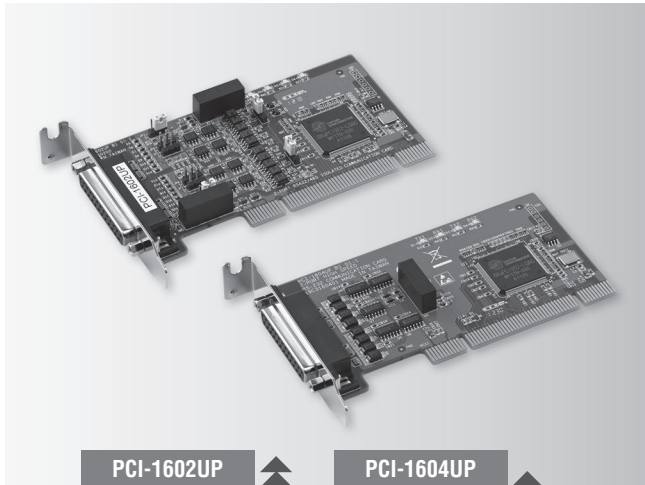


PCI-1602UP PCI-1604UP

2-port RS-422/485 Low-Profile Universal PCI Communication Card with Isolation Protection

2-port RS-232 Low-Profile Universal PCI Communication Card with Isolation Protection



Features

- PCI bus 2.2 compliant
- Speeds up to 921.6 kbps
- 2-port RS-422/485 (PCI-1602UP); 2-port RS-232 (PCI-1604UP)
- I/O address automatically assigned by PCI Plug & Play
- OS support: Windows 2000/XP/Vista/7, Windows CE 5.0/6.0, Linux
- 2,500 V_{DC} EFT Protection
- 2,500 V_{DC} Isolation protection for RS-422/485 (PCI-1602UP) or RS-232 (PCI-1604UP)
- Interrupt status register for increased performance
- Space reserved for termination resistors (PCI-1602UP)
- Automatic RS-485 data flow control (PCI-1602UP)
- Powerful and easy-to-use utility (ICOM Tools)
- Universal and low-profile PCI (Supports 3.3 V or 5 V PCI bus signal)

Introduction

These RS-232/422/485 PCI communication cards are compatible with the PCI 2.2 bus specification for universal connectivity and low-profile PCI cards. The PCI-1604UP provides two independent RS-232 ports, while the PCI-1602UP has two RS-422/485 ports. To improve system performance, all cards allow transmission rates up to 921.6 kbps. To increase reliability, the cards offer EFT protection, protecting your system from abrupt high voltages up to 2,500 V_{DC}. High-performance OXuPC1952 and OXuPC1954 UARTs with 128-byte FIFO, reduces the CPU load, making the cards especially suitable for multitasking environments.

The cards follow the Low Profile PCI MD1 standard. This standard has the same protocol and electronic definition as standard PCI, but the low-profile PCI standard is smaller. Thus, the cards are suitable for embedded systems, and size-constrained environments. Moreover, all cards are equipped with an universal PCI connector, which allows support for traditional systems with 5 V signaling or newer systems with 3.3 V signaling.

Specifications

General

- **Bus Type** Universal PCI V 2.2
- **Certification** CE, FCC class A
- **Connectors** 1 x Female DB25
- **Dimensions (L x W)** 119.91 x 64.41 mm (4.7" x 2.5") (low-profile MD1)
- **Power Consumption** 5 V @ 400 mA (Max.)

Communications

- **Communication Controller** OXuPC1952
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND
RS-422: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND
RS-485: Data+, Data-, GND
- **FIFO** 128 bytes
- **Flow Control** CTS/RTS, Xon/Xoff
- **IRQ** Assigned by Plug & Play
- **Parity** None, Even, Odd, Mark and Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Protection

- **EFT Protection** 1 KV
- **Isolation Protection** 2,500 V_{DC}
- **ESD Protection** 8KV (air), 4KV (contact)

Software

- **Bundled Software** ICOM Tools
- **OS Support** Windows 2000/XP/Vista/7, Windows CE 5.0/6.0, Linux, and QNX

Environment

- **Operating Humidity** 5 ~ 95 % RH, non-condensing
- **Operating Temperature** 0 ~ 65°C (32 ~ 149°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Ordering Information

- **PCI-1602UP** 2-port RS-422/485 Low-Profile Uni PCI Comm Card w/Iso
- **PCI-1604UP** 2-port RS-232 Low-Profile Uni PCI Comm Card w/Iso

Note: PCI-1602UP and PCI-1604UP include one DB25 to 2 x DB9 cable

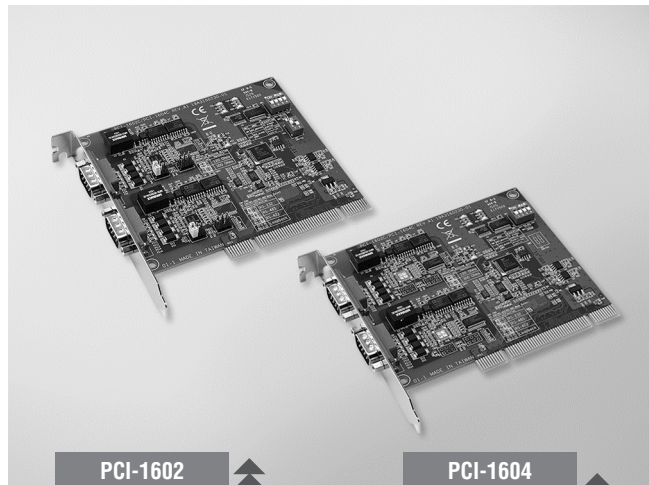
PCI-1602 PCI-1604 PCI-1610 PCI-1612

2-port RS-232/422/485 PCI Communication Card

2-port RS-232 PCI Communication Card

4-port RS-232 PCI Communication Card

4-port RS-232/422/485 PCI Communication Card



PCI-1602

PCI-1604



Features

- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 2 x RS-232 or RS-232/422/485 ports
- Supported operating systems: Windows 7/8/10, and Linux.
- XR17V352 UART with 256-byte FIFOs

Specifications

General

- Bus Type** Universal PCI v2.2
- Certification** CE, FCC class A
- Connectors** 2x male DB9
- Dimensions (L x W)** 119.91 x 106.67 mm (4.72" x 4.2")
- Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- Comm. Controller** XR17V352
- Data Bits** 5, 6, 7, 8
- FIFO** 256 bytes
- Parity** None, Odd, Even, Mark and Space
- Speed** 50 bps ~ 921.6 kbps
- Stop Bits** 1, 1.5, 2

Software

- Bundled Software** ICOM Tools
- OS Support** Windows 7/8/10, and Linux. (You can reference the SW release note to know the supported OS version.)

Environment

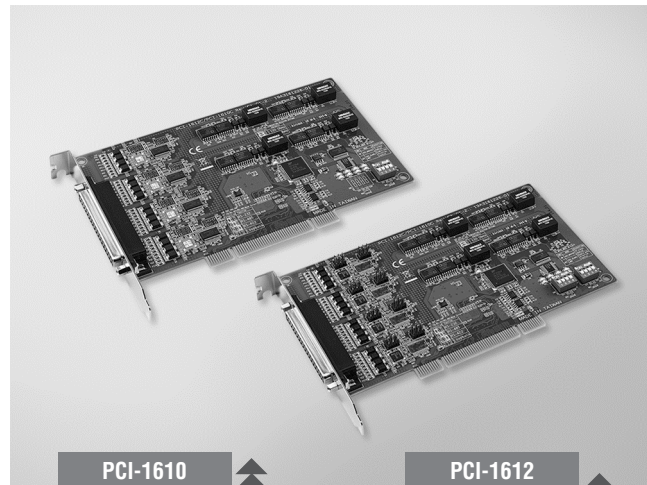
- Operating Humidity** 5 ~ 95 % RH, non-condensing
- Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Protection

Model Name	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCI-1602B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCI-1602C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{oc}
PCI-1604C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{oc}

Ordering Information

- PCI-1602B-CE** 2-port RS-232/422/485 PCI Comm. Card w/Surge
- PCI-1602C-AE** 2-port RS-232/422/485 PCI Comm. Card w/Surge & Isolation
- PCI-1604C-AE** 2-port RS-232 PCI Comm. Card w/Surge & Isolation



PCI-1610

PCI-1612



Features

- Universal PCI v2.2
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 4 x RS-232 or RS-232/422/485 ports
- Supported operating systems: Windows 7/8/10, and Linux.
- XR17V354 UART with 256-byte FIFOs

Specifications

General

- Bus Type** Universal PCI v2.2
- Certification** CE, FCC class A
- Connectors** 1x Female DB37
- Dimensions (L x W)** 174.65 x 106.67 mm (6.88" x 4.2")
- Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- Comm. Controller** XR17V354
- Data Bits** 5, 6, 7, 8
- FIFO** 256 bytes
- Parity** None, Odd, Even, Mark and Space
- Speed** 50 bps ~ 921.6 kbps
- Stop Bits** 1, 1.5, 2

Software

- Bundled Software** ICOM Tools
- OS Support** Windows 7/8/10, and Linux. (You can reference the SW release note to know the supported OS version.)

Environment

- Operating Humidity** 5 ~ 95 % RH, non-condensing
- Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Protection

Model Name	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCI-1610B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCI-1610C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{oc}
PCI-1612B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCI-1612C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{oc}

Ordering Information

- PCI-1610B-DE** 4-port RS-232 PCI Comm. Card w/Surge
- PCI-1610C-CE** 4-port RS-232PCI Comm. Card w/ Surge & Isolation Protection
- PCI-1612B-DE** 4-port RS-232/422/485 PCI Comm. Card w/Surge
- PCI-1612C-CE** 4-port RS-232/422/485 PCI Comm. Card w/Surge & Isolation

Note: this series includes cable OPT4A.

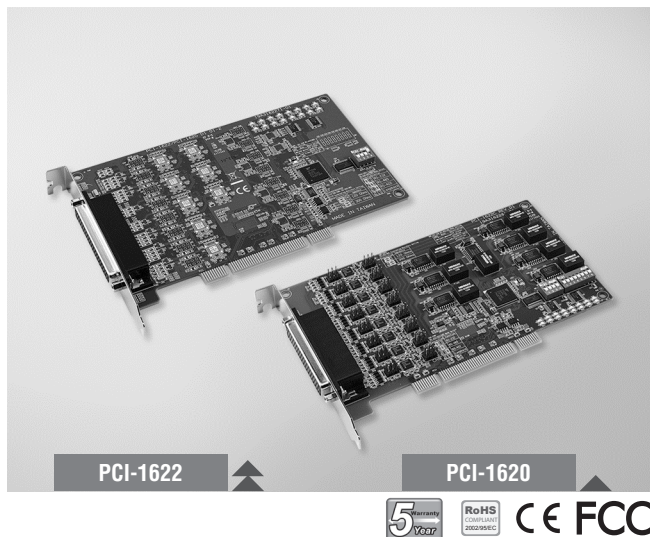
Accessories

- OPT4A-AE** DB37 x1 to DB9 x4 Cable, 30cm

PCI-1620 PCI-1622

8-port RS-232 PCI Communication Card

8-port RS-232/422/485 PCI Communication Card



Features

- PCI bus 2.2 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 8 x RS-232 or RS-232/422/485 ports
- XR17V358 UART with 256-byte FIFOs
- Supported operating systems: Windows 7/8/10, and Linux.

Introduction

The PCI-1620 is an 8-port RS-232, and the PCI-1622 is an 8-port RS-232/422/485 PCI communication cards that are compatible with the PCI 2.2 bus specification. The cards provide eight EFT protected ports up to 1,000 V, and have many functions such as high transmission speed of 921.6 kbps; The cards utilize high-performance XR17V358 UARTs with 256-byte FIFOs to reduce CPU load. Thus, the PCI-1620 and PCI-1622 are especially suitable for making reliable systems in multitasking environments.

Specifications

General

- **Bus Type** Universal PCI v2.2
- **Certification** CE, FCC class A
- **Connectors** 1x Female DB62 (PCI-1620A/22A/22B)
1x Female DB78 (PCI-1622C)
- **Dimensions (L x W)** 174.65 x 106.67 mm (6.88" x 4.2")
- **Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- **Comm. Controller** XR17V358
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: Tx+, Rx+, RTS, CTS, DTR, DSR, DCD (PCI-1620A/22A/22B)
Tx+, Rx+, RTS, CTS, DTR, DSR, DCD, RI (PCI-1622C)
RS-422: Tx+, Tx-, Rx+, Rx- (PCI-1620A/22A/22B)
CTS+, CTS-, RTS+, RTS-, Tx+, Tx-, Rx+, Rx- (PCI-1622C)
RS-485: Data+, Data- (PCI-1620A/22B/22C)
- **FIFO** 256 bytes
- **Flow Control** DTR/DSR, RTS/CTS, Xon/Xoff
- **Parity** None, Odd, Even, Mark, or Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Protection

Model Name	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCI-1620A	15KV (air), 8KV (contact)	1000 V		
PCI-1622B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCI-1622C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{DC}

Software

- **Bundled Software** ICOM Tools
- **OS Support** Windows 7/8/10, and Linux. (You can reference the SW release note to know the supported OS version.)

Environment

- **Operating Humidity** 5 ~ 95 % RH, non-condensing
- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Ordering Information

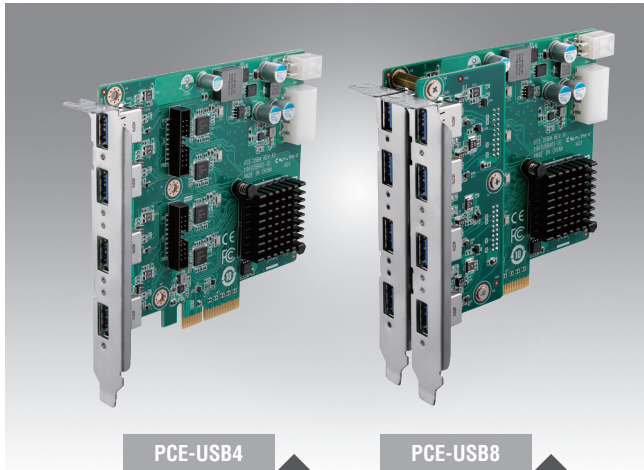
- **PCI-1620A-DE** 8-port RS-232 PCI Comm. Card
- **PCI-1622B-DE** 8-port RS-232/422/485 PCI Comm. Card
w/ Surge Protection
- **PCI-1622C-DE** 8-port RS-232/422/485 PCI Comm. Card
w/ Surge & Isolation Protection

Accessories

- **OPT8C-AE** DB62 x1 to DB25 x8 Cable, 1m for PCI-1620A-DE and PCI-1622B-DE
- **OPT8H-AE** DB62 x1 to DB9 x8 Cable, 1m for PCI-1620A-DE and PCI-1622B-DE
- **OPT8J-AE** DB78 x1 to DB9 x8 Cable, 1m for PCI-1622C-DE

PCE-USB4 (4 ports) PCE-USB8 (8 ports)

PCI Express x4, 4/8-Port USB 3.0 Expansion Card



Features

- Four USB 3.0 host controllers
- Support 1500mA Max. Current per Port
- Supports four or eight USB 3.0 ports
- Compliant with USB 3.0 Specification and Intel® xHCI Specification, Revision 1.0
- PCI Express x4 interface
- Supports Microsoft Windows 7/8.1 and Linux operating systems

Introduction

PCE-USB4 is a 4-port PCIe x4 expansion card aimed at industrial imaging applications. Featuring four independent Renesas μ PD720202 USB 3.0 host controllers, a Gen 2 PCI Express® x4 interface, and a per-port bandwidth of 5 Gbps when operating four ports simultaneously, PCE-USB4 delivers maximal per-port performance. PCE-USB4 features four USB 3.0 ports (for expansion, PCE-USB8 features eight USB 3.0 ports) with 1500 mA current to ensure stable power for external USB devices. PCE-USB4 is a high-bandwidth industrial-power expansion card designed for machine vision, factory automation, and medical applications, as well as any other applications that require high data transfer speeds.

Specifications

USB	Interface	PCI Express x4
	Connector	4 x USB 3.0 Type A (PCE-USB4-00A1E) 8 x USB 3.0 Type A (PCE-USB8-00A1E)
	Host Bus	4-lane Gen 2 PCIe interface, compliant with PCI Express Base Specification, Revision 2.0
	Controller	4 x Renesas μ PD720202 host controllers Compliant with Universal Serial Bus 3.0 Specification and Intel® xHCI Specification, Revision 1.0
	Max. current	1500 mA maximum per port
	Data Transfer Rate	Super speed (5.0 Gbps)/high speed (480.0 Mbps)/full speed (12.0 Mbps)/low speed (1.5 Mbps)
Environment	Operating Temperature	0 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions	118 x 111 mm
	Certifications	CE/FCC

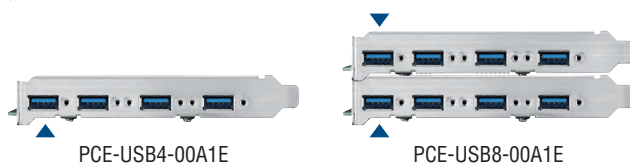
Ordering Information

Part Number	Description
PCE-USB4-00A1E	PCIe x4, 4-port USB 3.0 expansion card
PCE-USB8-00A1E	PCIe x4, 8-port USB 3.0 expansion card

Optional USB3.0 Cable

Part Number	Description
1700025427-01	USB 3.0 cable, 5 m, Micro B (locking) to Type A
1700025428-01	USB 3.0 cable, 3 m, Micro B (locking) to Type A
1700025429-01	USB 3.0 cable, 5 m, Micro B (locking) to Type A (locking)
1700025430-01	USB 3.0 cable, 3 m, Micro B (locking) to Type A (locking)

I/O View



Note: Indicated USB3.0 port cannot support USB3.0 type A locking cable.

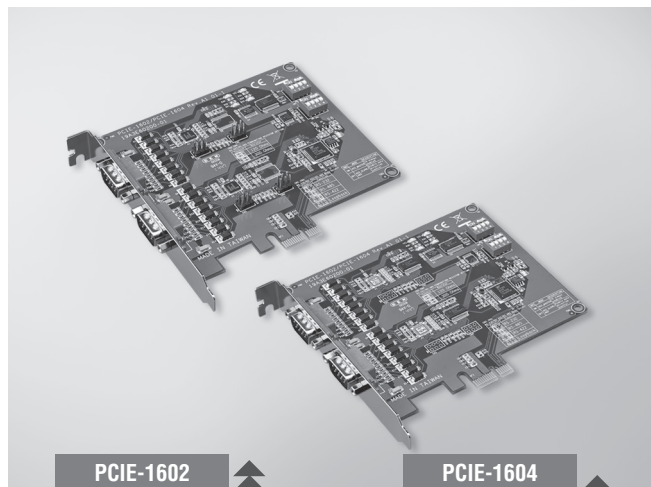
PCIE-1602 PCIE-1604 PCIE-1610 PCIE-1612

2-port RS-232/422/485 PCI Express Communication Card

2-port RS-232 PCI Express Communication Card

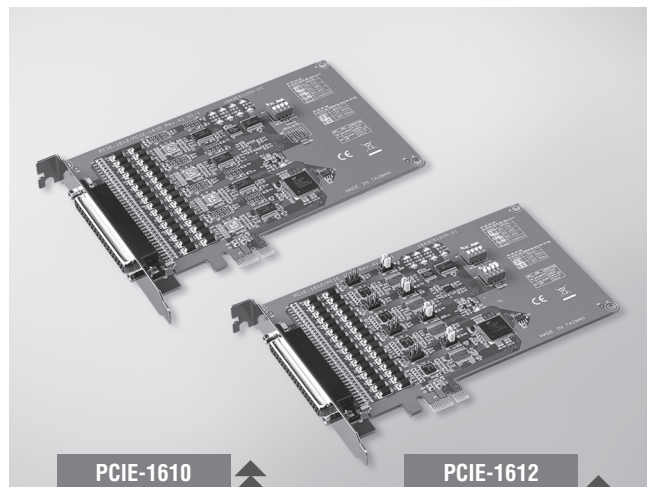
4-port RS-232 PCI Express Communication Card

4-port RS-232/422/485 PCI Express Communication Card



PCIE-1602

PCIE-1604



PCIE-1610

PCIE-1612



Features

- PCI Express bus 2.0 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 2 x RS-232 or RS-232/422/485 ports
- Operating systems supported: Windows 7/8/10, and Linux.
- XR17V352 UART with 256-byte FIFOs

Specifications

General

- Bus Type** PCI Express bus 2.0 compliant
- Bus Interface** PCI Express x1
- Certification** CE, FCC class A
- Connectors** 2x male DB9
- Dimensions (L x W)** 119.63 x 111 mm (4.71" x 4.4")
- Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- Comm. Controller** XR17V352
- Data Bits** 5, 6, 7, 8
- FIFO** 256 bytes
- Parity** None, Odd, Even, Mark and Space
- Speed** 50 bps ~ 921.6 kbps
- Stop Bits** 1, 1.5, 2

Software

- Bundled Software** ICOM Tools
- OS Support** Windows 7/8/10, and Linux. (You can reference SW release note to know the version of supported OS.)

Environment

- Operating Humidity** 5 ~ 95 % RH, non-condensing
- Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Protection

Model Name	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCIE-1602B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCIE-1602C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{DC}
PCIE-1604B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCIE-1604C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{DC}

Ordering Information

- PCIE-1602B-AE** 2-port RS-232/422/485 PCI Express Comm. Card w/Surge
- PCIE-1602C-AE** 2-port RS-232/422/485 PCI Express Comm. Card w/Surge & Isolation
- PCIE-1604B-AE** 2-port RS-232 PCI Express Comm. Card w/Surge
- PCIE-1604C-AE** 2-port RS-232 PCI Express Comm. Card w/Surge & Isolation

Features

- PCI Express bus 2.0 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 4 x RS-232 or RS-232/422/485 ports
- Operating systems supported: Windows 7/8/10, and Linux.
- XR17V354 UART with 256-byte FIFOs

Specifications

General

- Bus Type** PCI Express bus 2.0 compliant
- Bus Interface** PCI Express x1
- Certification** CE, FCC class A
- Connectors** 1x Female DB37
- Dimensions (L x W)** 168 x 111 mm (6.6" x 4.4")
- Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- Comm. Controller** XR17V354
- Data Bits** 5, 6, 7, 8
- FIFO** 256 bytes
- Parity** None, Odd, Even, Mark and Space
- Speed** 50 bps ~ 921.6 kbps
- Stop Bits** 1, 1.5, 2

Software

- Bundled Software** ICOM Tools
- OS Support** Windows 7/8/10, and Linux. (You can reference SW release note to know the version of supported OS.)

Environment

- Operating Humidity** 5 ~ 95 % RH, non-condensing
- Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Protection

Model Name	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCIE-1610B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCIE-1612B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCIE-1612C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{DC}

Ordering Information

- PCIE-1610B-AE** 4-port RS-232 PCI Express Comm. Card w/Surge
- PCIE-1612B-AE** 4-port RS-232/422/485 PCI Express Comm. Card w/Surge
- PCIE-1612C-AE** 4-port RS-232/422/485 PCI Express Comm. Card w/Surge & Isolation

Note: this series includes cable OPT4A.

Accessories

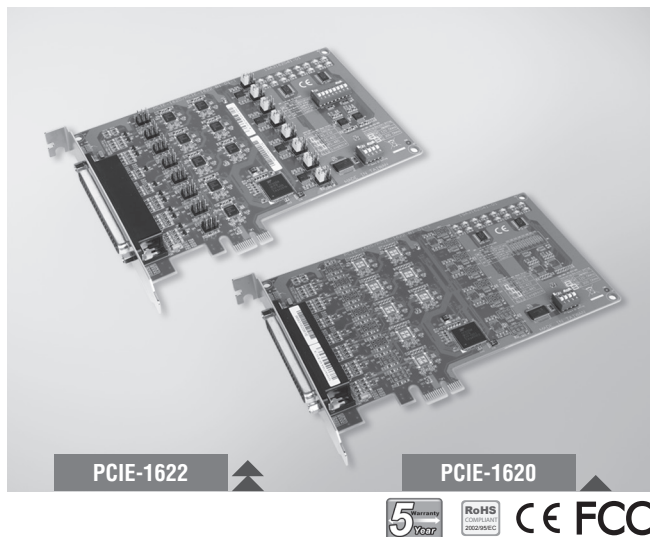
- OPT4A-AE** DB37 x1 to DB9 x4 Cable, 30cm
- 1700018791** DB37 x1 to DB25 x4 Cable, 30cm

PCIE-1620

PCIE-1622

8-port RS-232 PCI Express Communication Card

8-port RS-232/422/485 PCI Express Communication Card



Features

- PCI Express bus 2.0 compliant
- Speeds up to 921.6 kbps for extremely fast data transmission
- Supports any baud rate setting
- 8 x RS-232 or RS-232/422/485 ports
- XR17V358 UART with 256-byte FIFOs
- Windows 7/8/10, and Linux

Introduction

PCIE-1620 is an 8-port RS-232, and PCIE-1622 is an 8-port RS-232/422/485 PCI Express communication cards that are compatible with the PCI Express x1 specification. The cards provide eight EFT protected ports up to 1,000 V, and have many functions such as high transmission speed of 921.6 kbps; The cards utilize high-performance XR17V358 UARTs with 256-byte FIFOs to reduce CPU load. Thus, the PCIE-1620 and PCIE-1622 are especially suitable for making reliable systems in multitasking environments.

Specifications

General

- **Bus Type** PCI Express bus 2.0 compliant
- **Bus Interface** PCI Express x1
- **Certification** CE, FCC class A
- **Connectors** 1x Female DB62 (PCIE-1620A/22A/22B)
1x Female DB78 (PCIE-1622C)
- **Dimensions (L x W)** 168 x 111 mm (6.6" x 4.4")
- **Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- **Comm. Controller** XR17V358
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD (PCIE-1620A/22A/22B) TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI (PCIE-1622C)
RS-422: Tx+, Tx-, Rx+, Rx- (PCIE-1620A/22A/22B)
CTS+, CTS-, RTS+, RTS-, Tx+, Tx-, Rx+, Rx- (PCIE-1622C)
RS-485: Data+, Data- (PCIE-1622)
- **FIFO** 256 bytes
- **Flow Control** DTR/DSR, RTS/CTS, Xon/Xoff
- **Parity** None, Odd, Even, Mark, or Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Protection

Model Name	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCIE-1620A	15KV (air), 8KV (contact)	1000 V		
PCIE-1622A	15KV (air), 8KV (contact)	1000 V		
PCIE-1622B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCIE-1622C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V _{DC}

Software

- **Bundled Software** ICOM Tools
- **OS Support** Windows 7/8/10, and Linux. (You can reference SW release note to know the version of supported OS.)

Environment

- **Operating Humidity** 5 ~ 95 % RH, non-condensing
- **Operating Temperature** -10 ~ 60°C (14 ~ 140°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Ordering Information

- **PCIE-1620A-BE** 8-port RS-232 PCI-express Comm. Card
- **PCIE-1622A-BE** 8-port RS-232/422/485 PCI-express Comm. Card
- **PCIE-1622B-BE** 8-port RS-232/422/485 PCI-express Comm. Card w/ Surge Protection
- **PCIE-1622C-AE** 8-port RS-232/422/485 PCI-express Comm. Card w/ Surge & Isolation Protection

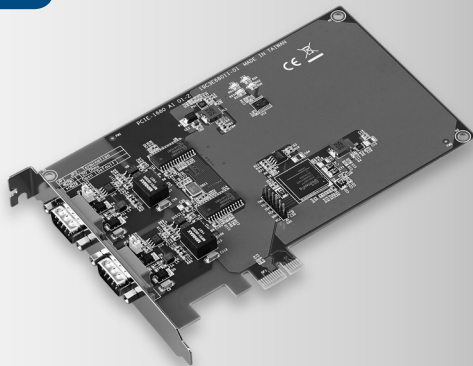
Accessories

- **OPT8C-AE** DB62 x1 to DB25 x8 Cable, 1m
- **OPT8H-AE** DB62 x1 to DB9 x8 Cable, 1m
- **OPT8J-AE** DB78 x1 to DB9 x8 Cable, 1m

PCIE-1680

2-Port CAN-Bus PCIE card with Isolation Protection

NEW



FCC CE

Features

- PCIe bus specification 1.2 compliant
- Operates two separate CAN networks at the same time
- High speed transmission up to 1 Mbps
- 16 MHz CAN controller frequency
- Optical isolation protection of 2,500 V_{DC} ensures system reliability
- I/O address automatically assigned by PCI PnP
- Transmit/Receive status LED indicators
- Windows DLL library and examples included
- Supports Windows CE5/CE6/XP/7 driver and utility
- Supports Linux 2.4.xx / 2.6.xx; Intel x86 hardware platform

Introduction

The PCIE-1680 is a special purpose communication card that offers connectivity to Controller Area Networks (CAN) on your PC. With its built-in CAN controllers, the PCIE-1680 provides bus arbitration and error detection with an automatic transmission repetition. This drastically reduces the chance of data loss and ensures system reliability. You can run both CAN controllers independently at the same time. The PCIE-1680 operates at baud rates up to 1 Mbps.

Specifications

General

- **Bus Type** PCI Express V1.0
- **Certification** CE, FCC
- **Connectors** 2 x DB9 male connectors
2 x 10 pin box wafer (optional)
- **Ports** 2
- **Power Consumption** 3.3 V @ 600 mA (Typical)

Communication

- **CAN Controller** NXP SJA-1000
- **CAN Transceiver** NXP TJA1051T
- **Signal Support** CAN_H, CAN_L
- **Protocol** CAN 2.0 A/B
- **Data Transfer Rate(bps)** Programmable up to 1 Mbps
- **CAN Frequency** 16MHz

Protection

- **Isolation Protection** 2,500 V_{DC}

Mechanical and Environmental

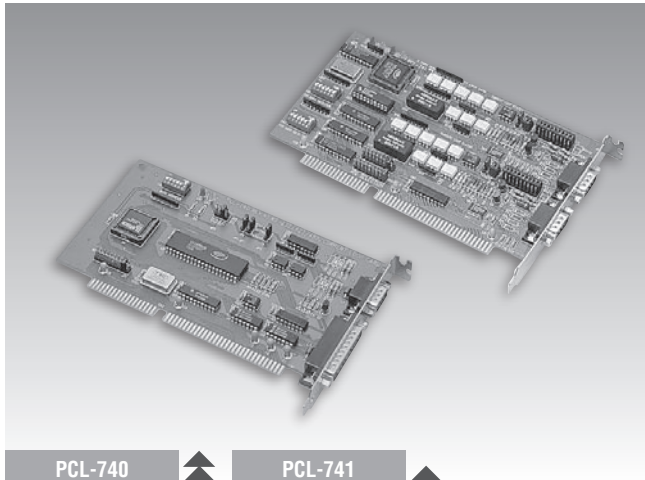
- **Operating Temperature** 0 ~ 70°C (32 ~ 158°F)
(refer to IEC 60068-2-1, 2)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 5 ~ 95% Relative Humidity, non-condensing
- **Dimensions (L x W)** 168 x 100 mm(6.6" x 3.9")

Ordering Information

- **PCIE-1680-AE** 2-Port CAN-Bus PCIE card with Isolation Protection

PCL-740 PCL-741 PCL-743/745 PCL-746+

RS-232/422/485 Current-loop Communication Card 2-port RS-232 Current-loop Communication Card 2-port RS-422/485 Communication Cards 4-port RS-232/422/485 Communication Card



PCL-740

PCL-741



Features

- RS-232, RS-422, RS-485 or current-loop interface
- 16C550 UART with 16-byte FIFO
- Transmission speeds up to 921.6 kbps
- Flexible I/O address and IRQ selection
- IRQ: 3, 4, 5, 6, 7, 9, 10, 11, 12 or 15
- Complete RS-232 modem control signals
- Supports 4-wire or 2-wire operation for RS-422/485
- Automatic RS-485 data flow control
- Space reserved for termination resistors
- Supports Windows® 98/ME/2000/XP, Linux
- Powerful and easy-to-use utility (ICOM Tools)

Introduction

The PCL-740 offers a versatile range of high speed interfacing options. You can switch its single port between the popular RS-232, long distance RS-422, multi-drop RS-485, or noise-resistant current-loop. The card's 16C550 UART has an on-chip 16-byte FIFO buffer for faster and more reliable communication, especially under Windows.

The card has two 16C550 UARTs with on-chip 16-byte FIFO buffers. The UARTs buffer data into 16-byte packets before sending it to the bus. This drastically reduces CPU load and avoids data loss when the system is busy and cannot process the interrupt quickly. These FIFO buffers make the PCL-741 especially suitable for high speed serial I/O under Windows. Onboard optical isolators protect your PC and equipment against damage from ground loops, increasing system reliability in harsh environments.

Specifications

General

- **Card Interface** ISA
- **Certifications** CE
- **Connectors** PCL-740: 1 x DB9-M, 1 x DB25-M
PCL-741, PCL-743, PCL-745: 2 x DB9-M
PCL-746+: 1 x DB37-F
- **Dimensions** 185 x 100 mm (7.3" x 3.9")
- **Power Consumption** PCL-740: +5 V @ 180 mA max., ±12 V @ 20 mA max.
PCL-741: +5 V @ 300 mA (typical), +5 V @ 1.1 A max.
PCL-743, PCL-745: +5 V @ 400 mA typical, 950 mA max.
PCL-746+: +5 V @ 800 mA typical, 1.5 A max.
±12 V @ 60 mA typical, 120 mA max.
- **Weight (Gross)** PCL-740, PCL-741, PCL-743, PCL-745: 0.6 kg (1.3 lb)
PCL-746+: 1.1 kg (2.4 lb) (including cable)

Communications

- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: Tx, Rx, CTS, RTS, DTR, DSR, DCD, GND, RI
Current loop: Tx+, Tx-, Rx+, Rx-
RS-422: Tx+, Tx-, Rx+, Rx-, GND, CTS+, CTS-, RTS+, RTS-
RS-485: Data+, Data-, GND
- **I/O Address** From 200H to 3F8H (for PCL-740/741/743/745)
From 000h to 3F8H (for PCL-746+)
- **IRQ** 3, 4, 5, 6, 7, 9, 10, 11, 12 or 15
- **Ports** PCL-740: 1, PCL-741: 2
PCL-743, PCL-745: 2
PCL-746+: 4
- **Parity** None, even, odd
- **Protocols** PCI-740: RS-232/422/485, current-loop
PCI-741: RS232, current-loop
PCI-743, 745: RS-422/485
PCI-746+: RS-232/422/485
- **Speed** PCL-740, PCL-741: 50 bps ~ 115.2 kbps
(for RS-232/422/485)

- **Stop Bits**
- **UART**

50 bps ~ 57.6 kbps (current-loop)
PCL-743, PCL-745: 50 bps ~ 921.6 kbps
PCL-746+: 50 bps ~ 115.2 kbps
1, 1.5, 2
PCL-743, PCL-745: 2 x 16C550 with 16-byte FIFO
PCL-746+: 4 x 16C550 16-byte FIFO
PCL-740: 1 x 16C550 with 16-byte FIFO
PCL-741: 2 x 16C550 with 16-byte FIFO

Protection

- **Isolation Protection** 2500 V_{DC} (PCL-741), 3000 V_{DC} (PCL-745B/745S)
- **EFT Surge Protection** 2500 V_{DC} (PCL-743S/745S)

Software

- **Bundled Software** ICOM Tools
- **Driver Support** Windows 98/ME/2000/XP, Linux

Environment

- **Operating Temperature** PCL-740, PCL-741, PCL-746+: 0 ~ 50° C (32 ~ 122° F)
PCL-743, PCL-745: 0 ~ 65° C (32 ~ 149° F)

Ordering Information

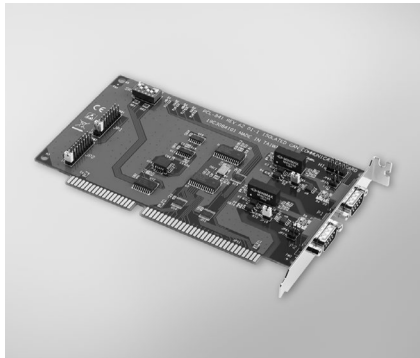
- **PCL-740** RS-232/RS-422/RS-485/current-loop serial interface card
- **PCL-741** Isolated dual-port RS-232/current-loop interface card.
- **PCL-743B** 2-port RS-422/485 communication card
- **PCL-743S** 2-port RS-422/485 communication card with EFT surge protection
- **PCL-745B** 2-port RS-422/485 communication card with isolation protection
- **PCL-745S** 2-port RS-422/485 communication card with isolation and EFT Surge Protection
- **PCL-746+** 4-port RS-232/422/485 communication card (30 cm DB37 to 4 DB25 cable included)
- **PCL-746+/9** 4-port RS-232/422/485 communication card (30 cm DB37 to 4 DB9 cable included)

PCL-841 PCI-1680U PCM-3680/I

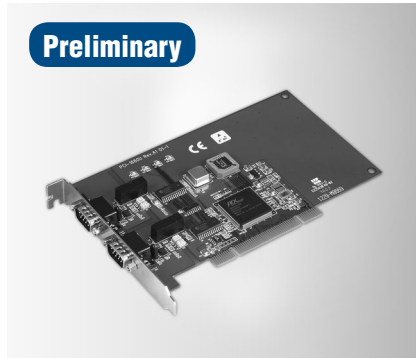
2-port CAN-bus ISA Card with Isolation Protection

2-port CAN-bus Universal PCI Card with Isolation Protection

2-port CAN-bus PC/104 / PCI-104 Module with Isolation Protection

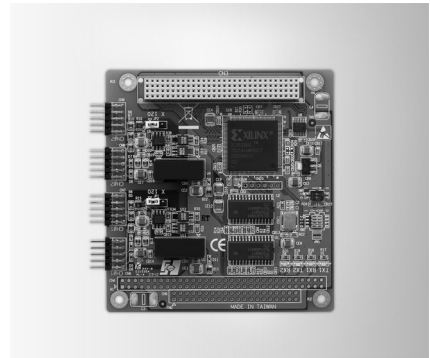


PCL-841



Preliminary

PCI-1680U



PCM-3680I



Features

- Operates two separate CAN networks simultaneously
- High speed transmission up to 500 kbps
- Optical isolation protection of 1000 V_{DC}
- Windows DLL library and examples included
- Wide IRQ selection for each port: IRQ 3, 4, 5, 6, 7, 9, 10, 11, 12, 15
- Supports 32-bit/64-bit Windows 2000/XP/Vista/7 and Linux

Specifications

General

- Card Interface** ISA
- Certification** CE, FCC
- Connectors** 2 x DB9-M
- Dimensions** 185 x 100 mm (7.3" x 3.9")
- Ports** 2
- Power Consumption** 5 V @ 400 mA typical

Communications

- CAN Controller** SJA-1000
- CAN Transceiver** 82C250
- Protocol** CAN2.0 A/B
- Speed** 500 kbps
- IRQ** 3, 4, 5, 6, 7, 9, 10, 11, 12, or 15
- Memory Segment Base Address** From C800H to EF00H
- Signal Support** CAN_H, CAN_L

Protection

- Isolation Protection** 1,000 V_{DC}

Environment

- Operating Temp.** 0 ~ 50°C (32 ~ 122°F)

Ordering Information

- PCL-841** 2-port CAN-bus ISA Comm. Card w/ Iso

Features

- Operates two separate CAN networks simultaneously
- High speed transmission up to 1 Mbps
- Optical isolation protection of 2500 V_{DC}
- Windows DLL library and examples included
- I/O address automatically assigned by PCI PnP
- Supports 32-bit/64-bit Windows 2000/XP/Vista/7 and Linux

Specifications

General

- Card Interface** Universal PCI
- Certification** CE, FCC
- Connectors** 2 x DB9-M
- Dimensions** 175 x 107 mm (6.9" x 4.2")
- Ports** 2
- Power Consumption** 5 V @ 400 mA typical

Communications

- CAN Controller** SJA-1000
- CAN Transceiver** TJA1051T
- Protocol** CAN2.0 A/B
- Speed** 1 Mbps
- CAN Frequency** 16 MHz
- Signal Support** CAN_H, CAN_L

Protection

- Isolation Protection** 2,500 V_{DC}

Environment

- Operating Temp.** 0 ~ 70°C (32 ~ 158°F)

Ordering Information

- PCI-1680U** 2-port CAN Uni-PCI COMM Card w/Iso

Features

- Operates two separate CAN networks simultaneously
- High speed transmission up to 1 Mbps
- 16 MHz CAN controller frequency
- Optical isolation protection
- Transmit/receive status LED indicators on each port
- Supports wide operating temperature
- Supports 32/64-bit WinXP/Vista/7 and Linux
- Supports WinCE 5.0/6.0

Specifications

General

- Card Interface** PCM-3680: PC/104
PCM-3680I: PCI-104
- Certification** CE, FCC
- Connectors** 2 x DB9-M with cable
- Dimensions** 90 x 96 mm (3.6" x 3.8")
- Ports** 2
- Power Consumption** 5 V @ 400 mA

Communications

- CAN Controller** SJA-1000
- CAN Transceiver** 82C250
- Protocol** CAN2.0 A/B
- Speed** Up to 1 Mbps
programmable transfer rate
- CAN Frequency** 16 MHz
- Signal Support** CAN_H, CAN_L

Protection

- Isolation Protection** 2,500 V_{DC}

Environment

- Operating Temp.** -40 ~ 85°C (-40 ~ 185°F)

Ordering Information

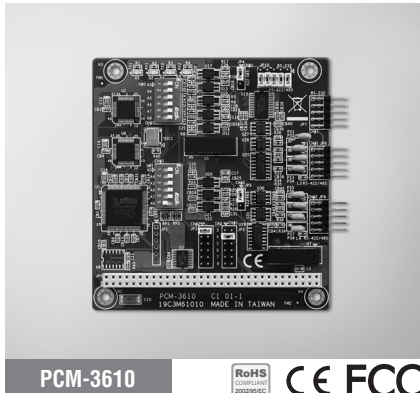
- PCM-3680** Dual-port Iso CAN-bus PC/104 Module
- PCM-3680I** Dual-port Iso CAN-bus PCI-104 Module

PCM-3610 PCM-3612 PCM-3614

2-port RS-232/422/485 PC/104 Module with Isolation Protection

2-port RS-422/485 PC/104 Module

4-port RS-422/485 High-speed PC/104 Module



Features

- High speed transmission rate
- Automatic RS-485 data flow control
- Jumper selectable interrupt level
- Supports Windows 2000/XP/Vista/7
- Supports WinCE 4.2, 5.0
- Powerful and easy-to-use utility (ICOM Tools)

Specifications

General

- **Card Interface** PC/104
- **Certification** CE, FCC
- **Connectors** 2 x DB9-M
- **Ports** 2
- **Power Consumption** +5V @ 400mA (Typical)

Communications

- **Channel 1** RS-232, 422, or 485
- **Channel 2** RS-422, or RS-485
- **Character Length** 5, 6, 7, or 8 bits
- **IRQ** 3, 4, 5, 6, 7, 9
- **Parity** Even, Odd, or None
- **Speed** 50 bps ~ 115.2 kbps
- **Stop Bit** 1, 1.5, or 2

Protection

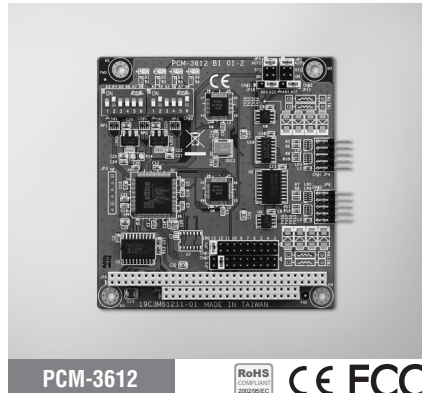
- **Isolation Protection** 2,500 V_{DC}

Environment

- **Operating Humidity** 0 ~ 90 % RH
- **Operating Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)

Ordering Information

- **PCM-3610** Isolated RS-232/422/485 Module



Features

- Long distance communication
- Automatic RS-485 data flow control
- Jumper selectable interrupt level
- Supports Windows 2000/XP/Vista/7
- Supports WinCE 4.2, 5.0
- Powerful and easy-to-use utility (ICOM Tools)

Specifications

General

- **Card Interface** PC/104
- **Certification** CE, FCC
- **Connectors** 2 x DB9-M
- **Indicators** Red LED for TX
Green LED for RX
- **Ports** 2
- **Power Consumption** +5V @ 400mA (Typical)

Communications

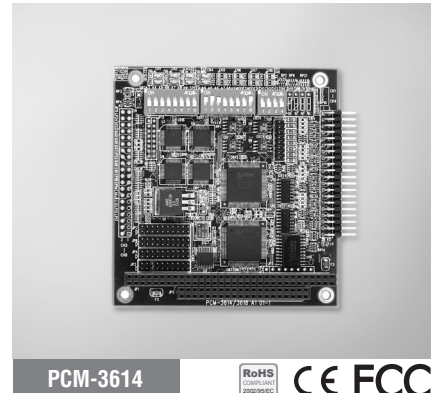
- **Channel 1 and 2** RS-422, or RS-485
- **Character Length** 5, 6, 7, or 8 bits
- **IRQ** 3, 4, 5, 6, 7, 9, 10, 11, 12, or 15
- **Parity** Even, Odd, or None
- **Speed** 50 bps ~ 115.2 kbps
- **Stop Bit** 1, 1.5, or 2

Environment

- **Operating Humidity** 0 ~ 90 % RH
- **Operating Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)

Ordering Information

- **PCM-3612** Dual Port RS-422/485 Module



Features

- Automatic RS-485 data flow control
- Shared IRQ settings for each ports
- LED indicators: TX, RX
- Standard PC ports: COM1, COM2, COM3, COM4 compatible
- Supports Windows 2000/XP/Vista/7
- Supports WinCE 4.2, 5.0
- Powerful and easy-to-use utility (ICOM Tools)

Specifications

General

- **Card Interface** PC/104
- **Certification** CE, FCC
- **Connectors** 4 x DB9-M
- **Ports** 4
- **Power Consumption** +5V @ 450mA (Typical)

Communications

- **Data Bits** 5, 6, 7, 8
- **I/O Address Range** 0 x 000 ~ 0 x 3F8
- **IRQ** 3, 4, 5, 6, 7, 9, 10, 11, 12, or 15
- **Parity** Even, Odd, or None
- **Data Signals** RS-422: TxD+, TxD-, RxD+, RxD-, CTS+, CTS-, RTS+, and RTS-
RS-485: DATA+, DATA-
50 bps ~ 921.6 kbps
- **Speed**
- **Stop Bits** 1, 1.5, 2
- **Termination Resistor** 120 Ω

Environment

- **Operating Humidity** 0 ~ 90 % RH
- **Operating Temperature** 0~65°C (32~149°C)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)

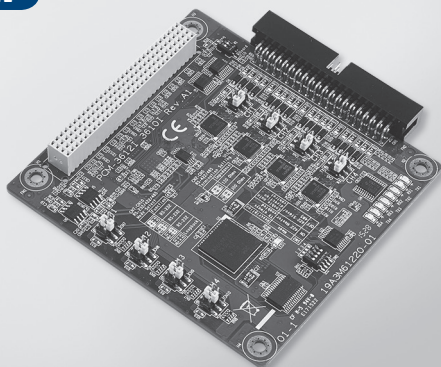
Ordering Information

- **PCM-3614** 4-port RS-422/485 High-speed Module

PCM-3612I

4-port RS-232/422/485 PCI-104 Module

NEW



Features

- Automatic RS-485 data flow control
- LED indicators: TX, RX
- Standard PC ports: COM1, COM2, COM3, COM4 compatible
- Supports Windows 7/8/10
- Supports Linux driver
- Powerful and easy-to-use utility (ICOM Tools)

Specifications

General

- **Card Interface** PCI-104
- **Connectors** 1 x 40-pin header
- **Ports** 4
- **Power requirements** +3.3V @ 260 mA (Typical)
+3.3V @ 530 mA (Max.)

Communications

- **Data Bits** 5, 6, 7, 8
- **Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI and GND
RS-422: TxD+, TxD-, RxD+, RxD-, GND, CTS+, CTS-, RTS+ and RTSRS-
485: Data+, Data- and GND
- **Parity** None, Even, or Odd
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2
- **Termination Resistor** 120 Ω & 300 Ω

Environment

- **Operating Humidity** 0 ~ 90 % RH
- **Operating Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)

Ordering Information

- **PCM-3612I-AE** 4-port RS-232/422/485 PCI-104 Module

PCM-3618

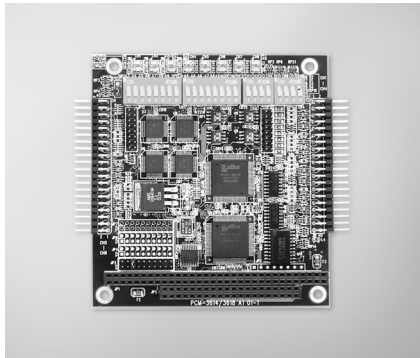
PCM-3640/3641

PCM-3660

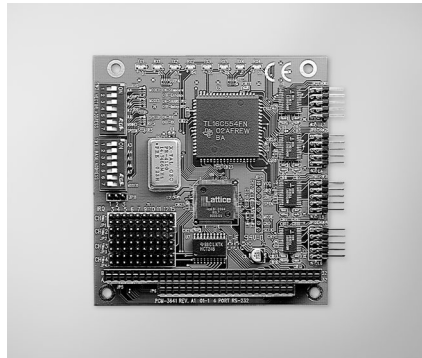
8-port RS-422/485 High-speed PC/104 Module

4-port RS-232 High-speed PC/104 Module

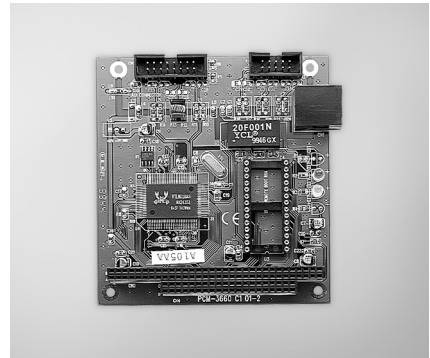
Jumperless Ethernet PC/104 Module



PCM-3618



PCM-3641



PCM-3660



Features

- Automatic RS-485 data flow control
- Shared IRQ settings for each ports
- LED indicators: TX, RX
- Supports Windows 2000/XP/Vista/7
- Supports WinCE 5.0/6.0
- Powerful and easy-to-use utility (ICOM Tools)

Specifications

General

- Card Interface** PC/104
- Certification** CE, FCC
- Connectors** 8 x DB9-M
- Ports** 8
- Power Consumption** +5V @ 650 mA

Communications

- Data Bits** 5, 6, 7, 8
- I/O Address Range** 0 x 000 ~ 0 x 3F8
- IRQ** 3, 4, 5, 6, 7, 9, 10, 11, 12, 15
- Parity** None, Even, or Odd
- Data Signals** RS-422: TxD+, TxD-, RxD+, RxD-, CTS+, CTS-, RTS+, and RTS-
RS-485: DATA+, DATA-
50 bps ~ 921.6 kbps
- Speed** 1, 1.5, 2
- Termination Resistor** 120 Ω

Environment

- Operating Humidity** 0 ~ 90 % RH
- Operating Temperature** 0 ~ 65°C (32 ~ 149°F)
- Storage Temperature** -25 ~ 80°C (-13 ~ 176°F)

Ordering Information

- PCM-3618** 8-port RS-422/485 High-Speed Module

Features

- Transmission speeds up to 460 kbps (PCM-3641)
- Shared IRQ settings for each of 4 RS-232 ports (PCM-3641)
- Standard PC ports: COM1, COM2, COM3, COM4 compatible
- Supports Windows 2000/XP/Vista/7
- Supports WinCE 5.0/6.0
- Powerful and easy-to-use utility (ICOM Tools)

Specifications

General

- Card Interface** PC/104
- Certification** CE, FCC
- Connectors** 4 x DB9-M
- Ports** 4
- Power Consumption** +5V @ 200 mA (Typical)
+5V @ 250 mA (Max)

Communications

- Data Bits** 5, 6, 7, 8
- Data Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI
0 x 0200 ~ 0 x 03F8
- I/O Address Range** 3, 4, 5, 6, 7, 9, 10, 11, 12, 15
- IRQ** 3, 4, 5, 6, 7, 9, 10, 11, 12, 15
- Parity** None, Even, or Odd
- Speed** 50 bps ~ 460.3 kbps (PCM-3641)
50 bps ~ 115.2 kbps (PCM-3640)
- Stop Bits** 1, 1.5, 2

Environment

- Operating Humidity** 0 ~ 90 % RH
- Operating Temperature** 0 ~ 65°C (32 ~ 149°F)
- Storage Temperature** -25 ~ 80°C (-13 ~ 176°F)

Ordering Information

- PCM-3640** 4-port RS-232 Module
- PCM-3641** 4-port RS-232 High-speed Module

Features

- Automatically detects 8-bit or 16-bit
- AUI connector supports external MAUs
- Onboard 32 KB buffer for multi-packages

Specifications

General

- Boot ROM Address** C0000, C8000, D0000, or D8000H
- Card Interface** PC/104
- Certification** CE, FCC
- Connectors** 1 x PC/104 stackthrough
1 x 10Base-T (RJ-45)
1 x 16-pin insulation displacement connector for AU1
- Power Consumption** +5V @ 400 mA max

Communications

- Data Bus** 8-bit, 16-bit, or auto-sending
- I/O Address** 200, 220, 240, 260, 280, 2A0, 2C0, 300, 320, 340, 380, 3A0
- IRQ** 3,4,5,9, 10, 11, 12 or 15
- Standard** IEEE 802.3 10 Mbps CSMA/CD 10Base-T Transceiver

Environment

- Operating Humidity** 10 ~ 90% RH
- Operating Temperature** 0 ~ 70°C (32 ~ 158°F)
- Storage Temperature** -15 ~ 80°C (5 ~ 176°F)

Ordering Information

- PCM-3660** Jumperless Ethernet Module