SpaceLogger.S10

- **Stand-alone RS232 serial data logger**
- **Combines data from two RS232 inputs**
- **Data sampled and time-stamped**
- **SD Card for high capacity data storage in easily removable and transferable format**
- **Option to record status of two switches**
- **Simple to configure for wide range of devices**
- **Compact, economical and robust design**
- **Low power consumption**
- **Stored data files simple to read with standard PC office software**

Overview

The SpaceLogger.S10 is a versatile serial data logger for sampling RS232 data from up to two devices.

Data is stored on a removable SD card, enabling remote data logging without the need for direct connection to a PC. After logging, the memory card can be simply inserted in a card reader, to view and analyse the data on a PC; no special software is required.

Each data record (that will combine the data sampled from two devices) is date and time-stamped when it is stored. A new file is generated for each day's data. The default file format is .CSV; other file extensions may be specified.

To configure the SpaceLogger.S10 for a wide range of devices with RS232 output, set up includes defining the start and end characters for up to two data samples, baud rate, sample rate, file name format, handling of un-printable characters, addition of a separator and/or a newline to each data record. There is also the option to disable time-stamping and data sampling (to log all data).

The SpaceLogger.S10 may be set up to output RS232 data as it is input or as logged. This enables connection to a PC, display or other device. A response to a handshake may be output and/or the contents of a file on the SD card may be output on start-up; this enables a command to be sent to the sensor, for example.

The status of two switches to ground may also be added to each data record.

The SpaceLogger.S10 is ideal for field data acquisition due to its low power consumption and high capacity data storage.

Applications

Data acquisition from devices, instruments and sensors outputting RS232 data, such as:

- ✓ Environmental sensors – wind speed & direction, temperature, humidity. pressure, noise, pollution etc
- ✓ GPS & other NMEA devices
- ✓ Weighing balances & scales
- ✓ Barcode scanners & RFID readers

More SpaceLogger Models

SpaceLogger.T10 – simple RS232 data recorder (no sampling or time-stamping)

SpaceLogger.A10 – 2 channel analogue 4-20mA data logger with one RS232 channel

SpaceLogger.W10 – for logging of wind speed & direction data from WindSonic & WindObserver wind sensors & MetPak II weather stations

SpaceLogger.D10 – for logging of cycle records from medical decontamination devices

OEM options and customised versions of all SpaceLogger are available. Please contact us for more information.

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SpaceLogger.S10 Specification

Physical	Dimensions	Width: 67 mm | Depth: 67 mm | Height: 28 mm (excluding optional rubber feet)
	Weight	75g
	Enclosure material	GP ABS (UL94-HB) plastic and acrylic
Connections	Type	Screwless terminals capable of accepting wire 0.32 to 0.65mm diameter (AWG 28 to 22)
RS232 Input	Number of channels	2
	Transmission standard	Input 1: RS232 and TTL/CMOS* logic compatible with selectable logic inversion. 8 bits and no parity (default), even or odd parity or 7 bits and even or odd parity. *V_{IL} Input threshold low: 0.6V min 1.2V Typ. V_{IH} Input threshold high: 1.5V Typ, 2.4V max Input 2: RS232 compatible, 8 bits and no parity only
	Transmission speed	Input 1: 9600 Baud (default) or selectable from 115200, 57600, 38400, 19200, 4800, 2400, 1200, 300 or 110 Baud Input 2: 4800 Baud only
	Data Sample	Records only the data between specified start (STX/STX2) and end (ETX/ETX2) identifiers (unless configured to LOG_ALL=Y)
RS232 Output	Number of channels	2
	Transmission standard	Output 1: RS232 compatible, 8 bits and no parity (default), even or odd parity or 7 bits and even or odd parity. Output 2: RS232 compatible, 8 bits and no parity
	Transmission speed	Output 1: 9600 Baud (default) or selectable from 115200, 57600, 38400, 19200, 4800, 2400, 1200, 300 or 110 Baud Output 2: 4800 Baud only
	Data Transmission	Output 1: Output of data defined by command OUTPUT. Output of handshake response unless already allocated to output data. Output of file STARTUP.TXT. Output 2: Only used for handshake response if RS232 Output 1 is already allocated to output data.
Switch Input	Max input voltage	Must not exceed 3V
	Current out	7µA max
Data Storage	Data Storage Card	Removable SD, MMC or MMC mobile card
	Data Capacity	2 GByte (max)
	File System	FAT16 or FAT32 with 8.3 file names. Sector size 512 Bytes
	Data logging interval	Default is to log every data sample output by the device/sensor or select logging interval from 1 to 60 seconds
Audible / Visual Indicators	LED Indicators	Green: Ready to record data | Red: Power on, Writing data to SD card, Waiting for second data sample in timeout mode
	Audible Bleeper	Status alert
Real Time Clock	Accuracy	±40 ppm at 25 ºC
	Backup battery	CR2032
Power	Power requirement	7 to 30 Vdc
	Current at 12Vdc	10 mA typical
	Connection	1.3 mm centre pin DC connector, or Screwless terminals (0.32 to 0.64 mm diameter conductors)
Environmental	Temperature Range	Operating: -25 ºC to +70 ºC | Storage: -40 ºC to +70 ºC
	EMC	CE marked - EMC directive 2004/108/EC FCC/CFR 47: Part 15:2004
Guarantee	Period	1 year

Example of SpaceLogger.S10 Application