



Isolated Multi-Port RS232 PCI Express Mini Card Data Sheet

FEATURES

MODELS mPCIe-ICM232-4 AND mPCIe-ICM232-2

- PCI EXPRESS MINI CARD (mPCIe) TYPE F1, WITH LATCHING I/O CONNECTORS
- FOUR AND TWO-PORT mPCIe RS232 SERIAL CARDS WITH OPTIONAL DB9M CONNECTIVITY
- 500V ISOLATION PORT-TO-PORT AND 1500V ISOLATION PORT-TO-COMPUTER ON ALL SIGNALS
- HIGH PERFORMANCE 16C950 CLASS UARTS WITH 128-BYTE FIFO FOR EACH TRANSMIT AND RECEIVE BUFFER
- SUPPORTS DATA COMMUNICATION RATES TO 921.6KBPS
- VIRTUALLY ANY CUSTOM BAUD RATE MAY BE CONFIGURED BY THE USER VIA REGISTER SETTINGS, NO CUSTOM OSCILLATOR NEEDED
- ± 15 kV ESD PROTECTION ON ALL SIGNAL PINS
- SUPPORTS 9-BIT DATA MODE
- SUPPORTS CTS AND RTS
- ROHS AND INDUSTRIAL TEMP (-40°C TO 85°C) BOTH STANDARD



FUNCTIONAL DESCRIPTION

The mPCIe-ICM232 family of cards feature high performance 16C950-class UARTs. Available in 4-port and 2-port versions, each port is capable of communication speeds up to 921.6kbps and has 128-byte deep transmit and receive FIFOs. Large FIFOs protect against data loss in multitasking operating systems, reduce CPU utilization, and improve data throughput, while reducing or eliminating inter-character or inter-packet pauses. The advanced integrated circuit with pre-scalar supports a wide variety of custom baud rates, and any rates not otherwise achievable can be supported via a custom factory-installed crystal oscillator.

The RS232 ports provided by the card are 100% compatible with every other industry-standard serial COM device, supporting TX, RX, RTS, and CTS. In addition, they provide Tru-Iso™ port-to-port and port-to-PC isolation.

Communication is possible either with custom application software, with off-the-shelf applications (such as HyperTerminal), or with provided samples and utilities, including WinRISC™ ("Windows Really Incredibly Simple Communication").

The serial ports on the device are accessed using a low-profile, latching, 5-pin Hirose connector. Optional breakout cables are available, and bring each port connection to a panel-mountable DB9-M with an industry compatible RS232 pin-out.

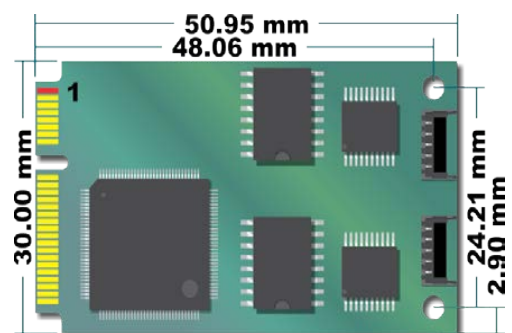
SPECIAL ORDER

Please contact ACCES with your precise requirement. Examples of special orders would be custom oscillators, conformal coating, custom software or product labelling, and more. We will work with you to provide *exactly* what is required.

ACCESSORIES

Available accessories include:

CAB-mPCIe-ICM2	Two port DB-9 cable accessory kit
CAB-mPCIe-ICM4	Four port DB-9 cable accessory kit
ADAP-9	DB-9 Screw Terminal Accessory
mPCIe-HDW-KIT2	2mm mounting hardware
mPCIe-HDW-KIT2.5	2.5mm mounting hardware

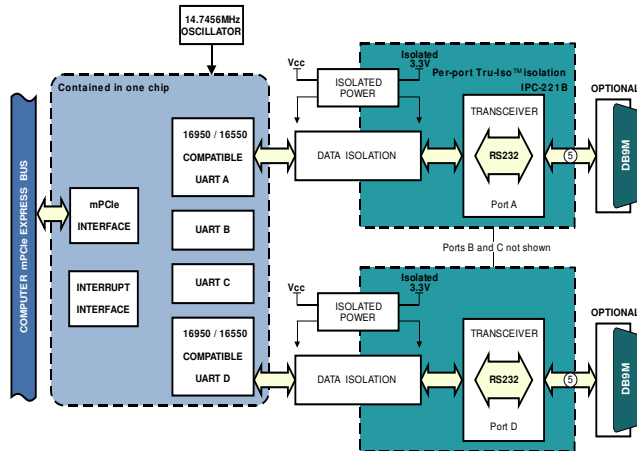


SOFTWARE

A complete driver support package is provided including an easy-to-use Windows terminal program for testing your COM ports. This simplifies the verification of proper COM port operation. The card installs as standard COM ports in all operating systems including DOS, Linux (including Mac OS X) and 32-bit and 64-bit Windows. Additional drivers may be available for a wide variety of operating systems including Windows CE, please contact the factory for compatibility with your specific OS.

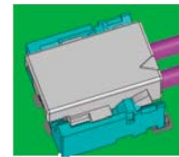


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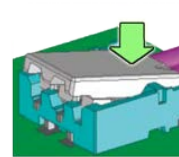


Mating

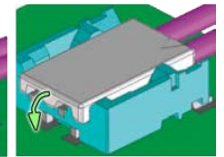
Position above and match alignment



Push down to insert the cable side

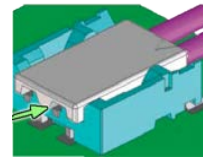


Push the contact-portion side into place

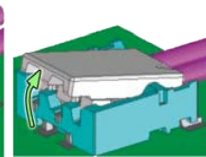


Un-Mating

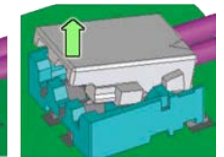
Engage lever



Pull up to release the simple lock



Continue lifting, the reinforced lock is released



PC Interface

PCI Express Mini Card Type F1 "Full Length" V1.2

Communications Interface

Connector I/O Hirose DF57-5P-1.2V 5-pin, latching

Mating Hirose DF57H-5S-1.2C

Serial Ports 4 (or 2) RS-232

UART Quad 16C950

FIFO 128-byte transmit & receive

Baud Rates up to 921.6k baud
advanced-prescaler allows a wide variety of unusual baud rates to be achieved

Character length 5, 6, 7, 8 bits (contact factory for assistance with 9-bit data)

Parity Even, Odd, None, Mark, Space

Stop Interval 1, 1½, 2 bits

Flow Control RTS/CTS, Xon/Xoff, None

Environmental

Temperature Operating -40° to 85°C

Storage -65° to 150°C

Humidity 5% to 95%, non-condensing

Power required +3.3VDC @ 1.8W (typical)

ESD Protection ±15kV on all signal pins (IEC 61000)

Physical

Weight 8 grams

Size ,Length 50.95mm (2.006")

Width 30.00mm (1.181")

The 4-port model violates component height restriction on "bottom" side by up to 1.3mm. Confirm your host PC does not place components under the mPCIe footprint before ordering.

Isolation

Tru-Iso™ IPC-221B

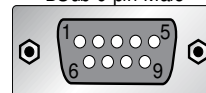
port-to-PC 1500 V peak (AC or DC)

port-to-port 500 V peak (AC or DC)

Careful attention has been paid to isolation design, including extensive keep-out zones and hand-routed circuit paths, as well as component and material selection.

DF57 Pin	Signal Names	Signal Descriptions	DB-9 Male Pin	Signal Names	Signal Descriptions
1	GND	Signal Ground	1	nc	no connect
2	TX	Transmit Data	2	RX	Receive Data
3	RX	Receive Data	3	TX	Transmit Data
4	RTS	Request To Send	4	RTS	Request To Send
5	CTS	Clear To Send	5	GND	Signal Ground
			6	nc	no connect
			7	RTS	Request To Send
			8	CTS	Clear To Send
			9	nc	no connect

DSUB 9-pin Male



ORDERING GUIDE

mPCIe-ICM232-4 4-port Isolated RS232 PCI Express Mini Card

mPCIe-ICM232-2 2-port Isolated RS232 PCI Express Mini Card

SHIPS STANDARD WITH INDUSTRIAL OPERATING TEMPERATURE AND ROHS

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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