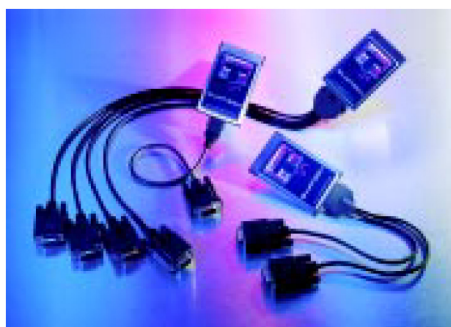# Serial PCMCIA Cards
# RS-232 and RS-422/485

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 or two 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 or two 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
- RoHS compatible
- Plug & Play and Hot Swap capability
- Low power requirements
- Linux support
- Windows CE and Pocket PC support
- Windows 9x/Me/NT/2000/XP/Vista/7 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/Vista/7, Linux, OS/2

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

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

**Ports: SSP:** 1 **DSP:** 2

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

**Transceivers:**
**SSP/DSP/QSP:** ICL 3245 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/QSP:** compatible with 3.3V & 5V systems
**SSP:** 20mA @ 5V (typ), 35mA (max)
**DSP:** 30mA @ 5V (typ), 45mA (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 connectors

**Certifications:** CE, FCC Class B, RoHS

**Ordering Information:**
**SSP-100:** 1-port RS-232 card with cable
**SSPR-100:** 1-port RS-232 card with attached cable
**DSP-100:** 2-port RS-232 card with cable
**DSPR-100:** 2-port RS-232 card with attached 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/7 Linux, OS/2

**Data Rate:**
**SSP/DSP/QSP:** 921.6 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

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

**Transceivers:**
**SSP/DSP/QSP:** MAX 3076E or compatible (Auto enable/disable of RS-422/485 transmitter on SSP/DSP)

**Drivers:**
Differential Voltage: +/- 3.3V
Transition Time: (TLH): 52 ns (typ)
Transition Time: (THL): 60 ns (typ)

**Receive Buffers:**
Differential Input Threshold +/-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/QSP:** compatible with 3.3V & 5V systems
**SSP:** 20mA @ 5V (typ), 35mA (max)
**DSP:** 30mA @ 5V (typ), 45mA (max)

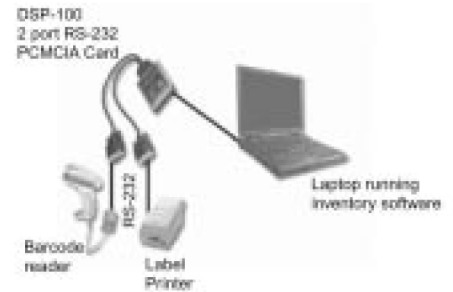**Size:** Type II PCMCIA Card package

**Connectors:**
**SSP:** Detachable cable with one DB9 female connector
**DSP:** Detachable cable with two 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

## TYPICAL APPLICATIONS


POS Application:
DSP-100 2 port RS-232 PCMCIA Card
RS-232
Laptop running inventory software
Barcode reader
Label Printer


Vehicle Diagnostics:
Laptop running diagnostic software
RS-232
SSP-100 1 port RS-232 PCMCIA Card
Ready Mix Concrete Truck


Building Automation:
HVAC
RS-485 half-duplex
SSP-200/300 1 port RS-422/485 PCMCIA Card
Laptop running HVAC maintenance software