Breakdown Voltage	Winding Configuration	Operating Temperature	PoE Rating
HB5G601NL	4	96 Pin DIP	2.5/5Gigabit	29.00	33.50	16.80	1500Vrms	2wCMC / XFM	0 to +70°C	60W
HB5G603NL	4	96 Pin DIP	2.5/5Gigabit	29.00	33.50	16.80	1500Vrms	XFM / 2wCMC	0 to +70°C	N/A
HXB5G602NL	4	96 Pin DIP	2.5/5Gigabit	29.00	33.50	16.80	1500Vrms	2wCMC / XFM	-40 to +85°C	90W
HXB7601NL	4	96 Pin DIP	10Gigabit	29.00	33.50	16.80	1500Vrms	2wCMC / XFM	-40 to +105°C	90W
HXB7602NL	4	96 Pin DIP	10Gigabit	29.00	33.50	16.80	1500Vrms	2wCMC / XFM	-40 to +90°C	60W
HXB7603NL	4	96 Pin DIP	10Gigabit	29.00	33.50	16.80	1500Vrms	XFM / 2wCMC	-40 to +90°C	N/A

AMERICAS

EMEA

ASIA

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Taiwan Tel: 886.3.4356768

Documents / Resources

	Pulse HB, HXB Discrete Ethernet Overview [pdf] Owner's Manual HB, HXB, HB HXB Discrete Ethernet Overview, HB Discrete Ethernet Overview, HXB Discrete Ethernet Overview, Discrete Ethernet Overview, Discrete Overview, Ethernet Overview, Discrete Ethernet, Discrete, Ethernet

References

- **Pulse Electronics – A world-wide leader in electronic components**
- **User Manual**