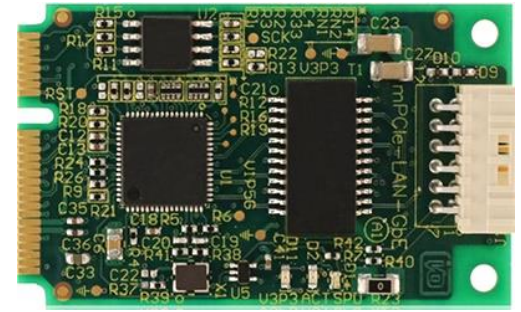


### FEATURES

- PCI EXPRESS MINI CARD (mPCIe) TYPE F1, WITH LATCHING I/O CONNECTOR
- RUGGED DESIGN INCLUDES OVERVOLTAGE PROTECTION AND BUFFERING ON ALL SIGNALS
- ONBOARD MAGNETICS WITH BUILT IN ISOLATION VIA TRANSFORMER COUPLING
- INDUSTRIAL TEMPERATURE (-40 TO +85°C) AND ROHS STANDARD
- 10/100/1000 BASE-T INTERFACE ON MPCIE
- PCI EXPRESS v2.1 (2.5GT/s) INTERFACE
- OPTIONAL LOW-PPM XTAL TO SUPPORT IEEE 1488 PRECISION TIMING PROTOCOL

### MODEL mPCIe-LAN-GbE



### FUNCTIONAL DESCRIPTION

The mPCIe-LAN-GbE is a type F1 PCI Express Mini Card (mPCIe) optimized for use in mobile and rugged environments, with latching connectors and protection on all signals. The onboard magnetics feature robust built in isolation via transformer coupling. In addition, extended operating temperature and RoHS compliance are standard.

The card's high-speed PCI Express 2.1 controller and Intel's industry-leading I210 Ethernet chip provide an often-necessary 1000Base-T (gigabit) Ethernet port while low power-consumption, small form-factor and light weight make integration into existing designs a snap. Onboard LEDs provide diagnostic and status information about power, link/activity, and data rate.

Full 10/100/1000 BASE-T compatibility — with IEEE 1488 Precision Timing Protocol support when ordered with a low-PPM XTAL (optional) — makes the mPCIe-LAN-GbE perfect for use in any Ethernet environment, from servers to users; mobile, rack, or desktop. The 104e-mPCIe-4 can support 4 mPCIe-LAN-GbE cards in a single stack height for the most compact and robust applications using the PC/104 form factor.

An optional RJ45 positive-retention cable assembly is designed to be easily panel-mounted.

### SPECIAL ORDER

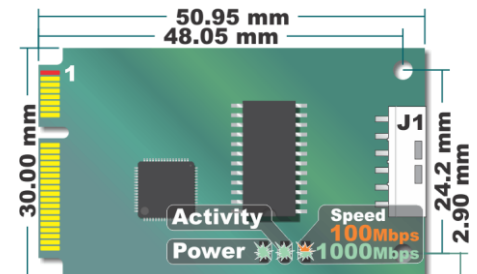
Please contact ACCES with your precise requirement. Examples of special orders would be conformal coating, custom software or product labeling, and more. We will work with you to provide *exactly* what is required.

### ACCESSORIES

Available accessories include a 9 inch panel-mount RJ45 cable and mounting hardware.

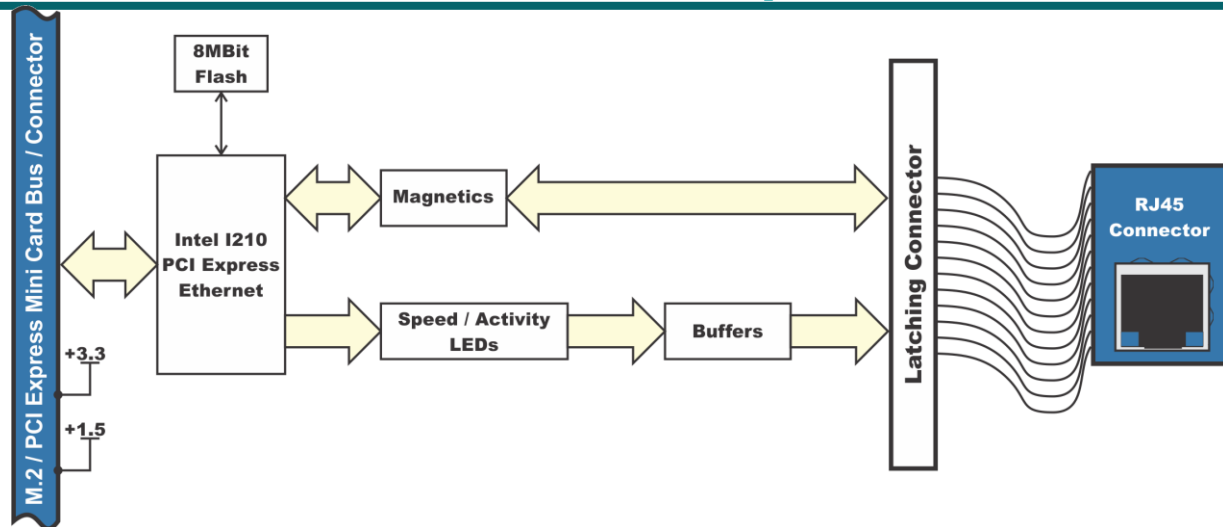
#### AVAILABLE ACCESSORIES INCLUDE:

CAB-mPCIe-LAN	9 inch panel-mount RJ45 cable
mPCIe-HDW-KIT2	Mounting hardware for 2mm
mPCIe-HDW-KIT2.5	Mounting hardware for 2.5mm



### SOFTWARE

Supported for use in most operating systems including Windows and Linux; embedded OS support includes DOS, XPe, WES7, WES8, IoT, VxWorks, and more.



**BLOCK DIAGRAM**

### PC Interface

mPCIe (PCI Express Mini Card) Type F1 "Full Length"

### Ethernet I/O

Protocol 10/100/1000 Base T

### ENVIRONMENTAL

Temperature Operating -40° to +85°C  
Storage -40° to +85°C

Humidity 5% to 95%, non-condensing

Power required +3.3VDC @ 176mA (1000Mbps)  
+3.3VDC @ 109mA (100Mbps)  
+3.3VDC @ 86mA (idle, no link)

### PHYSICAL

mPCIe board characteristics

Weight Ounces 0.19

Size Length 50.95mm (2.006")

Width 30.00mm (1.181")

I/O connector On-card Amphenol FCI 98417-G61-12ULF  
On-cable Amphenol FCI 10073599-012LF  
RJ45 Keystone 5379

#### On-card Pin Assignments

Function	Pin Name	Pin	Pin	Pin Name	Function
Ethernet Link/Activity	LINKACT LED	1	7	SPEED1000	1000Mbps speed ind
MDix LANE 1 Positive	LAN1+	2	8	LAN0+	MDix LANE 0 Positive
MDix LANE 1 Negative	LAN1-	3	9	LAN0-	MDix LANE 0 Negative
MDix LANE 3 Positive	LAN3+	4	10	LAN2+	MDix LANE 2 Positive
MDix LANE 3 Negative	LAN3-	5	11	LAN2-	MDix LANE 2 Negative
100Mbps speed ind	SPEED100	6	12	3.3V	+3.3V voltage rail

#### RJ45 Pin Assignments

Pin	Pin Name	Function
1	LAN0+	MDix LANE 0 Positive
2	LAN0-	MDix LANE 0 Negative
3	LAN1+	MDix LANE 1 Positive
4	LAN2+	MDix LANE 2 Positive
5	LAN2-	MDix LANE 2 Negative
6	LAN1-	MDix LANE 1 Negative
7	LAN3+	MDix LANE 3 Positive
8	LAN3-	MDix LANE 3 Negative

### ORDERING GUIDE

mPCIe-LAN-GbE	Rugged 1-port 10/100/1000 Ethernet mPCIe Card
CAB-mPCIe-LAN	9 inch panel-mount RJ45 cable
mPCIe-HDW-KIT2	Mounting hardware for 2mm (mPCIe only)
mPCIe-HDW-KIT2.5	Mounting hardware for 2.5mm (mPCIe only)

SHIPS STANDARD WITH INDUSTRIAL OPERATING TEMPERATURE AND ROHS

FACTORY OPTIONS:

-PT	Low PPM XTAL for IEEE 1488 Precision Timing Protocol
-CC	Conformal Coating