

**Four Channels Gigabit Ethernet Controller**  
**M.2 30x42mm**

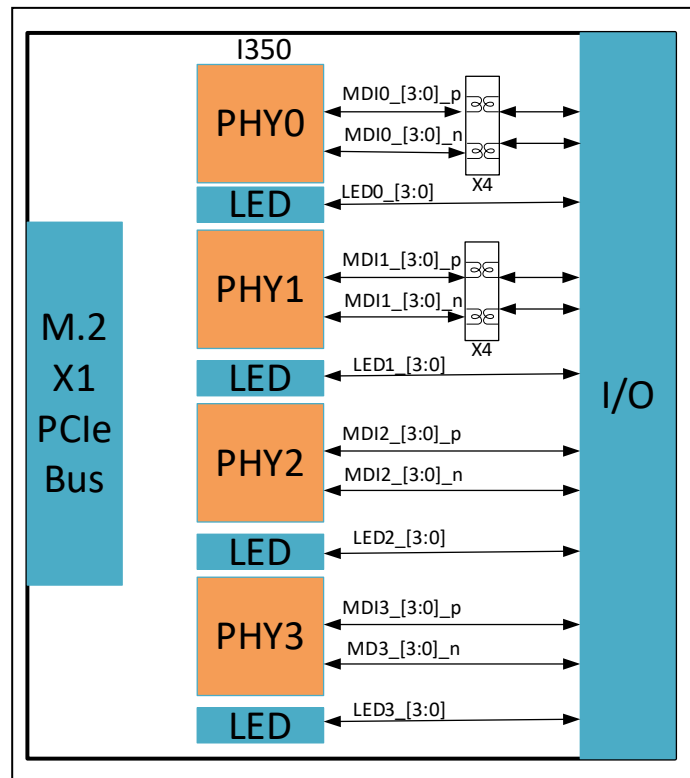
**Features**

- M.2 30mm x 42mm board size
- M.2 PCI Express x1 lane interface
- M.2 3042 Key B & M
- Intel® I350 controller
- 9KB jumbo frame support
- Flow control support
- PXE support
- Two channels on-board transformer 10/100/1000Mbps per channel
- Two channels off-board transformer 10/100/1000Mbps per channel
- IEEE802.3az Energy Efficient Ethernet power consumption



**Block Diagram and Operational Overview**

The M.2-ETH1G-4 employs the Intel I350 Ethernet Controller for 10/100/1000Mbps communications on up to four concurrent channels. Its compact M.2 form factor allows it to be used in numerous applications such as industrial PCs, single board computers and embedded systems.



### **Power Saving Features**

- ACPI power management states and wake-up capability
- Advanced Power Management (APM) wake-up functionality
- Low power link-disconnect state
- DMA Coalescing for improved system power management
- Energy Efficient Ethernet (IEEE802.3az) for reduced power consumption during low link utilization periods

### **Performance Enhancements**

- PCIe v 2.1 TLP Process Hints (TPH)
- UDP, TCP and IP Checksum offload
- UDP and TCP Transmit Segmentation Offload (TSO)
- SCTP receive and transmit checksum offload

### **Virtualization Features**

- Support of up to 8 Virtual Machines per port
- 8 TX and 8 RX queues per port
- PCI-SIG I/O SR-IOV support (direct assignment)

### **Timing and Synchronization**

- IEEE 1588 Precision Time Protocol support
- Per-packet timestamp

### **Applications**

This is a solution for a wide array of Ethernet communication applications such as:

- Commercial networks
- Industrial and Military
- Test equipment supporting evaluation, simulation
- Monitoring and analysis

### **Available Software Drivers**

- Linux® drivers
- Windows® drivers
- VxWorks® drivers

### **Mechanical**

- Size: M.2 Module Key B & M (30mm x 42mm)
- Power: 5W max
- Front panel I/O
- Vibration: 0.5G, 20-2000Hz rand
- Shock: 20G, 11ms, ½ sine
- Weight: 10g (0.4oz)
- MTBF: >250,000 hours

### **Operating Environment**

- Operating temperature  
Industrial: -10°C to +55°C
- Non-operating: -50°C to +90°C
- Airflow requirement: .5CFM
- Humidity: 5 to 90% (non-cond)
- Altitude: 0 to 10,000 feet

### **Ordering information**

**M.2-ETH1G-4-I** Four Channels Gigabit Ethernet Controller, Industrial Temp -10°C to +55°C

Append **-CC** for Conformal Coat

### **Optional Accessories**

**TB-M.2-ETH1G-4** Terminal Block to Quad RJ-45, 12in length