CP1200TX

CompactPCI
## Dual Gigabit Ethernet Card
DATASHEET

AEI's CP1200 Gigabit Ethernet adapter offers combined density, and maximum Bandwidth connectivity for Windows or UNIX embedded server applications.

Jumbo Frame Support

❑ Two auto-negotiating 10/100/1000Base-T Gigabit Ethernet ports.

❑ Copper RJ-45 UTP connectivity Up to 100 meters.

❑ Intel 82546 MAC/PHYs on single CompactPCI slot.

❑ Eliminates need for Carrier Cards.

❑ Device Drivers
  Windows
  Solaris (x86)
  Linux
  FreeBSD
  VxWorks
  and more, call for details

❑ PCI-X 1.0 compliant 32/64-bit, 33/66/100/133 MHz

❑ Hardware Hot Swap Compliant

❑ Boot ROM Support

❑ PICMG 2.0
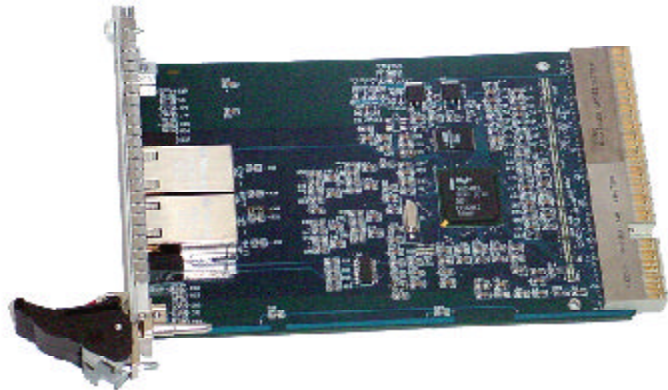
The CP1200 is an ideal candidate for multi-port performance intensive applications such as streaming video, Network Attached Storage (NAS), Stoage Area Networks (SANs), routers/switches, Voice over IP (VoIP), media gateways, digital imaging, data acquisition processors, and enterprise servers. The CP1200 satisfies the requirement of many OEMs to provide a low cost multi-port Gigabit connectivity solution for embedded platforms.

AEI's cPCI Dual Gigabit Ethernet NIC features flexible, auto-negotiation of 10/100/1000 Mbps performance. Utilizing the CP1200 allows network administrators to take advantage of merging gigabit technologies, and provides the scalability and versatility to interface with legacy 10/100 Fast Ethernet networks.

Compatible with Intel's advanced server feature software, administrators can achieve multi-Gigabit scalability and redundant failover capability. The CP1200 is compatible with IEEE 802.3ab compliant switches over 1000Base-T copper cabling through industry standard RJ-45 connections.

Advanced hardware interrupt handlers improve system efficiency. Using hardware acceleration, the controller off-loads tasks from the host processor, such as TCP/UDP/IP checksum calculations and TCP segmentation. The CP1200 can auto-sense speed, simplex/duplex/auto flow, and detects polarity (no need for cross over cables). It can cache up to 64 packet descriptors in a single burst, and the controller's next generation DSPs implement digital adaptive equalization as well as echo, cross-talk and baseline wander cancellation allowing 1000 Mbps performance in noisy environments.

The CP1200 comes standard with a 3u single size Eurocard mounting bracket. Also, sold separately is an optional 6u kit.

In addition to auto-sensing support for standard 32/64-bit, 33/66 MHz CompactPCI slots, the CP1200 also supports Embedded PCI-X single board computers into the 100 MHz and 133 MHz range.

Although the copper RJ-45 transceiver supports Cat 5/6 cabling, in order to profit from its Gigabit capability AEI recommends Belden Cable's DataTwist 600e copper cable. Cat 5 (and even Cat 6) cable suffers from cross talk, among other things. However, Belden's *DataTwist 600e* cable guarantees performance to 600MHz, well beyond Cat 6's 250MHz standards. Finally, a quality Gigabit switch is recommended to ensure reliable high bandwidth Gigabit connectivity.

Fault Tolerance, High Reliability, and High Performance. That's why Tier-1 and Tier-2 OEMs, system integrators, and others choose AEI.

SPECIFICATIONS:

Part Numbers:	**CP1200TX**
Number of Ports	Two 10/100/1000 Copper RJ-45 ports.
Ethernet Controller	Intel 82546
Network Topology	10Base-T (Up to 20Mbps Full Duplex) 100Base-TX (Up to 200 Mbps Full Duplex) 1000Base-T (Up to 1,000 Mbps Gigabit Ethernet) ** Auto sensing to allow users to extend the value of their Fast Ethernet connectivity.

IEEE Standards

802.3 (10Base-T)	802.3ab (1000Base-T)	802.3u (100Base-T)
802.3x (Flow Control)	802.1Q (VLAN)	802.3ad (Link Aggregation, note 1)
802.1p (Quality of Service)		

Auto-negotiation (NWay), and full duplex capable.

Bus Type	Supports 32- and 64-bit PCI-X 1.0 or PCI 2.2 buses on CompactPCI.
On-Board Memory	256KB and 1MB EEPROM Flash Programmable (Boot ROM)
Cable Type	Copper Category 5 (or better) for distances to 100 meters.
Slot Type	3u Eurocard Form Factor. 32/64-bit, 33/66/100/133 MHz Optional 6u conversion kit available upon request for additional nominal charge.
Bus Mastering	32- or 64-bit Bus-Mastering DMA reduces CPU utilization.
LED's	ACTIVITY, LINK, STATUS, 100 Mbps, 1000 Mbps LINK, and two programmable
Remote management features	Lower support costs with standards-based management tools such as Wfm, RIS and SNMP/DMI.
Device Drivers	DOS Microsoft Windows Linux 2.4.x (32- and 64-bit Editions) SunSoft Solaris 2.7 and later revisions. FreeBSD 4.x and later revisions. VxWorks (via Wind River, built into OS) Updated device drivers available at **http://aei-it.com** **Boot ROM Support for most popular operating systems.**
Server Features	Wake on LAN Fast EtherChannel (Note 1) Gigabit EtherChannel (Note 1) TCP/IP Checksum Offloading Adaptive Load Balancing
Hot Swap Compliant	Hardware is hot swap compliant. Call for details on device driver support for Hot Swap.
Jumbo Frame	Yes. Recommend greater than 64 MB RAM when running in Jumbo Frame mode for most systems. Available in 1000Base-T Gigabit only. Running JF in 10/100 mode may result in poor performance or loss of link.
Environmental	Temperature: -5 to 60C Humidity: 5 to 90%, non-condensing
Emmissions	FCC Class B, Part 15 (pending)

Note1: When used with a capable switch.