

Serial PCMCIA Cards RS-232 and RS-422/485

Quatech serial PCMCIA cards (PC Cards) provide a simple yet robust solution for adding multiple serial ports to laptops, notebooks, tablets, handhelds and embedded systems.



Quatech serial PCMCIA cards add one, two or four RS-232 or RS-422/485 ports to portable computers.

The most complete serial PCMCIA product line available

Quatech offers more choices in serial I/O PC cards than any other manufacturer, including several exclusive models. In addition, our PCMCIA cards use a single driver set for all models, making them an extremely practical choice for applications with multiple configurations that span several operating systems including Windows, Linux and OS/2.

Quatech PC Cards are small, light and have low power requirements to reduce battery drain. They are available with one to four independent RS-232 or RS-422/485 serial ports that share a single interrupt. The standard version comes with a convenient detachable cable. For extreme computing environments, permanently attached ruggedized cables are available.

Multiple serial ports for portable devices, mobile applications, and embedded systems

Quatech serial PCMCIA cards are a flexible, low-cost way to interface serial peripherals in a wide variety of portable, PC-based mobile applications. They are also ideally suited for embedded systems, where achieving maximum functionality in a minimum of space is essential. For example:

- POS Systems
- Field data collection
- Medical testing
- Kiosks
- GPS tracking
- Mobile office
- Industrial monitoring & control

Industry leading speeds mean exceptional performance

Quatech serial PCMCIA cards provide industry leading speeds of up to 921.6 kbps by employing a clock multiplying feature in conjunction with 16750 UARTs.

To further increase performance, we have created an auto toggle feature for the RS-422/485 transmitter that permits the hardware itself to regulate data flow by only driving lines while actively transmitting--providing increased speed and convenience over the older software controlled method.

Features and Benefits

- One, two or four independent serial ports
- RS-232 or RS-422/485 cards
- Speeds up to 921.6 kbps
- Auto enable/disable feature for RS-422/485 transmitter
- Ruggedized case with removable cable standard
- Permanently attached ruggedized cable option for one and two port RS-232 cards
- 3.3V and 5V compatible
- Plug & Play and Hot Swap capability
- Low power requirements
- Linux support
- Windows CE and Pocket PC support
- Windows 9x/Me/NT/2000/XP and OS/2 support
- 5 year warranty

RS-232 SPECIFICATIONS

Bus Interface: 16-bit PCMCIA, Release 8 & backward compatible

OS Support: Windows CE, Pocket PC
Windows 95/98/Me/NT/2000/XP
Linux, OS/2

Data Rate: SSP/DSP: 921.6 kbps (max)*
QSP: 115.2 kbps (max)*

* Actual baud rates can be affected by cabling and other factors

Ports: SSP: 1 DSP: 2 QSP: 4

UARTs: SSP/DSP: 16750 UARTs with
64-byte FIFOs (1 per port)
QSP: 16550 UARTs with 64-byte
FIFOs (1 per port)

Transceivers: SSP/DSP: 3254 or compatible
QSP: SP211 or compatible

Drivers:

High Level Output: +5V (min), +5.4V (typ)
Low Level Output: -5V (min), -5.4V (typ)
Transition Time (THL-TLH): 25 ns (typ)

Receive Buffers:

Voltage Range: +25V (max), -25V (min)
Transition Time (THL-TLH): 25 ns (typ)

Environment:

Operating: 0°C to 70°C
Storage: -50°C to 70°C
Humidity: 10% to 90%

Power Requirements: SSP/DSP compatible
with 3.3V & 5V systems, QSP 5V only

SSP: 20mA @5V (typ), 35mA (max)
DSP: 30mA @5V (typ), 45mA (max)
QSP: 45mA @5V (typ), 50mA (max)

Size: Type II PCMCIA Card package

Connectors:

SSP: Detachable cable with one
DB9 male connector
SSPR: Permanently attached cable
with one DB9 male connector
DSP: Detachable cable with two
DB9 male connectors
DSPR: Permanently attached cable
with two DB9 male connector
QSP: Detachable cable with four
DB9 male connectors

Certifications: CE, FCC Class B

Ordering Information:

SSP-100: 1-port RS-232 card with cable
SSPR-100: 1-port RS-232 card w. attached cable
DSP-100: 2-port RS-232 card with cable
DSPR-100: 2-port RS-232 card w. attached cable
QSP-100: 4-port RS-232 card with cable

RS-422/485 SPECIFICATIONS

Bus Interface: 16-bit PCMCIA, Release 8 & backward compatible

OS Support: Windows CE, Pocket PC
Windows 95/98/Me/NT/2000/XP
Linux, OS/2

Data Rate: SSP/DSP: 921.6 kbps (max)*
QSP: 115.2 kbps (max)*

* Actual baud rates can be affected by cabling and other factors

Ports: (each configurable for RS-422 or
RS-485 for full or half duplex communication)
SSP: 1 DSP: 2 QSP: 4

UARTs: SSP/DSP: 16750 UARTs with
64-byte FIFOs (1 per port)
QSP: 16550 UARTs with 64-byte
FIFOs (1 per port)

Transceivers: SSP/DSP: 3491 or compatible
QSP: LT491 or compatible

(Auto enable/disable of RS-422/485 transmitter
on SSP/DSP)

Drivers:

Differential Voltage: $\pm 3.3V$
Transition Time (TLH): 52 ns (typ)
Transition Time (THL): 60 ns (typ)

Receive Buffers:

Differential Input Threshold: $\pm 0.2V$
Voltage Range: -7V to +12C CMI
Transition Time (THL-TLH): 65 ns (typ)

Environment:

Operating: 0°C to 70°C
Storage: -50°C to 70°C
Humidity: 10% to 90%

Power Requirements: SSP/DSP compatible
with 3.3V & 5V systems, QSP 5V only

SSP: 20mA @5V (typ), 35mA (max)
DSP: 30mA @5V (typ), 45mA (max)
QSP: 45mA @5V (typ), 50mA (max)

Size: Type II PCMCIA Card package

Connectors:

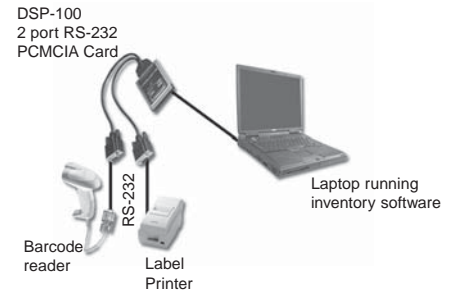
SSP: Detachable cable with one
DB9 female connector
DSP: Detachable cable with two
DB9 female connectors
QSP: Detachable cable with four
DB9 female connectors

Ordering Information:

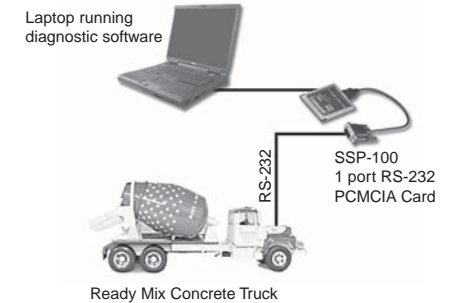
SSP-200/300: 1-port RS-422/485 card with cable
DSP-200/300: 2-port RS-422/485 card with cable
QSP-200/300: 4-port RS-422/485 card with cable

TYPICAL APPLICATIONS

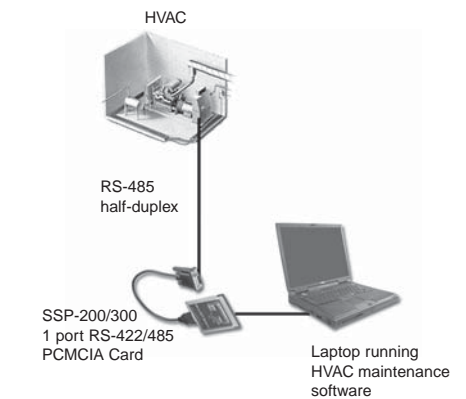
POS Application:



Vehicle Diagnostics:



Building Automation:



5675 Hudson Industrial Parkway, Hudson, OH 44236

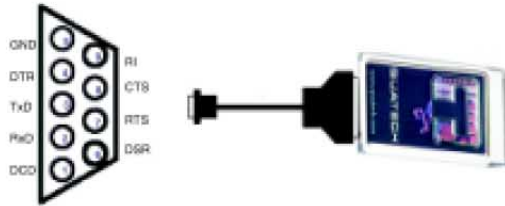
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Rev 1.1, 12.12.03

RS-232 Card Connectors

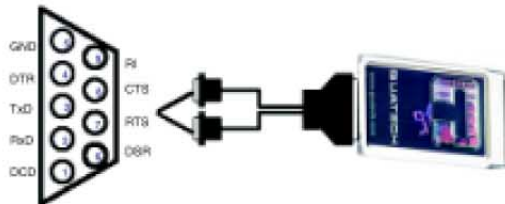
SSP-100:

The SSP-100 cable provides a single DB-9 male connector as shown:



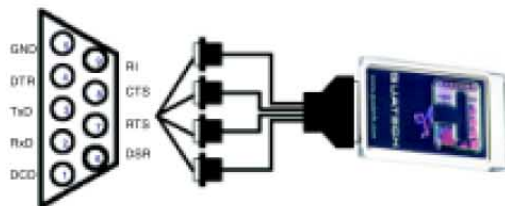
DSP-100:

The DSP-100 pigtail cable provides two DB-9 male connectors as shown:



QSP-100:

The QSP-100 pigtail cable provides four DB-9 male connectors as shown:



Pinout:

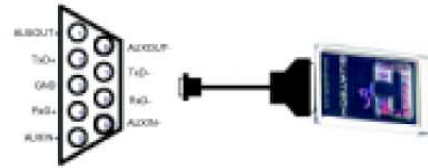
The pinout for each of the DB-9 male ports is as follows:

Pin 1	DCD	Carrier Detect
Pin 2	RxD	Data Input
Pin 3	TxD	Data Output
Pin 4	DTR	Data Terminal Ready
Pin 5	GND	Signal Ground
Pin 6	DSR	Data Set Ready
Pin 7	RTS	Request to Send
Pin 8	CTS	Clear to Send
Pin 9	RI	Ring Indicator

RS-422/485 Card Connectors

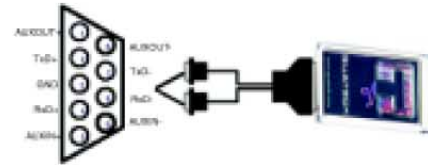
SSP-200/300:

The SSP-200/300 cable provides a single DB-9 female connector as shown:



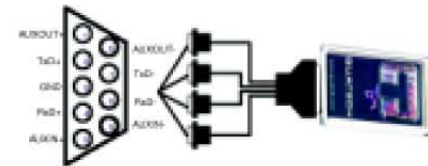
DSP-200/300:

The DSP-200/300 pigtail cable provides two DB-9 female connectors as shown:



QSP-200/300:

The QSP-200/300 pigtail cable provides four DB-9 female connectors as shown:



Pinout:

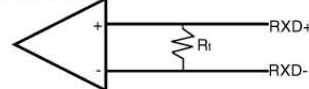
The pinout for each of the DB-9 female ports is as follows:

Pin 1	AUXOUT+	Auxiliary Output+
Pin 2	TxD+	Data Output+
Pin 3	GND	Signal Ground
Pin 4	RxD+	Data Input+
Pin 5	AUXIN+	Auxiliary Input+
Pin 6	AUXOUT-	Auxiliary Output-
Pin 7	TxD-	Data Output-
Pin 8	RxD-	Data Input-
Pin 9	AUXIN-	Auxiliary Output-

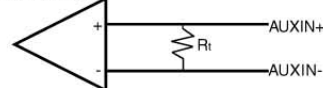
Termination Resistors:

Each port can be configured for RS-422 or RS-485 by using termination resistors as follows:

RS-422/485 Receiver



RS-422/485 Receiver



Termination Resistor Values

RS-422: 100Ω
1/2W resistor

RS-485: 60Ω total
(120Ω at each end)