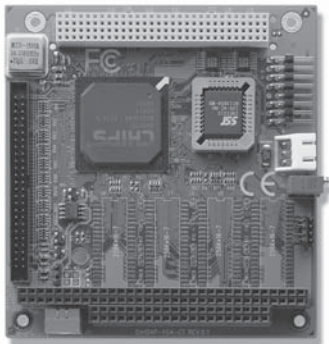


PC/104 Modules

Em104P-VGA-693

Flat Panel / CRT Module with
C&T 69030 (4 MB)



Features

- 4MB integrated SDRAM on dye
- Up to 1600 x 1200 @ 16 bpp (60Hz)
- Single voltage +3.3V @ 500mA

Specifications

Chipset

CHIPS C&T 69030 HiQVideo™ Accelerator with 4 MB integrated SDRAM on dye

CRT/LCD Support

CRT, TFT, DSTN, SSTN, EL, Plasma VGA, SVGA, XGA, UXGA

BIOS Flat Panel support

64 Kbytes EPROM Video BIOS has standard support for up to 16 flat panel monitor types (selectable by jumper setting)

Display Interface Connectors

15-pin header pitch 2.5 for CRT

50-pin boxheader pitch 2.0 for Flat Panel includes +3V / +5V power pins (jumper)

3-pin boxheader pitch 2.54 for DSTN

backlight power adjustable between +38 V and -38 V

PC/104-Plus Interface

PC/104 version 2.3 and PCI Local Bus 2.1

Pressfit PC/104 Connectors

High quality pressfit PCI/ISA connectors guarantee optimal connection and fit

OS Support

DOS, Windows 95/98/NT/2000, OS/2, NetWare, Linux, QNX, VxWorks

Power Requirements

single voltage +3.3 V @ 500 mA

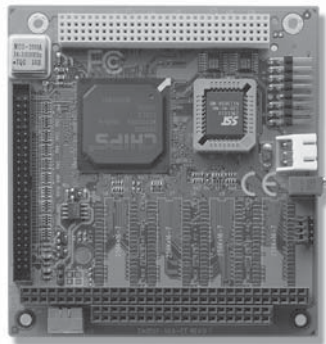
Ordering Information

Em104P-VGA-693

PC/104-Plus Flat Panel / CRT Module with C&T 69030

Em104P-VGA-690

Flat Panel / CRT Module with
C&T 69000 (2 MB)



Features

- 2MB integrated SDRAM on dye
- Up to 1024 x 768 @ 16 bpp (60Hz)
- Single voltage +3.3V @ 480mA

Specifications

Chipset

CHIPS C&T 69000 HiQVideo™ Accelerator with 2 MB integrated SDRAM on dye

CRT/LCD Support

CRT, TFT, DSTN, SSTN, EL, Plasma VGA, SVGA, XGA, SXGA

BIOS Flat Panel support

64 Kbytes EPROM Video BIOS has standard support for up to 16 flat panel monitor types (selectable by jumper setting)

Display Interface Connectors

15-pin header pitch 2.5 for CRT

50-pin boxheader pitch 2.0 for Flat Panel includes +3V / +5V power pins (jumper)

3-pin boxheader pitch 2.54 for DSTN

backlight power adjustable between +38 V and -38 V

PC/104-Plus Interface

PC/104 version 2.3 and PCI Local Bus 2.1

Pressfit PC/104 Connectors

High quality pressfit PCI/ISA connectors guarantee optimal connection and fit

OS Support

DOS, Windows 95/98/NT/2000, OS/2, NetWare, Linux, QNX, VxWorks

Power Requirements

single voltage +3.3 V @ 480 mA

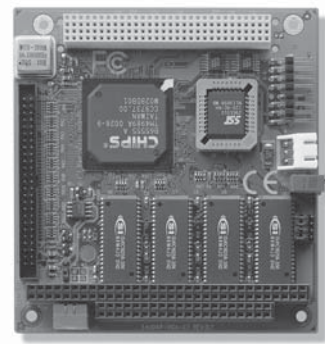
Ordering Information

Em104P-VGA-690

PC/104-Plus Flat Panel / CRT Module with C&T 69000

Em104P-VGA-655

Flat Panel / CRT Module with
C&T 65555 (1 ~ 4 MB)



Features

- 1MB EDO RAM on board
- Up to 1280 x 1024 @ 24 bpp (60Hz)
- Single voltage +3.3V @ 600mA

Specifications

Chipset

CHIPS C&T 65555 HiQVideo™ Accelerator with 1 MB EDO memory onboard (factory option : 2 or 4 MB EDO)

CRT/LCD Support

CRT, TFT, DSTN, SSTN, EL, Plasma VGA, SVGA, XGA, UXGA

BIOS Flat Panel support

64 Kbytes EPROM Video BIOS has standard support for up to 16 flat panel monitor types (selectable by jumper setting)

Display Interface Connectors

15-pin header pitch 2.5 for CRT

50-pin boxheader pitch 2.0 for Flat Panel includes +3V / +5V power pins (jumper)

3-pin boxheader pitch 2.54 for DSTN

backlight power adjustable between +38 V and -38 V

PC/104-Plus Interface

PC/104 version 2.3 and PCI Local Bus 2.1

Pressfit PC/104 Connectors

High quality pressfit PCI/ISA connectors guarantee optimal connection and fit

OS Support

DOS, Windows 95/98/NT/2000, OS/2, NetWare, Linux, QNX, VxWorks

Power Requirements

single voltage +3.3 V @ 600 mA

Ordering Information

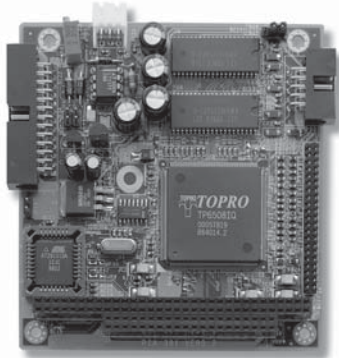
Em104P-VGA-655

PC/104-Plus Flat Panel / CRT Module with C&T 65555

PC/104 Modules

PIA-391

Flat Panel / CRT Module



Features

- 1MB EDO RAM on board
- Supports 16-bit VGA resolutions up to 800 x 600 at 256 colors
- Supports 3.3V/5V LCD

The PIA-391 is a 16-bit Super VGA high resolution, high performance CRT display controller. It can deliver up 16M colors.

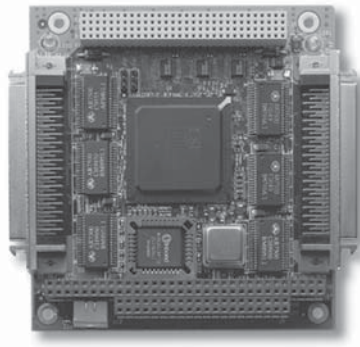
Chipset : Topro TP65081Q
simultaneous Flat panel and CRT operation
1 MB display RAM
up to 800 x 600 at 256 colors
built-in VESA feature connector
supports 3.3 V and 5 V displays
onboard panel contrast adjustment
onboard DC-to-DC converter :
VEE -35 V ~ +35 V

Ordering Information

PIA-391
PC/104 Flat Panel / CRT SVGA Module
with DC-to-DC converter

Em104P-SCSI-U2D

Dual Ultra2 LVD SCSI



Features

- Ultra2 LVD, Ultra-wide SCSI
- LSI Symbios 896
- Transfer rate at 80 MB/S

Specifications

Protocols Supported
Ultra2 LVD, Ultra-Wide SCSI

SCSI Processor
LSI Symbios 896

Max Transfer Rate
80 MB/s (Ultra2)

Max. Devices Supported
30 (2x 15)

Connector
dual external 68-Pin LVD

Cable length
LVD SCSI Cable length up to 12 meters

PCI standards
PCI 2.1 compliant with full Plug & Play support
Level triggering allows interrupt sharing between multiple adapters.

High speed 32-bit PCI bus master DMA transfers up to 133 MB/s in burst mode

OS Support
DOS, Windows, Windows NT, OS/2, NetWare, Linux(Red Hat, Caldera, SlackWare, Turbo-Linux, S.U.S.E. and Debian), FreeBSD, Solaris, SCO Unix and Unixware

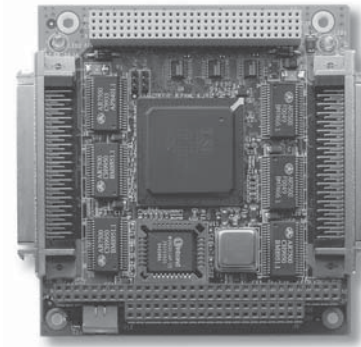
Pressfit PC/104 Connectors
High quality pressfit connectors for ISA and PCI bus to guarantee optimal connection and fit

Ordering Information

Em104P-SCSI-U2D
PC/104-Plus Dual Channel Ultra2 LVD SCSI Module with LSI Symbios 896

Em104P-SCSI-U3D

Dual Ultra3 LVD SCSI



Features

- Ultra3 LVD, Ultra-wide SCSI
- LSI Symbios 1010-33
- Transfer rate at 160 MB/S

Specifications

Protocols Supported
Ultra3 LVD, Ultra2 LVD, Ultra-Wide SCSI

SCSI Processor
LSI Symbios 1010-33

Max Transfer Rate
160 MB/s (Ultra3)

Max. Devices Supported
30 (2x 15)

Connector
dual external 68-Pin LVD

Cable length
LVD SCSI Cable length up to 12 meters

PCI standards
PCI 2.1 compliant with full Plug & Play support
Level triggering allows interrupt sharing between multiple adapters

High speed 32-bit PCI bus master DMA transfers up to 133 MB/s in burst mode

OS Support
DOS, Windows, Windows NT, OS/2, NetWare, Linux(Red Hat, Caldera, SlackWare, Turbo-Linux, S.U.S.E. and Debian), FreeBSD, Solaris, SCO Unix and Unixware

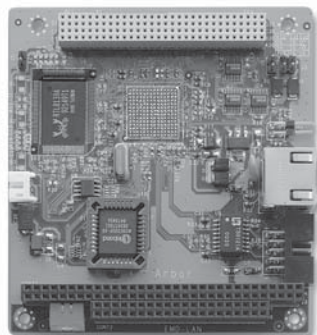
Pressfit PC/104 Connectors
High quality pressfit connectors for ISA and PCI bus to guarantee optimal connection and fit

Ordering Information

Em104P-SCSI- U3D
PC/104-Plus Dual channel Ultra2 LVD SCSI Module with LSI Symbios 1010-33

Em104P-LAN100R

10/100 Mbps Realtek 8139C Ethernet Module



Features

- LAN 10/100Mbps, RTL8139C
- Full Duplex transfer mode
- Power saving and Wake-on-LAN

Specifications

Chipset

Realtek RTL8139C

Protocol / Performance

10 Mbps and 100 Mbps, auto-negotiation
Supports Full Duplex Flow Control

Boot ROM support

up to 128KB Flash Memory Boot-ROM

Indicator LEDs

2 LED on RJ-45 connector - Activity/Link and 100 Mbps indicator additional 4-pin header for external LEDs

Connectors

RJ-45 interface connector 10-pin box-header for extension cable with RJ-45 connector with LED, 3-pin wake up LAN control line

Power Saving and Wake-up LAN

Advanced power saving mode when LAN function or wake-up function is not used, supports Link Change, Microsoft "Wake-up Frame" and AMD "Magic Packet" for WOL function

OS Support

Microsoft Windows NT4.0, Microsoft Windows* 95, 98, 2000, CE, Novel NetWare* 3.11, 3.12 & 4.1x, 5 Server, Packet driver for UNIX Client, UnixWare 7.0, Linux, SCO Unix, MAC, QNX, Free BSD, Macintosh Mac OS 8.x/9.x

Pressfit PC/104 Connectors

High quality pressfit connectors for ISA and PCI bus to guarantee optimal connection and fit

Power Requirement

0.52 W (105 mA @ +5 V) fully functional

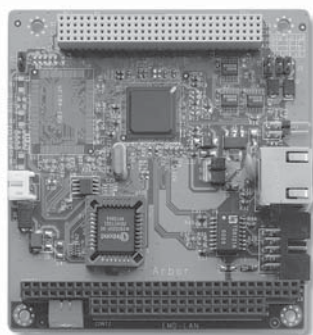
Ordering Information

Em104P-LAN100R

PC/104-Plus Fast Ethernet Module with Realtek RTL8139C

Em104P-LAN100N

10/100 Mbps Intel 82559 Ethernet Module



Features

- LAN 10/100Mbps, Intel 82559
- RJ-45 connector with 2 LED
- Power saving and Wake-on-LAN

Specifications

Chipset

Intel 82559

Protocol / Performance

10 Mbps and 100 Mbps, auto-negotiation, Priority Packet (IEEE 802.1p) and Virtual LAN (VLAN) support (IEEE 802.1Q) Supports Full Duplex Flow Control (IEEE 802.3x)

Boot ROM support

up to 128KB Flash Memory Boot-ROM

Indicator LEDs

2 LED on RJ-45 connector, additional 4-pin header for external LEDs

Connectors

RJ-45 interface connector 10-pin box-header for extension cable with RJ-45 connector with LED, 3-pin wake up LAN control line

Power Saving and Wake-up LAN

Advanced power saving mode when LAN function or wake-up function is not used, supports Link Change, Microsoft "Wake-up Frame" and AMD "Magic Packet" for WOL

OS Support

Microsoft Windows NT4.0, Microsoft Windows* 95, 98, 2000, CE, Novel NetWare* 3.11, 3.12 & 4.1x, 5 Server, Packet driver for UNIX Client, UnixWare 7.0, Linux, SCO Unix, MAC, QNX, Free BSD, Macintosh Mac OS 8.x/9.x

Pressfit PC/104 Connectors

High quality pressfit connectors for ISA and PCI bus to guarantee optimal connection and fit

Power Requirement

0.75 W (150 mA @ +5 V) fully functional

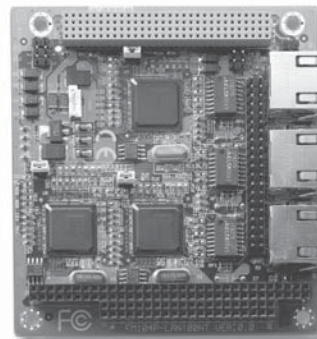
Ordering Information

Em104P-LAN100N

PC/104-Plus Fast Ethernet Module with Intel 82559

Em104P-LAN100NT

Triple port Intel 82559 Ethernet



Features

- 3x Intel 82559, 10/100 Mbps
- Full Duplex transfer mode
- Power saving and Wake-on-LAN

Specifications

Chipset

3x Intel 82559 (Em104p-LAN100NT)

Protocol / Performance

10 Mbps and 100 Mbps, auto-negotiation, Priority Packet (IEEE 802.1p) and Virtual LAN (VLAN) support (IEEE 802.1Q) Supports Full Duplex Flow Control (IEEE 802.3x)

Boot ROM support

up to 128 KB Flash Memory Boot-ROM

Indicator LEDs

2 LED on RJ-45 connector, additional 4-pin header for external LEDs

Connectors

RJ-45 interface connector 10-pin box-header for extension cable with RJ-45 connector with LED, 3-pin wake up LAN control line

Power Saving and Wake-up LAN

Advanced power saving mode when LAN function or wake-up function is not used, supports Link Change, Microsoft "Wake-up Frame" and AMD "Magic Packet" for WOL

OS Support

Microsoft Windows NT4.0, Microsoft Windows* 95, 98, 2000, CE, Novel NetWare* 3.11, 3.12 & 4.1x, 5 Server, Packet driver for UNIX Client, UnixWare 7.0, Linux, SCO Unix, MAC, QNX, Free BSD, Macintosh Mac OS 8.x/9.x

Power Requirement

0.75 W (150 mA @ +5 V) fully functional

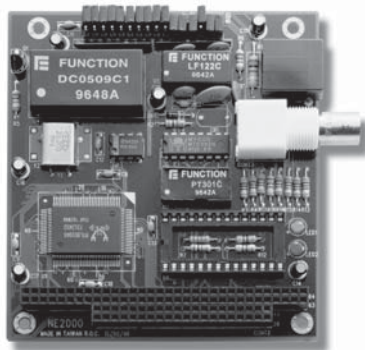
Ordering Information

Em104P-LAN100NT

PC/104-Plus Triple Port Fast Ethernet Module with three Intel 82559

PC/104 Modules

PIA-3610 NE2000 LAN Module



Features

- Chipset RTL 8019AS
- Full Duplex transfer mode
- NE2000 compatible with 16 KB RAM

The PIA-3610 is a high performance, NE2000 compatible, Ethernet adapter.

The PIA-3610 connects to twisted pair (10BASE-T) and coax (10BASE-2) media. It includes a 16 KB RAM buffer for fast and reliable network transmission.

Chipset Realtek 8019AS single chip
Full-duplex transfer mode, doubles effective bandwidth
NE2000 compatible with built in 16 KB RAM buffer
Jumper select , Jumperless or Plug&Play mode

Media

BNC (10BASE-2) or RJ-45 (10BASE-T), auto

Throughput

10 Mbps

IRQ

2 (9), 3, 4, 5, 10, 11, 12 or 15

I/O address

200h, 220h, 240h, 260h, 280h, 2A0h, 2C0h, 2E0h, 300h, 320h, 340h, 360h, 380h, 3A0h, 3C0h, 3E0h

Boot ROM address

C800, CC00, D000, D800, DC00, 8/16-bit data bus autosensing, Built-in boot ROM function

Power requirements

single 5V @ 120 mA

Operating temperature

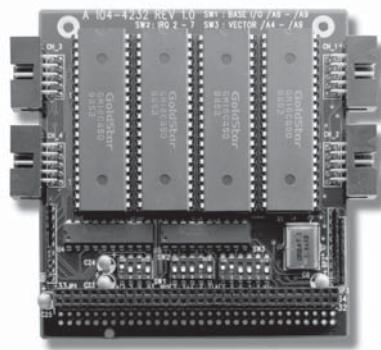
0 ~ +55°C

Ordering Information

PIA-3610

PC/104 NE2000 LAN Module

PIA-350-A 4-port RS-232 Module



Features

- 4 RS-232 asynchronous ports
- High speed transmission rate
- Jumper selectable interrupt level

Specifications

4 RS-232C asynchronous ports

4 x 16550 UARTS

Supports

TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

Interrupt select

2, 3, 4, 5, 7 RS-232 modem control signals

I/O address

100h to 300h

Baudrate

up to 115.2 Kbps

Power Requirements

single +5V

Operating Temperature

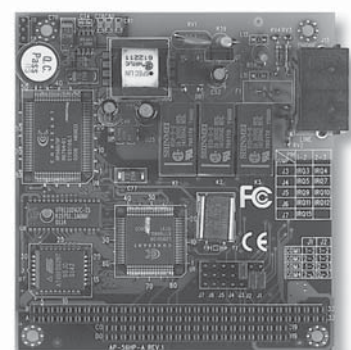
0 ~ +55°C

Ordering Information

PIA-350-A

PC/104 Four port RS-232 Module

Em104P-Modem/56K PC/104 Modem Module



Features

- Data modem throughput up to 115.2Kbps
- Rockwell RC56D Chipsets
- Error correction & data compression

Specifications

Rockwell RC56D Chipsets

ISA bus Interface

Data modem throughput up to 115.2Kbps

V.90, K56Flex, V.34, V.32bis, V.32, V.23, V.22bis, V.22, Bell 212A/Bell 103

Fax modem send and receive rates up to 14400bps

Error Correction & Data Compression

MNP2-4(ALT), V42(LAPM)

Voice/Audio mode

2M Flash ROM

FDSP (Full-Duplex speakerphone)

Hardware & Software flow control

Programmable volume control

Stores 2 configuration profiles

Stores up to 4 telephone numbers

2W Leased line function

V 80 Video phone

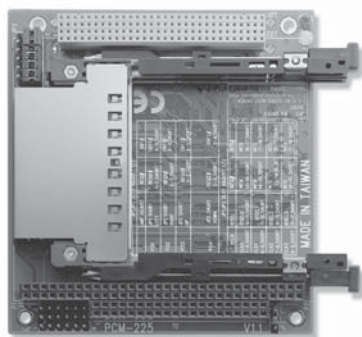
Ordering Information

Em104P-Modem/56K

PC/104 Modem Module

Em104P-PCM

PCMCIA Card Drive



Features

- One slot PCMCIA card bus module
- Support Type I/II/III PCMCIA cards
- 16-bit data bus
- 2 slots of PCMCIA card bus module
- Support Type I/II/III PCMCIA cards
- 16-bit data bus

The Em104P-PCM model consist of a PC/104-Plus interface module with two built-in PCMCIA card slots. Two PCMCIA slots are built into the interface board. The Em104P-PCM is ideal for user who require two PCMCIA interface slots where easy accessibility to the PCMCIA slots is not required. The PCMCIA slots on the module provides full support for all Type I, Type II and Type III PCMCIA memory, I/O and ATA hard disk cards.

Comply with PCMCIA v. 2.1 and JEIDA 4.2
 16-bit legacy mode support
 PCI way legacy mode support
 Mix and match 5V/3.3V PC card, 16/32 cards, 3.3V CardBus Cards
 Applies T/I 1420 Controller
 Support hot-swap function

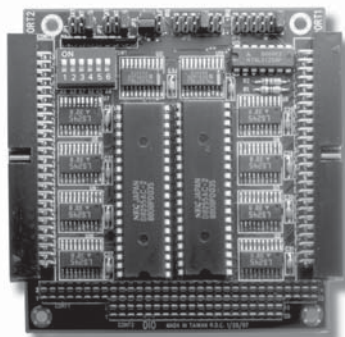
Ordering Information

Em104P-PCM/1
 PC/104-Plus Single slot PCMCIA module

Em104P-PCM/2
 PC/104-Plus Dual slot PCMCIA module
 2 port PCMCIA module

PIA-3148

48-bit Digital I/O Module



Features

- 48-bit digital I/O channels
- Channel simulate 8255 PPI mode 0
- Interrupt triggering, rising/falling edge

The PIA-3148 is a 48-bit digital I/O module. The module can be used together with TTL level input /output circuitry. Its 48 bits are arranged in two 24-bit digital I/O groups. Each group emulates an 8255 PPI (programmable peripheral interface) mode 0, but has a higher driving capacity than the 8255 PPI. Each 24-bit group is divided into three 8-bit ports.

48 digital I/O lines (2 groups)
 Group emulates a 8225 PPI mode 0
 Buffered circuits for higher driving capacity than 8255

Bit 0 of port C can generate an interrupt to IRQ 2, 3, 4, 5, 6 or 7
 Interrupt trigger on rising / falling edge
 Output status readback
 Pin-compatible with OPTO-22 I/O module racks

Transfer rate
 300 KB/sec. (typical)

Digital output
 Logic level 0: 0.5 Vmax @ 24 mA
 Logic level 1: 2.0 V min. @ 15 mA

Digital input
 Logic level 0: 0.8 V max.
 Logic level 1: 2.0 V min.

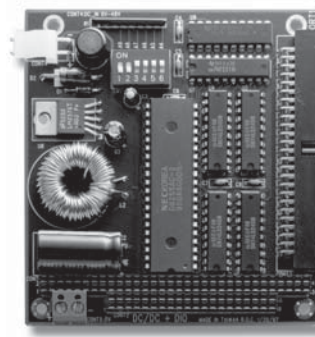
Ordering Information

PIA-3148
 PC/104 48-bit Digital I/O Module

PIA-3124
 PC/104 24-bit Digital I/O Module

PIA-3036

24-bit Digital I/O Module with DC/DC Converter



Features

- 24-bit digital channels w/DC/DC converter
- Channel simulate 8255 PPI mode 0
- High output driving capacity

The PIA-3036 is a 24-bit digital I/O. The module can be used together with TTL level input / output circuitry.

24 digital I/O lines (1 group)
 Group emulates a 8225 PPI mode 0
Higher driving capacity than 8255 PPI
 Output status readback
 Pin-compatible with OPTO-22 I/O module racks

Transfer rate
 300 KB/sec. (typical)

Digital I/O characteristics
 same as PIA-3148/3124

The DC to DC converter accepts any input between +8 and +48 VDC, which is converted into single + 5 VDC output. The converter includes cycle-by-cycle current limiting and thermal shutdown for full protection.

Input voltage range
 +8 ~ +48 VDC

Output voltage
 +5 VDC @ 3 A max.

Switch frequency
 52 KHz fixed frequency

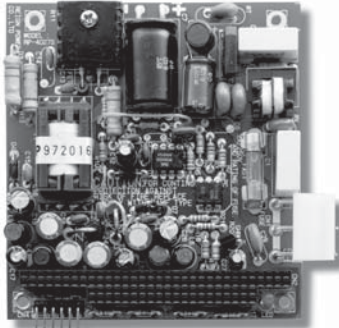
Efficiency
 over 80% Thermal shutdown and current limit protection

Ordering Information

PIA-3036
 PC/104 24-bit Digital I/O and DC/DC Converter Module

PIA-3026

AC/DC Power Module



Features

- Input voltage range: 90 ~ 264 VAC
- Output voltage: +5 VDC @ 2 A, -5 VDC @ 0.2 A, +12 VDC @ 1 A, -12 VDC @ 0.3 A
- Input frequency: 47 ~ 63 Hz

The PIA-3026 is a compact AC/DC switching power supply. The module is highly efficient and accepts a wide range of AC input.

Specifications

Input voltage range

90 ~ 264 VAC

Output voltage

+5 VDC @ 2A, -5 VDC @ 0.2 A, +12 VDC @ 1 A, -12 VDC @ 0.3 A

Input frequency

47 ~ 63 Hz

Inrush current cold

20 A @ 110 VAC, 40 A @ 220 VAC

Hold-up time

16 ms

Raise time

500 ms

Overload protection

power limit

Short protection

auto-recovery MOSFET design Built-in line filter

Operating temperature

0 ~ +55°C Meets FCC, CE, TÜV
Meets UL478 and CSA 22.2



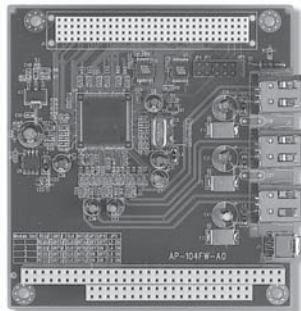
Ordering Information

PIA-3026

PC/104 Power Supply Module

Em104P-1394

1394 Ports PC/104-Plus Module



Features

- Compatible IEEE-1394a-2000 Fire Wire Standard
- Open Host Controller Interface (OHCI) compliant
- Three high speed Serial Interface
- Speeds of 100/200/400 MBits/sec
- Standard 6-way IEEE-1394 Connectors for self-powered or non powered devices

The Em104P-1394 is a high performance controller providing 3 serial ports conforming to the IEEE-1394 OHCI specification - popularly known as FireWire. The Em104P-1394 provides an ideal interface for attaching high speed Audio, Video and Storage peripherals to an embedded system. Automatic detection and configuration of devices (without the need for on-board jumpers) ensures robust system operations and high reliability.

The Em104P-1394 provides a distinct advantage over other communications and interfacing controllers by allowing multiple devices to be attached simultaneously on the high serial bus. Three serial ports are provided enabling up to 63 devices to be connected with cable lengths of over 4.5M. The Em104P-1394 is supported by a suite of drivers for Windows98SE/Me/2000/XP and Mac OS.

Support Interface

PC/104 extension

PC/104 Plus extension



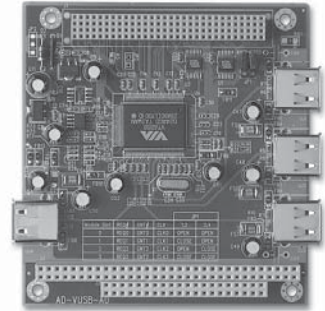
Ordering Information

Em104P-1394

3 High Performance 1394 Ports
PC/104-Plus Module

Em104P-USB2

4-Port USB 2.0 PC/04-Plus Module



Features

- USB 2.0 (480 Mbps)
- USB 1.1/USB 1.0 (12 Mbps)
- OHCI and EHCI Host Controller Core
- 4 A Type USB 2.0 Ports
- Data transfer rate 1.5/12/480 Mbps Speed

The PCP-USB2 is a 4-port Universal Serial Bus (USB) 2.0 PC/104-Plus adapter for upgrading Embedded computers to the new USB standard. This card is designed to work with mouse, keyboards, external CD-R/RW's, external hard drives, webcams, and other USB enabled devices. It is 40 times faster than previous USB adapters and 20% faster than Firewire (IEEE-1394). The four USB 2.0 ports can transfer data at 480 Megabits per second, making it ideal for external storage, backup, networking and video devices.

Support Interface

PC/104 extension

PC/104-Plus extension



Ordering Information

Em104P-USB2

4-port Universal Serial Bus (USB) 2.0
PC/104-Plus Module