

# Коммуникационные платы с шиной PCI серии PCI-1600

## ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

**По вопросам продаж и поддержки обращайтесь:**

Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78

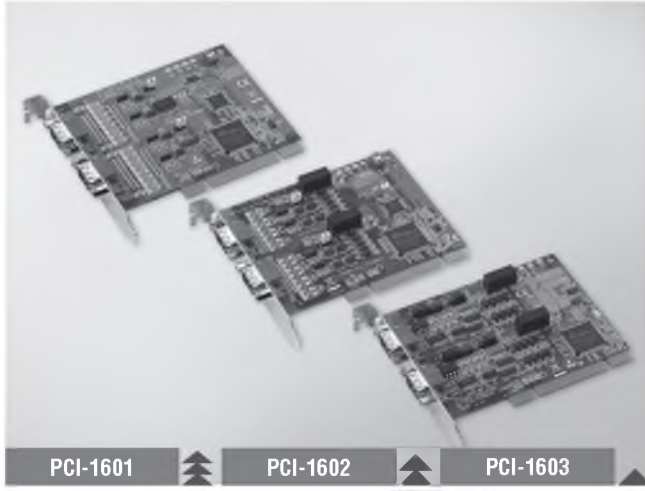
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

# PCI-1601 PCI-1602 PCI-1603

## 2-port RS-422/485 Universal PCI Communication Card

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

## 2-port RS-232/Current-loop Universal PCI Communication Card with Isolation Protection



### Features

- PCI bus 2.2 compliant
- Supports serial speed up to 921.6 kbps, and any baud rate setting
- 2-port RS-422/485 interface (PCI-1601/PCI-1602)
- 2 independent RS-232 or Current-loop serial ports (PCI-1603)
- I/O address automatically assigned by PCI Plug & Play
- OS supported: Windows 2K/XP/Vista/7, Windows CE 5.0/6.0, Linux, and QNX
- Interrupt status register for increased performance

### Introduction

The PCI-1601 and PCI-1602 are two RS-422/485 PCI communication cards that are compatible with the PCI 2.2 bus specification. Both cards provide EFT protected RS-422/485 ports, and come with features such as: high transmission speed of 921.6 kbps, optional isolation protection, windows utility software and more. The cards also come with high-performance OXuPCI952 UART with a 128-byte FIFO to reduce CPU load. This makes the PCI-1601 and PCI-1602 especially suitable for multitasking environments.

The PCI-1603 offers a versatile range of high-speed interfacing options. You can switch its ports between the popular RS-232 or noise-resistant current-loop. The card utilizes OXuPCI952 UART with 128-byte FIFO buffer for faster and more reliable communication, especially under multi-tasking environments such as Windows operating systems. The card utilizes OXuPCI952 UART that buffers data into packets before sending it to the bus. This drastically reduces CPU load and avoids data loss when the system is busy and cannot process an interrupt quickly. These FIFO buffers make the PCI-1603 especially suitable for high speed serial I/O under Windows.

### Specifications

#### General

- **Bus Type** Universal PCI v2.2
- **Certification** CE, FCC class A
- **Connectors** 2 x Male DB9
- **Dimensions (L x W)** 123 x 92 mm (4.8" x 3.6")
- **Power Consumption** 300 mA @ +5V

#### Current-loop Interface (PCI-1603)

- **Baud-rate** 50 ~ 57600 bps
- **Current Value** 20 mA (Standard)
- **Mode** Asynchronous, full duplex
- **Signal Driver/Receiver** 6N136
- **Signals** TxD+, TxD-, RxD+, RxD-
- **Transmission Distance** 1,000 m (RS-422/485 mode only)

#### Communications

- **Communications Controller** OXuPCI952
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-422: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND  
RS-485: Data+, Data-, GND  
RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
- **FIFO** 128 bytes
- **Flow Control** RTS/CTS. Xon/Xoff
- **IRQ** Assigned by Plug & Play
- **Parity** None, Even, Odd, Mark and Space
- **Speed** 50 bps ~ 921.6 kbps, any baud rate setting  
230.4 kbps (PCI-1601B, PCI-1602 and PCI-1603 in Current-loop mode only)
- **Stop Bits** 1, 1.5, 2

#### Protection

- **ESD Protection** 8 KV (air), 4 KV (contact)
- **EFT Protection** 1 KV

Model Name	Surge Protection	Isolation Protection
PCI-1601A	-	-
PCI-1601B	1000 V <sub>DC</sub>	-
PCI-1602	1000 V <sub>DC</sub>	2500 V <sub>DC</sub>
PCI-1603	1000 V <sub>DC</sub>	2500 V <sub>DC</sub>

#### Software

- **Bundled Software** ICOM Tools
- **OS Support** 32-bit/64-bit Windows 2000/XP/Vista/7, Windows CE 5.0/6.0, Linux, and QNX

#### Environment

- **Humidity (Operating)** 5 ~ 95 % RH, non-condensing
- **Operating Temperature** -10 ~ 60°C (14 ~ 144°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

#### Regulatory Approvals

- **EMC** EN 55011: 2009 + A1:2010, Group 1, Class A  
EN 55022: 2010, Class A  
EN 61000-6-4: 2007  
EN 55024: 2010  
EN 61000-6-2: 2005  
IEC 61000-4-2: 2008  
IEC 61000-4-3: 2006 +A1: 2007 +A2: 2010  
IEC 61000-4-4: 2010  
IEC 61000-4-6: 2008  
IEC 61000-4-8: 2009  
FCC 47 CFR Part 15 Subpart B (Class B)  
IC ICES-003 (2004)

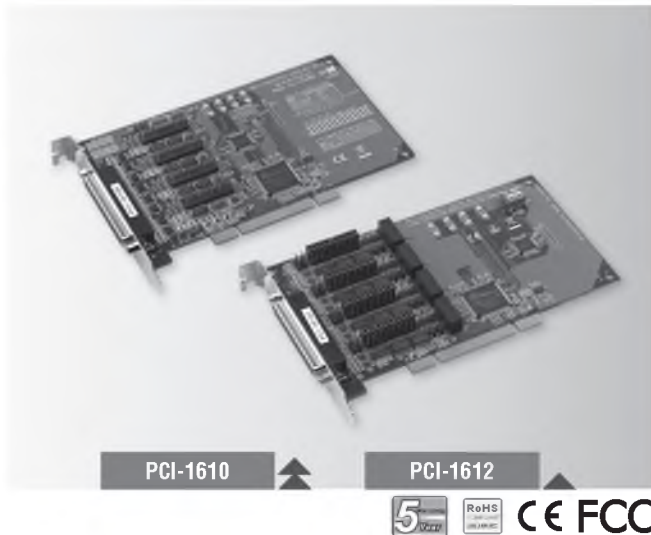
### Ordering Information

- **PCI-1601A** 2-port RS-422/485 PCI Comm. Card
- **PCI-1601B** 2-port RS-422/485 PCI Comm. Card w/Surge
- **PCI-1602** 2-port RS-422/485 PCI Comm. Card w/Surge+iso
- **PCI-1603** 2-port RS-232/Current Loop PCI Comm. Card w/Surge+Iso

# PCI-1610 PCI-1612

## 4-port RS-232 Universal PCI Communication Card

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



### Features

- PCI bus 2.2 compliant
- Supports serial speed up to 921.6 kbps, and any baud rate setting
- 4-port RS-232 (PCI-1610), 4-port RS-232/422/485 (PCI-1612)
- OXuPCI954 UART with 128-byte FIFO standard
- I/O address automatically assigned by PCI Plug & Play
- OS supported: Windows 2000/XP/Vista/7, Windows CE 5.0/6.0, Linux, and QNX
- Interrupt status register for increased performance
- Powerful and easy to use utility (ICOM Tools)
- Universal PCI, supports 3.3 V or 5 V PCI bus signal
- 1,000 V<sub>DC</sub> surge protection
- 2,500 V<sub>DC</sub> isolation protection (PCI-1610C and PCI-1612C only)

### Introduction

The PCI-1610 is a four port RS-232, and PCI-1612 is a four port RS-232/422/485 PCI communication card that are compatible with the PCI 2.2 bus specification, and offer transmission speeds up to 921.6 kbps. They also support any baud rate setting, for example 500 kbps is acceptable. The PCI-1610 and PCI-1612 also come with high-performance OXuPCI954 UART with 128-byte FIFO to reduce CPU load. These components make your system more stable and reliable. Thus, the PCI-1610 and PCI-1612 are especially suitable for multitasking environments.

Both the PCI-1610 and PCI-1612 have a universal PCI connector that is compatible with both the latest 3.3 V signaling systems and the traditional 5V signaling system. This gives high compatibility and allows usage in diverse systems. To further increase reliability, the cards can protect your system from abrupt high voltages up to 2,000 voltage thanks to EFT protection technology. PCI-1610C and PCI-1612C also provide 2,500 voltage optical isolation to protect your PC and equipment against damages from ground loops in harsh environments.

### Specifications

#### General

- **Bus Type** Universal PCI v2.2
- **Certification** CE, FCC class A
- **Connectors** 1 x Female DB37
- **Dimensions (L x W)** 185 x 100 mm (7.3" x 3.9")
- **Power Consumption** 180 mA @ +5 V

#### Communications

- **Communication Controller** OXuPCI954
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND (PCI-1610, PCI-1612)  
RS-422: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS- (PCI-1612)  
RS-485: Data+, Data- (PCI-1612)
- **FIFO** 128 bytes
- **Flow Control** RTS/CTS, Xon/Xoff
- **IRQ** Assigned by Plug & Play
- **Parity** None, Even, Odd, Mark and Space
- **Stop Bits** 1, 1.5, 2
- **Speed** 50 bps ~ 921.6 kbps, any baud rate setting  
230.4 kbps (PCI-1610B/C and PCI-1612B/C only)

#### Protection

- **ESD Protection** 8KV (air), 4KV (contact)
- **EFT Protection** 1 KV

Model Name	Surge Protection	Isolation Protection
PCI-1610A	-	-
PCI-1610B	1000 V <sub>DC</sub>	-
PCI-1610C	1000 V <sub>DC</sub>	2500 V <sub>DC</sub>
PCI-1612A	-	-
PCI-1612B	1000 V <sub>DC</sub>	-
PCI-1612C	1000 V <sub>DC</sub>	2500 V <sub>DC</sub>

#### Software

- **Bundled Software** ICOM Tools
- **OS Support** 32-bit/64-bit Windows 2000/XP/Vista/7, Windows CE 5.0/6.0, Linux, and QNX

#### Environment

- **Operating Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -10 ~ 60°C (14 ~ 144°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

#### Regulatory Approvals

- **EMC** EN 55011: 2009 + A1:2010, Group 1, Class A  
EN 55022: 2010, Class A  
EN 61000-6-4: 2007  
EN 55024: 2010  
EN 61000-6-2: 2005  
IEC 61000-4-2: 2008  
IEC 61000-4-3: 2006 +A1: 2007 +A2: 2010  
IEC 61000-4-4: 2010  
IEC 61000-4-6: 2008  
IEC 61000-4-8: 2009  
FCC 47 CFR Part 15 Subpart B (Class B), IC ICES-003

### Ordering Information

- **PCI-1610A** 4-port RS-232 PCI Comm. Card
- **PCI-1610B** 4-port RS-232 PCI Comm. Card w/Surge
- **PCI-1610C** 4-port RS-232 PCI Comm. Card w/Surge+Iso
- **PCI-1612A** 4-port RS-232/422/485 PCI Comm. Card
- **PCI-1612B** 4-port RS-232/422/485 PCI Comm. Card w/Surge
- **PCI-1612C** 4-port RS-232/422/485 PCI Comm. Card w/Surge+Iso

Note: this series includes cable OPT4A.

#### Accessories

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

# PCI-1620 PCI-1622

## 8-port RS-232 Universal PCI Communication Card

## 8-port RS-422/485 Universal PCI Communication Card



### Features

- PCI bus 2.2 compliant
- Supports serial speed up to 921.6 kbps, and any baud rate setting
- 8-port RS-232, or 8-port RS-422/485
- OXPCIe958 UARTs with 128-byte FIFOs standard
- I/O address automatically assigned by PCI Plug & Play
- OS supported: Windows 2000/XP/Vista/7, Windows CE 5.0/6.0, Linux, and QNX
- Interrupt status register for increased performance
- Space reserved for termination resistors
- Automatic RS-422 data flow control
- Powerful and easy to use utility (ICOM Tools)
- Universal PCI, supports 3.3 V or 5 V PCI bus signal
- 1,000 V<sub>DC</sub> surge protection and 2,500 V<sub>DC</sub> isolation protection (PCI-1622C only)

### Introduction

The PCI-1620 is an eight port RS-232, and PCI-1622 is an eight port RS-422/485 PCI communication card that are compatible with the PCI 2.2 bus specification, and offer transmission speeds up to 921.6 kbps. They also support any baud rate setting, for example 500 kbps is acceptable. PCI-1620 and PCI-1622 also come with high-performance OXuPC1954 UART with 128-byte FIFO to reduce CPU load. These components make your system more stable and reliable. Thus, the PCI-1620 and PCI-1622 are especially suitable for multitasking environments.

The PCI-1620 and PCI-1622 have a universal PCI connector that is compatible with both the latest 3.3 V signaling systems and the traditional 5V signaling system. This gives high compatibility and allows usage in diverse systems. To further increase reliability, the PCI-1620 and PCI-1622 offer EFT protection technology, protecting your system from electrical surges up to 2,500 volts. The PCI-1622C also provides 2,500 voltage optical isolation to protect your PC and equipment against damages from ground loops in harsh environments.

### Specifications

#### General

- **Bus Type** Universal PCI v2.2
- **Certification** CE, FCC class A
- **Connectors** PCI-1620: 1 x Female DB62  
PCI-1622: 1 x Female DB78
- **Dimensions (L x W)** 185 x 100 mm (7.3" x 3.9")
- **Power Consumption** 600 mA @ +5 V

#### Communications

- **Communication Controller** OXPCIe958
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND (PCI-1620)  
RS-422: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS- (PCI-1622)  
RS-485: Data+, Data- (PCI-1622)
- **FIFO** 128 bytes
- **Flow Control** RTS/CTS, Xon/Xoff
- **IRQ** Assigned by Plug & Play
- **Parity** None, Even, Odd
- **Speed** 50 bps ~ 921.6 kbps, any baud rate setting  
230.4 kbps (PCI-1622C only)
- **Stop Bits** 1, 1.5, 2

#### Protection

- **ESD Protection** 8KV (air), 4KV (contact)
- **EFT Protection** 1 KV

Model Name	Surge Protection	Isolation Protection
PCI-1620A		-
PCI-1620B	1000 V <sub>DC</sub>	-
PCI-1622B	1000 V <sub>DC</sub>	-
PCI-1622C	1000 V <sub>DC</sub>	2500 V <sub>DC</sub>

#### 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** -10 ~ 60°C (14 ~ 144°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

#### Regulatory Approvals

- **EMC** EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55044 including (IEC 61000-4-2/3/4/5/6/8/11), FCC Part 15 Subpart B

### Ordering Information

- **PCI-1620A** 8-port RS-232 PCI Comm. Card w/Surge
- **PCI-1620B** 8-port RS-232 PCI Comm. Card w/Surge
- **PCI-1622B** 8-port RS-422/485 PCI Comm. Card w/Surge
- **PCI-1622C** 8-port RS-422/485 PCI Comm. Card w/Surge+Iso

#### Accessories

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

**По вопросам продаж и поддержки обращайтесь:**

Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78

Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93