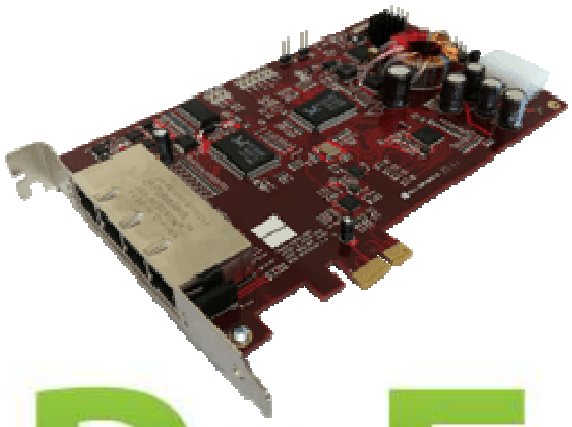
AEI-e410C
Product Brief



PoE
Power over Ethernet

Fault Tolerance / Bypass

The AEI-e410C can be deployed in a standard network configuration. The card incorporates an onboard switch chip that operates independent of the host system, thus providing an extra layer of fault tolerance. In the event the host system locks, the Gigabit uplink port to the host will no longer function. HOWEVER, the eight Fast Ethernet ports will continue to pass network traffic amongst themselves so long as power and ground reside on the bus.

PD Detection

Each port independently monitors the connection to determine if a Power Device is connected. Only when detection is made, will power be applied to the cable attaching the PD. Thus, allowing PoE and non-PoE devices to be connected to the same NIC.

PCI Express (x1) Embedded PoE 4+1 Physical Layer Switch

Ideal solution for Telco, NVS, and NVR OEMs. The **AEI-e410C** allows you to incorporate an 8+1 PSE switch that supports BOTH IEEE 802.3(af) Power over Ethernet (PoE) standards into your appliance.

The **AEI-e410C** has an onboard switch that provides four external Fast Ethernet connections, and one Gigabit Ethernet uplink to the host system. With 5.6 Gbps of aggregate switching bandwidth, the **AEI-e410C** easily achieves wire speeds on all 4 Fast Ethernet ports simultaneously!

Installation is a snap, as the device driver is Plug & Play in most popular operating systems including Windows, Linux, etc.

Quite simply, the **AEI-e410C** incorporates the latest technology, and is the world's first of it's kind.

Moreover, multiple cards can be installed in a single system, thereby providing a unique embedded multi-port solution.

PO Box 890955, Temecula, CA 92589 (USA) Tel. 1 (951) 699 8740 Email sales@aei-it.com WWW.AEI-IT.COM

AEI Intelligent Technologies

SOFTWARE FEATURES

NETWORK MONITORING
Monitors network connectivity on user-selected network clients or PDs.

FAULT NOTIFICATION
Via email and SMS text messages.
Initial notification upon fault recognition, and optional second notification after PoE reset.

PoE RESET ON FAULT
Configurable AUTOMATIC PoE power reset when a network fault occurs. Thus, re-booting all attached PoE devices.

PoE RESET SWITCH HEADER
Onboard header can be attached to a SPST Momentary switch on an OEM enclosure to allow manual resetting of PoE power without re-booting the host system.

PoE 24 HOUR RESET JUMPER
By installing a jumper on the card, the AEI hardware will automatically reset PoE power and reboot PoE devices every 24 hours of continuous operation.

PoE RESET ON MOUSE CLICK
PoE power reset without having to re-boot the host system by simply clicking the mouse.

REMOTE ACCESS SUPPORT
GUI allows PoE Power Management support for both local users and remote access users.

INTUITIVE GUI
Intuitive Graphical User Interface (GUI) allows for easy setup and use.

CALL FOR FEATURE AVAILABILITY

Simplifying IT

It's Not Just A Switch
FAULT TOLERANT UTILITY

Video Surveillance Systems, for example, are considered by many to be mission critical. Unfortunately, most systems are unmonitored and unattended. If fact, they usually sit in a closest or on a dusty shelf somewhere in the backroom, and are only used when criminal activity occurs.

Unfortunately, the main drawback with any mission critical system is network connectivity faults. Network connectivity faults result from any number of things. Such as plant growth or spider webs that blocks wireless links, premature network hardware , IC component failure, or device lockup. In fact, we've even seen mice chew through CAT-5 cable to use as nesting material. In short, faults are a natural occurrence, and can happen at anytime and for virtually any cause.

It is for this reason AEI developed our **FAULT TOLERANT UTILITY** software.

This software **MONITORS NETWORK CONNECTIVITY** of user-selected network clients or PD devices, including (but not limited to) PoE cameras, wireless cameras, POS terminals, and other PoE and non-PoE network equipment.

When a network connectivity FAULT is detected, the software will provide **FAULT NOTIFICATION** by sending an email or SMS text message to one or more users or service providers. The email notification will send a text attachment indicating the MAC and IP addresses, client nickname (such as ***Front Door Camera***) , and other information of the faulty unit (s) in order to easily troubleshoot the problem.

POE POWER MANAGEMENT:

Most network connectivity faults can be cured simply by resetting power, thereby re-booting devices or systems attached to the network.

The AEI software utility offers several Advanced Power Management Features that take preventative measures in resolving network connectivity problems.

This includes the ability to reset PoE power without rebooting the host system with the simple click of the mouse. This feature allows both local users, as well as authorized remote access users the ability to re-boot PoE devices attached to the AEI PoE controller.

Moreover, the software utility can be configured to AUTOMATICALLY reset PoE power when a network fault is detected. Thus, resolving network connectivity issues automatically, without the need for user intervention!

As a result of this patent pending solution, AEI offers our customers the ability to monitor network connections, receive notifications and automatically resolve PoE network issues without human intervention.

This leap in technology allows service providers to be proactive, rather than responsive, to customer demands. In addition to improved service quality, OEMs can expect to see improved ROI from service activities.

PO Box 890955, Temecula, CA 92589 (USA) Tel. 1 (951) 699 8740 Email sales@aei-it.com WWW.AEI-IT.COM

AEI™ Intelligent Technologies

SPECIFICATIONS

- PCI Express (x1) Slot
  Compatible with x4, x8 and x16 slots
- PLUG & PLAY
  Device Driver is included in virtually all popular operating systems including Windows, Linux, MacOS, and many more
- HIGH RELIABILITY
  High quality and precision components deliver reliability that's second to none!
- FAULT TOLERANCE / Bypass
  Onboard Switching circuitry operates Independent of Host. (See Front Page)
- BUS TYPE
  PCI Express 1.1 Compliant
- Host CPU TCP/IP Offload
  Incorporates on onboard Switch Chip that automatically routes network traffic without encumbering the Host CPU.
- POWER OVER ETHERNET
  Advanced Features
  PD Detection & Classification
  Over / Under Voltage Protection
  AC Disconnection Monitoring
  Current Foldback
- APPLICATIONS
  Powers PoE devices such as VoIP Phones, IP Cameras, wireless access points, and much more!

Simplifying IT

PCI Express (x1) Embedded POE 4+1 Physical Layer Switch

PART NUMBERS:

AEI-e410C

AEI-e410C-PoE

CONNECTOR:

Quad Gang RJ-45

IEEE STANDARDS

(8 Fast Ethernet Ports):

IEEE 802.3 (10Base-T Ethernet)

IEEE 802.3u (100Base-Tx Ethernet)

IEEE 802.3af (PoE Mode A)

IEEE 802.3u (Autonegotiation)

IEEE 802.3x Duplex and Flow Control

IEEE 802.3q (VLAN)

IEEE 802.3x (Priority Tagging)

IEEE STANDARDS

(Gigabit Uplink):

IEEE 802.3ab (1000Base-T)

IEEE 802.3q (VLAN)

IEEE 802.3p (Priority Tagging)

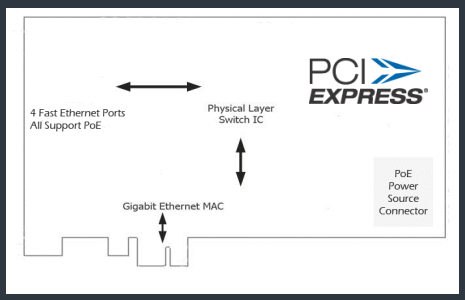
IEEE 802.3x (Full Duplex Operation)

PCI Express Slot

x1 card edge connector, compatible with x4, x8 and x16 PCIe slots.

Auto-Negotiation / NWay

Yes, full duplex and simplex operations, as well as 10/100 Mbps. Gigabit uplink operates at Full Duplex.



IEEE 802.3(af) | MODE A

CERTIFICATIONS:

RoHS; FCC Part 15, Subpart B-Class A; CE; CISPR-22-A; CISPR-22-b; VCCI-A; CSA 22.2 No. 950-95; and CE compliant to EN55024, EN50082-1, EN60950

POWER CONSUMPTION:

Add-in Card: Estimated *Maximum* Rating (1879mA / 3778.8mW) 3.3V @ 453mA, 1.8V @ 913mA, 1.5V @ 241mA, 1.05V @ 272mA.

POWER OVER ETHERNET

	PoE
Watts per port	15.4W
Amps per port	350mA

PoE Power Source

Via Host System PSU via Disc Drive Connector

Dimensions:

Universal Short Card: 6.6" (L) x 4.375 (H)

PO Box 890955, Temecula, CA 92589 (USA) Tel. 1 (951) 699 8740 Email sales@aei-it.com WWW.AEI-IT.COM

AEI Intelligent Technologies