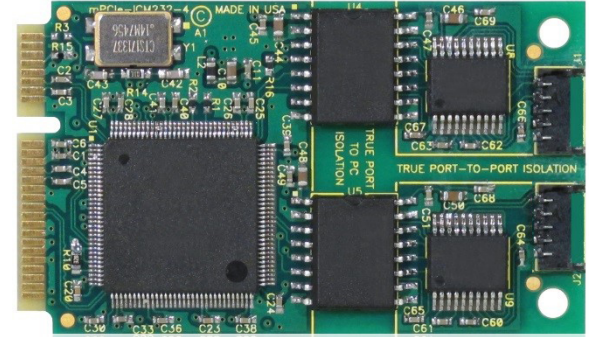## FEATURES

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
- ±15KV 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 (mPCIe-ICM232-4) and 2-port (mPCIe-ICM232-2) versions, each port is capable of communication speeds up to 921.6kbps and has 128-byte deep transmit and receive FIFOs which protect against data loss in multitasking operating systems, reduce CPU utilization, and improve data throughput. 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.
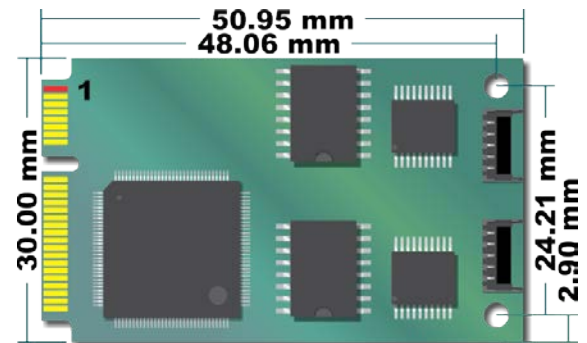
SPECIAL ORDER

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.
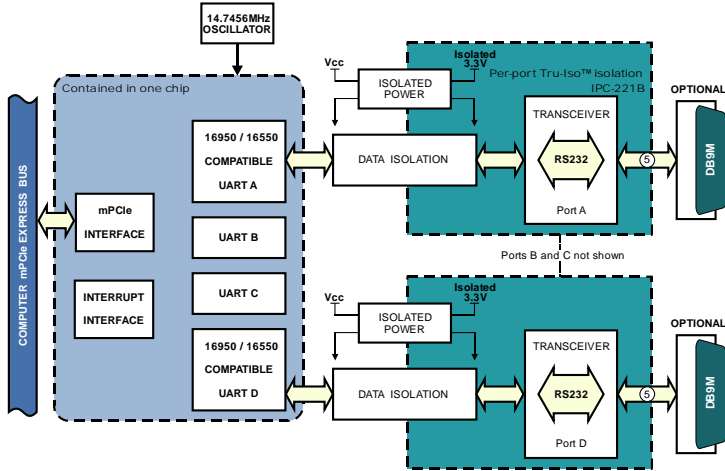
ACCESSORIES

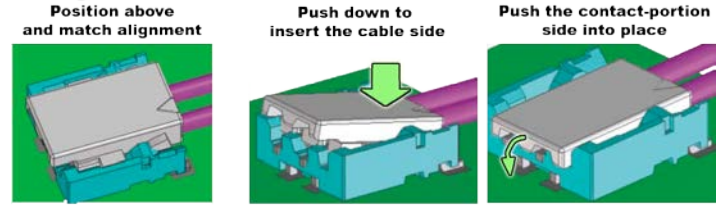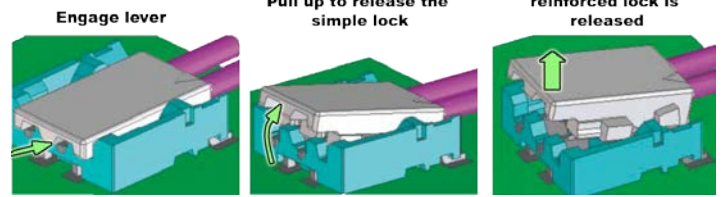| Available accessories include:	
CAB-mPCIe-ICM2	Two port DB-9 cable accessory kit
CAB-mPCIe-ICM4	Four port DB-9 cable accessory kit
ADAP-9	DB-9 Screw Terminal Accessory
mPCIe-HDW-KIT2	Mounting hardware for 2mm
mPCIe-HDW-KIT2.5	Mounting hardware for 2.5mm

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.

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 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

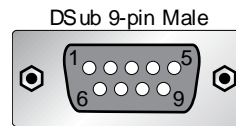|		
Weight		8 grams
Size	length	50.95mm (2.006")
	width	30.00mm (1.181")

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-ICM232-2	2-port Isolated RS232 PCI Express Mini Card
mPCIe-ICM232-4	4-port Isolated RS232 PCI Express Mini Card

SHIPS STANDARD WITH INDUSTRIAL OPERATING TEMPERATURE AND ROHS