

## CompactFlash (CF) Serial I/O Cards RS-232 and RS-422/485

Quatech CF serial cards provide a simple solution for adding serial ports to handhelds, tablets, PDAs, and other portable computing devices.



Quatech CompactFlash serial I/O cards add one or two RS-232 or RS-422/485 ports to portable computers.

### Robust features for diverse mobile computing environments

Quatech CF serial cards are small, light and have low power requirements, including a special feature that automatically reduces power consumption when terminal equipment is not connected.

Single port cards provide ESD-protected serial ports. Two port cards provide +/- 50VDC isolation for each port. All are housed in a sturdy metal case and have a convenient removable connector cable. For extreme environments, the single port RS-232 model is also available with a ruggedized attached cable.

### Serial ports for portable devices and mobile applications

Handheld devices are becoming increasingly popular choices for today's busy mobile professionals. While these devices provide many of the software functions required for mobile business they are often lacking in expansion ports. Serial connectivity is a flexible, low-cost interface choice for a wide variety of portable peripherals and applications including:

- GPS receivers
- Bar code scanners
- Printers
- Digital Cameras
- Field data collection
- Office automation
- Industrial monitoring & control

### High speed ports compatible with the most popular Operating Systems

Quatech CF cards provide industry-leading speeds of up to 921.6 kbps by employing a clock multiplying feature in conjunction with 16550 UARTs.

The cards are supported under Windows CE and Pocket PC, making them ideal choices for the most popular handheld devices.

Support is also provided for Windows 95/98/98SE/Me/2000/XP and DOS, enabling the cards to be used with most Tablet, Laptop, and Desktop PCs as well.

### Features and Benefits

- One or two independent serial ports
- RS-232 or RS-422/485 cards
- Speeds up to 921.6 kbps
- One port cards CF+ Type I
- Two port cards CF+ Type II
- Ruggedized metal case with removable cable
- One port RS-232 cards also available with attached ruggedized cable
- 3.3V and 5V compatible
- Plug & Play and Hot Swap capability
- Low Power requirements
- ESD protection for one port cards
- +/- 50VDC isolation per port for two port cards
- Windows CE and Pocket PC compatible
- Windows 9x/Me/2000/XP and DOS compatible
- 5 year warranty

## RS-232 SPECIFICATIONS

**Bus Interface:** CF+ Type I (SSCF)  
CF+ Type II (DSCF)

**OS Support:** Windows CE, Pocket PC  
Windows 95/98/Me/2000/XP  
DOS

**Data Rate:** **SSCF:** 921.6 kbps (max)\*  
**DSCF:** 115.2 kbps (max)\*

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

**Ports:** **SSCF:** 1 **DSCF:** 2

**UARTs:** 16550 UARTs with 16-byte FIFOs

**RS-232 Signals:** Typical output level  $\pm 5.5V$  (open circuit voltages). TX, RX, CTS and RTS supported on each port.

**ESD Protection (SSCF only):** All signal lines protected for

- 15kv - human body model
- 8kv - IEC1000-4-2, contact discharge
- 15kv - IEC1000-4-2, air-gap discharge

**Isolation (DSCF only):** Isolation is defined between ISOGND and host 0V supply (metal case of card and cable shield braid) and can be up to +/-50V, DC to 60Hz. The two ports share a common ground (ISOGND): no isolation exists between the two ports.

### Environment:

- Operating:** 0°C to 50°C ambient
- Humidity:** <80% non-condensing

### Power Requirements:

- SSCF compatible with 3.3V & 5V systems,
- DSCF 3.3V only

**SSCF (VCC Current):** 20mA typ. @ 5V  
13mA typ. @ 3.3V

**SSCF (Standby):** 14mA typ. @ 5V  
5mA typ. @ 3.3V

**DSCF (VCC Current):** 35mA typ. @ 3.3V

### Size:

- SSCF:** 36.4mm x 42.8mm x 3.3 mm (CF I)
- DSCF:** 36.4mm x 42.8mm x 5.0 mm (CF II)

### Connectors:

- SSCF:** Detachable cable with one DB9 male connector
- SSCFR:** Attached cable with one DB9 male connector
- DSCF:** Detachable cable with two DB9 male connectors

### Ordering Information:

**SSCF-100:** 1 port RS-232 CF card with cable

**SSCFR-100:** 1 port RS-232 CF card with attached cable

**DSCF-100:** 2 Port RS-232 CF card with cable

## RS-422/485 SPECIFICATIONS

**Bus Interface:** CF+ Type I

**OS Support:** Windows CE, Pocket PC  
Windows 95/98/Me/2000/XP  
DOS

**Data Rate:** 921.6 kbps (max)\*

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

**Ports:** 1 configurable for RS-422 or RS-485

**UARTs:** 16550 UART with 16-byte FIFOs

**RS-422 Mode:** CTS/RTS flow control signals available

**RS-485 Mode:** Auto-tristate of TXD drivers when not transmitting, Full-duplex and half-duplex operation

**Terminators:** None supplied. Use external termination resistors as required.

**Fail Safe Feature:** The receiver inputs include a fail-safe feature that guarantees a logic high on the receiver when the inputs are open circuit.

**ESD Protection :** All signal lines protected >1kv  
– IEC1000-4-4

### Environment:

- Operating:** 0°C to 50°C ambient
- Humidity:** <80% non-condensing

### Power Requirements:

compatible with 3.3V & 5V systems

- Idle:** 22mA typ. @ 5V  
10mA typ. @ 3.3V

- Active:** 80mA typical @ 5V  
55mA typical @ 3.3V

(includes 45mA consumed by terminating resistors)

**Size:** 36.4mm x 42.8mm x 3.3 mm (CF I)

**Connectors:** Detachable cable with one DB9 male connector

### Ordering Information:

**SSCF-200/300:** 1 port RS-422/485 CF card with cable

## TYPICAL APPLICATIONS

### GPS Application:



### Barcode Application:



### Industrial monitoring and control:



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