

## .A10 (Analogue)

- ▶ 2 channel analogue data logger
- ▶ 4 to 20mA inputs
- ▶ 10-bit analogue to digital conversion
- ▶ RS232 and switch inputs
- ▶ Stores data onto SD or MMC card
- ▶ Real-time clock for date and time-stamping records
- ▶ Loggers can be daisy chained to extend number of channels
- ▶ Analogue to RS232 serial converter
- ▶ Alarm signal output
- ▶ Conditional logging



### Overview

The SpaceLogger.A10 is a dual channel analogue data recorder, supporting a range of DC (4-20mA) logging applications.

Data is stored on a removable memory 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.

Data is stored as ASCII text with each record on a new line with comma separated fields. The available fields are: record prefix text, time & date, channel 1 reading, channel 1 units text, channel 2 reading, channel 2 units text, switch state. A new file is generated for each day's records. Readings are sampled at 75 Hz and averaged over 1 sec.

The user may set the text fields, scale and offset values for each channel's readings and may define which fields are to be recorded. In addition the record may be appended to a received RS232 data string when the unit is set to Slave Mode. This enables data from a sensor outputting RS232 to be recorded with the analogue data input to the SpaceLogger.A10 or for loggers to be daisy chained to extend the number of channels.

Logging may be set to be conditional; when a switch is in open or close state or when either of the input channels meets defined trigger (threshold) conditions or when a command is received on the RS232 input.

RS232 output of the data may be set up either continuously or when the specified logging conditions are met. This enables connection to a PC, display or to another SpaceLogger.A10.

There is a single alarm output which may be activated by the level of signal on either analogue channel.

The unit uses an SD or MMC card. These cards are available with up to 2GB capacity for long term data logging.

### Applications

- ✓ Scientific research
- ✓ Education
- ✓ Industrial automation
- ✓ Plant and machinery monitoring
- ✓ Quality control
- ✓ Security monitoring
- ✓ Environmental monitoring

The SpaceLogger.A10 is ideal for field data acquisition due to its low power consumption and high capacity data storage.

### SpaceLogger® Additional Capability

OEM options and customised versions of the SpaceLogger.A10 are available. Please visit our website or contact us for more information.

### Contact Us

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## SpaceLogger®.A10 Specification

<b>Physical</b>	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
<b>Connections</b>	Type	Screwless terminals capable of accepting wire 0.32 to 0.65mm diameter (AWG 28 to 22)
<b>Analogue Input</b>	Number of channels	2
	Range	4 to 20 mA (0 to 23 mA maximum)
	Sampling	Readings are sampled at 75 Hz and averaged over 1 sec
	Maximum logging rate	1 Hz
	Input impedance	177 ohms
	Accuracy	±1% or 0.1 mA at 20 °C over range 4 to 20 mA
	Drift with temperature	100 ppm / °C over range -40 °C to +40 °C
	Analogue to digital converter	10-bit resolution
<b>Switch Input</b>	Digital channel	Input for logging control switch
	Max input voltage	Must not exceed 3V
	Current out	7µA max
<b>RS232 Input</b>	Number of channels	1
	Transmission standard	RS232 compatible, 8 bits and no parity
	Transmission speed	9600 Baud (default) or selectable from 115200, 57600, 38400, 19200, 4800, 2400, 1200, 300 or 110 Baud
	Data Sample	Records only the data between specified start (STX) and end (ETX) characters
<b>RS232 Output</b>	Transmission standard	RS232 compatible, 8 bits and no parity
	Transmission speed	9600 Baud (default) or selectable from 115200, 57600, 38400, 19200, 4800, 2400, 1200, 300 or 110 Baud
	Output rate	Normal Mode: 1 data record per 1 to 60 seconds – selectable Slave Mode: rate determined by input of RS232 data sample defined by STX and ETX
<b>Alarm Output</b>	Min output voltage	V <sub>OH</sub> =1.7V Typ @ 1mA output current
<b>Data Storage</b>	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	Normal Mode: 1 data record per 1 to 60 seconds – selectable Slave Mode: rate determined by input of RS232 data sample defined by STX and ETX
<b>Audible / Visual Indicators</b>	LED Indicators	Green: Ready to record data   Red: Power on , Writing data to SD card
	Audio Bleeper	Status alert
<b>Real Time Clock</b>	Accuracy	±40 ppm at 25 °C
	Backup battery	CR2032
<b>Power</b>	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, AWG 28 to 22 diameter conductors)
<b>Environmental</b>	Temperature Range	Operating: -25 °C to +70 °C   Storage: -40 °C to +70 °C
	EMC	CE marked - EMC directive 2004/108/EC   FCC/CFR 47: Part 15:2004
<b>Guarantee</b>	Period	1 year

The manufacturer reserves the right to amend the specification and therefore the information in this document may be subject to change.

### Example Application

