

USB 8 channel power or signal relay cards**Product Datasheet 19****Features**

- USB powered and controlled - USB1 or 2 compatible (Type B USB connector)
- Example code downloads available for: Labview, VB, VC, C#, JAVA, Agilent VEE, Delphi and Python. Uses simple ASCII/Hex text command strings
- OS compatibility: Win98SE to Windows 10, Mac OSX and Linux
- Uses same software drivers as used in our range of serial port cards. Can also be controlled with direct command input from terminal emulation programs (such as RealTerm, CoolTerm or Putty)
- Relays and PCB tracking will handle 10 amps (240V AC) or 8A (30V DC).
- Two types of relays available: 10A/240V AC power relay and 1A, high sensitivity (gold contact) signal relay. See page 2 for detailed relay specs.
- Relays are SPDT, Form C, changeover type, with N/O, COM and N/C contacts taken to the screw terminal blocks along each side of the card
- All relay contacts taken to screw terminal blocks. Option of either fixed or 2-part (male/female) screw terminal blocks, as shown in image
- Opto-isolated - USB isolation from relays to 2500V AC (rms)
- LED status indicators for USB connection/power and relay activation status
- Supplied with nylon feet (will take self-tapping screws)
- Corner mounting holes allow cards to be stacked if required
- Clear Perspex cover & base option available
- DIN rail base clip (with Perspex cover) mount option also available
- CE & RoHS compliant.

**USB8SR2****Description**

General purpose USB controlled 4 or 8 channel relay cards. Hot pluggable and powered from the USB port, they are available with a range of software driver options, including direct control using simple ASCII characters sent from any terminal emulation program.

Relays and PCB tracking will handle up to 10 amps (240V AC) or 8A (30V DC). Relay contacts are opto-isolated

Specifications**USB Interface**

USB1/2 compatible interface. Hot pluggable and powered from the USB port. Type B USB connector.

Relays

12A/120VAC, 10A/240VAC or 8A 30V DC contact rating. (PCB tracking to screw terminals will handle

Order code**USB8PR/USB8SR**

8 channel USB connected power or signal relay card with fixed screw terminal block connectors for connection to all relay contacts.

USB8PR2/USB8SR2

As above, but fitted with two-part (male/female) screw terminal block connectors (as shown in image above).

from USB/control inputs providing high level of electrical protection between PC and target system. All relay contacts are connected to either fixed or two-part screw terminal blocks, allowing rapid disconnection/ replacement of the card. USB 0V & 5V power connections are also accessible, making them readily available for onward connection to target system wiring if needed.

max current). Contact resistance: 100 mΩ max. Relay operate/release times: 12mS/7mS, (inc. SW overhead).

Operating temp range

0-70°C

Dimensions

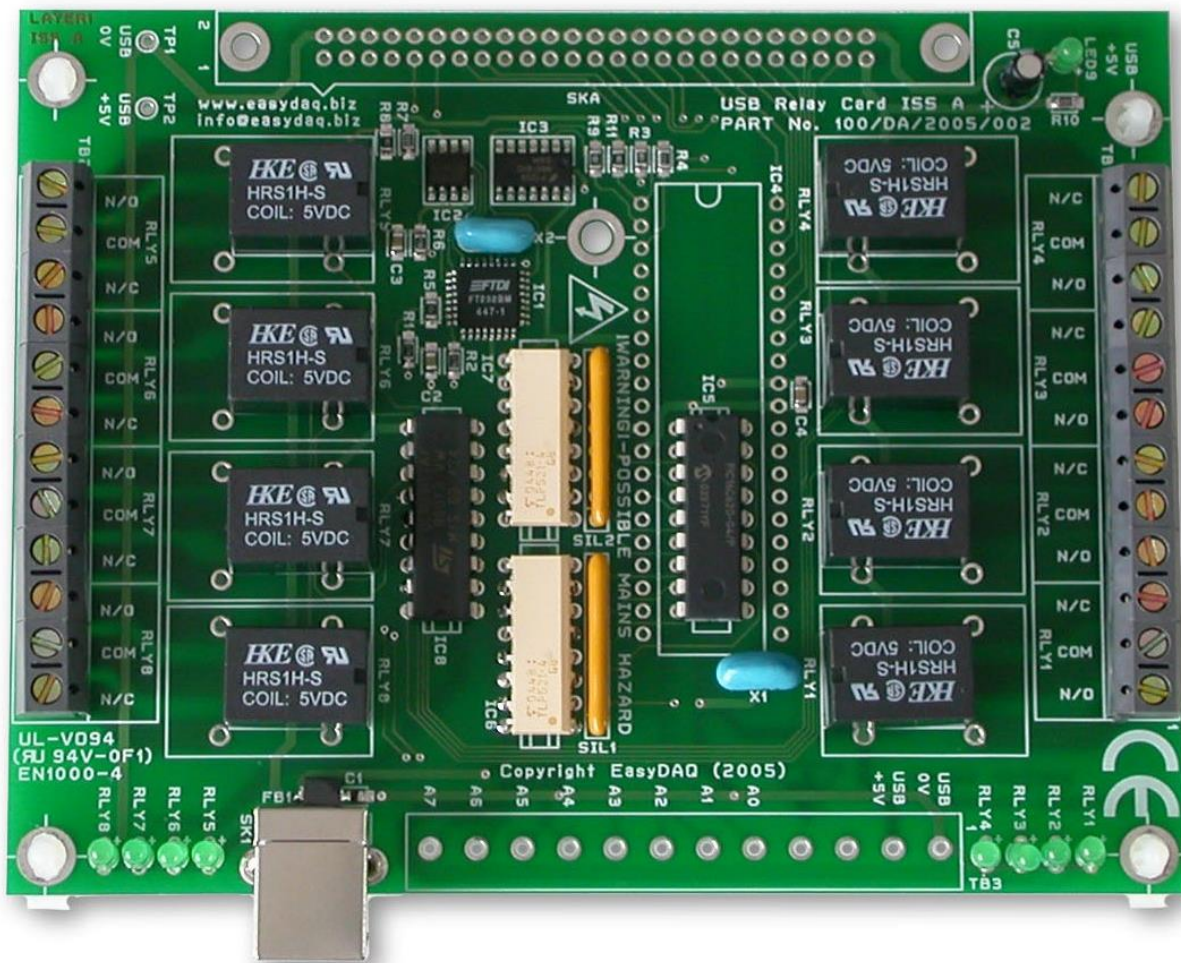
Dimensions approx. 106mm (D) 129mm (W) 25mm (H)

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<i>Specifications: Relays</i>					
Parameter	5V Power relays	6V Power relays	12V Power relays	24V Power relays	Signal relays
Rated voltage/current	5VDC/71mA each	6VDC/60mA each (50mA at 5V)	12VDC/44mA each	24VDC/22mA each	5VDC/42mA each
Must operate/release voltage	75%/10% of rated voltage				75%/10% of rated voltage
Contact ratings	10A/240VAC or 8A 30VDC				1A/120VAC or 1A 30VDC
Contact resistance	100mΩ max				100mΩ max
Operate/release time	10mS/5mS				5mS/5mS
Contact bounce period	0.6mS operate/ 7.2mS release				0.6mS operate/ 7.2mS release
Contact material	AgSnO ₂				AuAg overlay, Ag Alloy
Operational life (min)	Mechanical 10 ⁷ / Electrical 10 ⁵				Mechanical 10 ⁷ / Electrical 10 ⁵
Contact arrangement	SPDT, Form C				SPDT, Form C



USB8SR (Face view)

Serial Port settings

Baud rate: 9600
Parity: 0
Data: 8 bits
Stop bits: 1

Handshaking

None – output status reflects incoming data bytes.

Auto detection & com port assignment

When you connect this card to a USB port on your computer, it will be auto-detected and ask you to install drivers (downloadable from the 'downloads' section of our website). After installation, this USB device will appear as a 'virtual' COM port and be assigned a COM port number. Following installation, the COM port number can be manually re-assigned via the control panel if required.

Command format

The following commands show the ASCII characters required to command each port of the PIC device (Hex equivalent shown in brackets - can be commanded via Windows HyperTerminal – see below).

Port B (Channels 1-8) commands:

B (42H), X Set direction of Port B, 1=Input, 0= output. (i.e. X=10111111 (AFH) = bit 6 output, the rest inputs).

C (43H), X Write data X to Port B (i.e. X=00000001 (01H), sets channel 1 to active).

Valid data bytes are latched by the card until a further valid data byte is written to it.

Please note that the Read port function is not available on this board. If this function is required then please contact EasyDAQ for information.

Using a Terminal Emulator

In order to test operation, the card can be connected to a serial port and controlled from a terminal emulator program such as "PuTTY" or "Realterm". See our "[Data Sheet 50 \(Using Terminal Emulators to control and test EasyDAQ cards\)](#)". Ensure port configuration is set as shown above, type (ASCII) characters shown above to achieve port direction and read or write command/data.

Example downloads

Example driver files and executables are available from the 'downloads' area of our website (www.easydaq.co.uk). Example programs are available for LabView, Visual Basic, Visual C. Delphi & Agilent VEE.

Uses existing serial port software examples

This card uses the same software drivers & command interface as that used in our range of serial port relay cards (SERDIO8/16/24 etc). Therefore, if you have already used the serial port cards you may be able to re-use your code or use a USB card in place of a serial port card.



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NOTE.

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Document versions

Version number	Date	Notes
V1.x	Various	
V2.0	31 st May 2022	Updated format