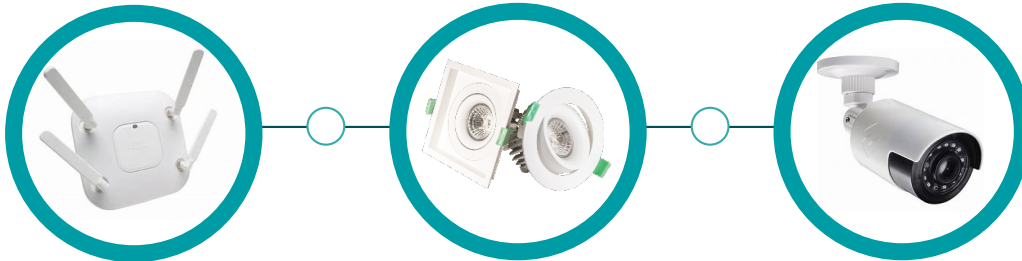


## 1GIGABIT MAGNETIC MODULE

SMALL FOOTPRINTS THAT PACK A PUNCH FOR OUTDOOR AND INDUSTRIAL USE



Pulse Electronics latest 1Gigabit magnetic module designs support power over ethernet for outdoor and industrial use. The HX5164NL and HX6164NL share the same small form package footprint but offer different PCB layouts for ease of routing. The taller package provides superior temperature performance as the coils have low winding resistance keeping internal I<sup>2</sup>R losses down when supporting loads of ~40W and ~70W respectively over CAT5 or higher-grade cable according to IEEE802.3at/bt.



## KEY APPLICATIONS

Wireless access points, building control, HVAC and lighting, remote sensing, digital video and CCTV cameras

## FEATURED PRODUCTS

- HX5164NL- 40W PoE over 4 Pair
- HX6164NL - 70W PoE over 4 Pair

## FEATURES & BENEFITS

- Designed to exceed IEEE802.3au
- Full IEEE802.3at/bt compliance for PoE
- Compatible with all Major PHYs
- Superior Temperature Performance.
- Up to 70W PoE over 100m of UTP
- Operates from -40°C to +85°C
- High volume, High reliability production

# 1GIGABIT MAGNETIC MODULE

SMALL FOOTPRINTS THAT PACK A PUNCH FOR OUTDOOR AND INDUSTRIAL USE

| Industrial 100Base-Tx and 1000Base-T Ethernet Connector Modules |                   |           |           |                |
|---|-------------------|-----------|-----------|----------------|
| Part No.  | Tab Location      | Data Rate | No. Ports | EMI Fingers    |
| HX5164NL  | 15.2 x 10.9 x 8.6 | Single    | 40W       | -40°C to +85°C |
| HX6164NL  | 15.2 x 10.9 x 8.6 | Single    | 70W       | -40°C to +85°C |

**Application summary:**

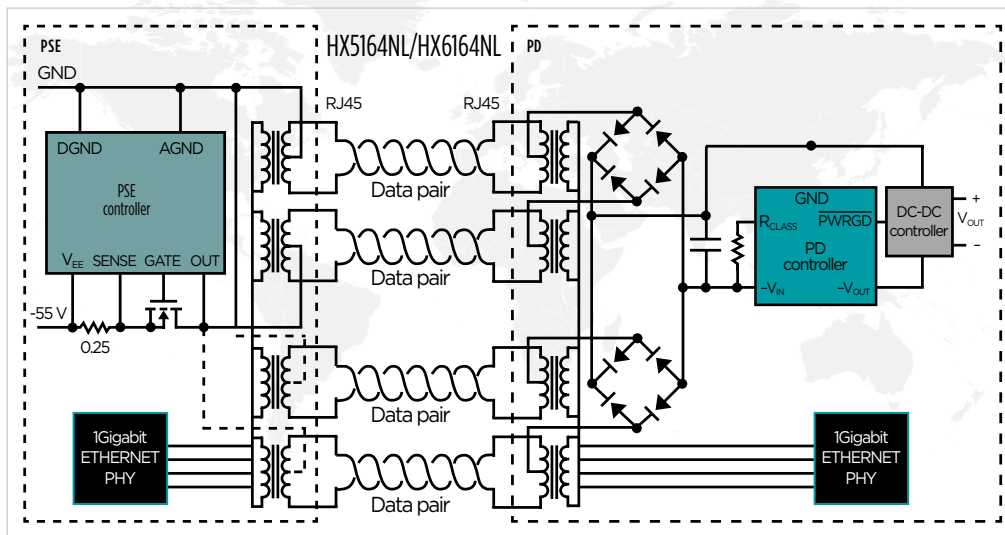
HX5164NL will support Class 1 to 3, Type 1 (IEEE802.3af) over 2 pair; and Class 1 to 5, Type 3 (IEEE802.3bt) over 4 pair DC power feeding circuits at both PSE and PD (user) connection sites.

HX6164NL will support all Type 1 (IEEE802.3af), Type 2 (IEEE802.3at) and Type 3 (IEEE802.3bt) applications over 2/4 pair DC power feeding circuits at the PSE site and Class 7 to 8, Type 4 (IEEE 802.3bt) over 4 pair DC power feeding circuits at the PD (user) connection site.

**Requesting and sourcing power level by Type, Class and PoE device**



| Type 3 (802.3bt)  |                   |                      |                   | Type 4 (802.3bt)            |                 |                 |                   |
|---|-------------------|----------------------|-------------------|-----------------------------|-----------------|-----------------|-------------------|
| Type 1 (802.3af)  |                   | Type 2 (IEEE802.3at) |                   |                             |                 |                 |                   |
| Class 1<br>4 W  | Class 2<br>7 W    | Class 3<br>15.4 W    | Class 4<br>30 W   | Class 5<br>45 W             | Class 6<br>60 W | Class 7<br>75 W | Class 8<br>90 W   |
| 2-pair only (Type 1 & 2)<br>2-pair or 4-pair power feeding (Type 3 & 4) |                   |                      |                   | Always 4-pair power feeding |                 |                 |                   |
| Class 1<br>3.84 W   | Class 2<br>6.49 W | Class 3<br>13 W      | Class 4<br>25.5 W | Class 5<br>40 W             | Class 6<br>51 W | Class 7<br>62 W | Class 8<br>71.3 W |



• Catalog and Custom Solutions Available •