

## INTRODUCTION

Our AntiLog product range is the ideal way to record all of your RS232 serial port data without requiring PCs, laptops or other bulky hardware. These simple to use, world class data logging solutions can log up to two completely independent channels of serial port data simultaneously even at extremely demanding data rates. In addition, they can log selected digital inputs, events, supply voltage and even the local environment for selected models.

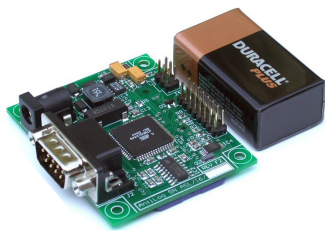


AntiLogPro Boxed

## BOXES AND OEM UNITS

AntiLog products are available as ready to use boxed units or single board OEM solutions to allow easy integration into customer applications. The original AntiLog design offers reference standard high levels of performance, but our latest AntiLogPro product design now offers exceptional levels of performance and extended logging flexibility including extensive multiple unit operation.

All boxed units have all you need to log data immediately. They can run from an external power source, or from an internal PP3 battery for maximum flexibility. Therefore you can log your RS232 data without the need for an external power source in remote locations.



AntiLog OEM

The OEM units need minimum connections to realise a fully functioning, high performance data logging solution with access to more features via their dedicated pin header connections. All AntiLog units are offered as standard with a battery backed real time clock solution.

AntiLogPro products have a rechargeable real time clock battery backup system on the main board, complete with a low power trickle charger.

## SIMPLE TO USE

For boxed units, simply press the 'On' button to start logging RS232 data. Press and hold the 'Off' button to stop logging. Repeat as many times as you like to append more data to the store – it's as simple as that!

For AntiLog OEM units purchased with the Forced Power 'P' option and for all AntiLogPro OEM units that have this option fitted as standard, you simply apply and remove power to start a new logging session and to stop a logging session.

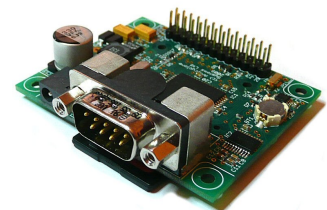
You hold the 'On' button down at power on and then it release it when a green LED lights to put the unit in its playback menu mode. In this mode, you can configure your unit exactly how you want it using an easy to use but comprehensive RS232 terminal menu system.

Recorded data can be replayed or upload to a PC, Laptop or other host machine of your choice. Data can even be played back in real time on up to two RS232 output channels simultaneously to simulate real equipment output.

## APPLICABILITY

The AntiLog V9.1 system software is available for all variants in the AntiLog product range. It uses the same easy to use terminal menu system to configure units. It runs on all boxed and OEM variants with extra features available on all OEM units and extended performance and features available for all AntiLogPro variants.

V9.1 running on AntiLogPro OEM hardware provides support for a third hardware auxiliary serial port. This port can be selected for



AntiLogPro OEM

record or playback or it can be dedicated to multiple unit operation. In the multiple unit mode, up to a theoretical maximum of 255 dual channel AntiLogPro OEM units can be combined together and controlled as one large multiple channel data logger, all controlled via a single serial port interface.

## APPLICATIONS

- Recording important civil or military GPS/GNSS receiver trials data on location.
- Logging output from equipment in ASCII, binary or any other format.
- Logging dual channel RS232 data at very demanding data rates.
- Monitoring traffic in both directions on an existing RS232 link.
- Recording two equipment outputs which need a common timestamp reference.
- Completely unattended data logging in remote locations.
- Recording data from equipment that needs to be polled for readings.
- Trials where important events can be logged using operator button pushes.
- Applications that require data to be collected by non-technical staff.
- Ideal for applications that do not have a local source of power for logging.
- Recording from a large number of data sources (AntiLogPro OEM multiple unit).
- Simultaneous local environment recording via supported sensors (AntiLogPro OEM).

## FLEXIBILITY

AntiLog can record ALL RS232 data transmitted by your RS232 data sources. It does not suffer from data resolution problems experienced by some other RS232 data logging solutions. You can also pre-select, sub sample, filter and time tag incoming data streams independently on the two available recording channels.

You can even transmit user defined commands to your equipment during record either by pressing the front panel buttons or have AntiLog automatically send commands at user defined rates (ideal for taking measurements from equipment which requires data polling).

A military option ('M') is available to add recording of military/government GPS receivers (e.g. ICD-GPS-153) and there is a GNSS Simulated Receiver Output ('G') option for all AntiLogPro units which can transmit up to two channels of simulated GNSS NMEA navigation data in real time, whilst still being able to log two channels of RS232 data.

## CONFIGURATION

You configure AntiLog for your needs using a serial port terminal program. Use the intuitive menu system you see on the terminal screen in playback mode to configure your unit. All settings are non-volatile so they won't be lost when power is removed. A comprehensive free terminal application (AntiTermPro) designed specifically to support the AntiLog product range is available from the Anticyclone Systems Ltd website ([www.anticyclone.co.uk](http://www.anticyclone.co.uk)).

The bootloader (standard on all units) allows the embedded software to be upgraded very simply to the latest release from plain text files which can be supplied over the Internet.

## ANTILOG V9.1 STANDARD FEATURE SUMMARY

All OEM and boxed (cased) AntiLog products are supplied with the following features as standard (see later for additional advanced AntiLogPro specific features):-

### General Features

- Cost effective, complete data logging solution.
- Single or independent dual port RS232 data logging available, all in one unit.
- Two serial ports available from front panel 9 way D connector with adapter cable.
- Fully unattended operation possible including automatic power and log file shut down.
- V9.1 supports up to 1TByte (1024GByte) of non volatile storage.
- At least 60 hours of recording time possible from a single PP3 Alkaline battery
- Extended operation possible with long life PP3 Alkaline cells.
- Dynamic battery health check via menu system with terminal load voltage report.
- Dynamic power management saves power when using slower baud rates.
- Can operate from an external DC power source from 4.5V (9.5V OEM-P) up to 18V.
- File system supports real time date and time tagging of session and event information.
- Media recovery feature for comprehensive data recovery.
- OEM product allows access to CMOS 3V3 RS232 UART levels (selected ports only).
- Built in system 'bootloader' to allow embedded software upgrades via any serial port.

### Recording Features (using original AntiLog hardware)

- Records ASCII, binary or any other data combination as standard.
- Can log 230,400 baud data at full rate (no handshaking required) with suitable media.
- Full rate data capture possible from two 115,200 baud data sources at the same time.
- Selected GPS/GNSS NMEA sentences can be logged using NMEA sentence filtering.
- Intelligent data frame sub-sampling for ASCII line formatted data sources (e.g. NMEA).
- ASCII line data can be time tagged with millisecond resolution.
- Binary data can be time tagged using 'N' byte time tagging mode.
- User equipment commands can be sent at user defined rates (equipment polling).
- Can log 'user events' during data logging using the 'On' and 'Off' buttons.
- Can log the logic state of selected digital inputs during record.
- 'EventIn' line can log logic edge transitions up to 200Hz with 1ms timestamp resolution.
- Ability to log the unit supply voltage against time (for power supply monitoring).
- Independent equipment polling and button event logging for both recording channels.

### Playback Features (using original AntiLog hardware)

- Full rate RAW playback available.
- 'Real time' playback (including dual serial port) to simulate original equipment output.
- Time shift to simulate live data (e.g. live time and date replacement in NMEA data).
- Playback can be synchronised to an external event input (wait on hardware pulse).
- Hexadecimal playback mode to display recorded data as an ASCII hexadecimal dump.
- Session headers and time stamp date and time can be embedded in output stream.
- ASLTx2 Data Transfer protocol built in for uploading recorded data to a host machine.

### Configuration Features (using original AntiLog hardware)

- Independently programmable transmit and receive baud rates from 300 to 460,800.
- User selectable parity, data bits per character (5 to 8) and stop bits.
- Independent non standard baud rate support per channel (e.g. 11,111 baud).
- Complete sets of user options can be saved with a name and recalled for later use.
- Up to four user equipment commands can be stored for output during record mode.
- Time transfer function to accurately transfer time and date to another AntiLog unit.

### ANTILOGPRO V9.1 ADVANCED FEATURES SUMMARY

The following additional features are available when running V9.1 on AntiLogPro hardware:-

- Baud rates from 600 to 921,600 baud.
- Able to log two 921,600 baud channels at full data rate at the same time.
- Selectable ring buffer data storage method to retain only the most recent data.
- Support for a third serial port (auxiliary port) on OEM variant.
- All RS232 input lines individually invertible to log logic as well as RS232 line signals.
- 9 digital states can be logged, including two on 9-way D connector protected to  $\pm 40V$ .
- Local temperature, pressure and humidity logging via supported I2C sensors (OEM only).
- Settings can easily be transferred from one unit to another via a NULL modem cable.
- 1 pulse per second output available on OEM variant for precise timing applications.
- Support for dual channel GNSS Receiver simulated output option (hardware Option 'G')
- Support for powering unit from 9-way D connector (hardware Option '1')
- Auxiliary port can be configured for multiple unit operation (OEM only).
- Status reported by two bi-colour status LEDs

### TAILOR MADE OPTIONS

AntiLog V9.1 provides an extremely comprehensive set of features as standard, but additional 'Option Packs' available from your AntiLog supplier extend the capabilities still further. Hardware options are only available from your AntiLog supplier, but software options can be installed after purchase using the built in bootloader application.



#### Hardware Option 'P': Forced Power

Available for AntiLog OEM units, standard on all AntiLogPro OEM units.

- Starts recording data as soon as power is applied.
- Power may be removed and reapplied at any time to append more data in sessions.
- Suitable for power sources in the range 9.5V to 18V.
- Can power up straight into playback mode rather than record mode if required.
- Can power up in playback mode based on the state of an "EventIn" digital input.
- 'On' and 'Off' buttons still function to record events and transmit equipment commands.
- Ideal for deeply embedded systems where user interaction is not possible or desired.

#### Hardware Option 'G': GNSS Simulated Receiver Output (AntiLogPro only)

Adds up to two channels of GNSS receiver simulated output whilst recording up to two channels of equipment data.

- Available as a factory fitted hardware option for AntiLogPro boxed or OEM units only.
- Simulate real time selectable GNSS NMEA output for a user supplied static location.
- Supports NMEA sentences from GPS, GLONASS, Galileo, BeiDou and integrated sources.
- Time stamps in sync with internal time stamping system (and 1PPS output - OEM only).
- Dual channel simulation selectable, each channel with it's own independent settings.

- Select which NMEA sentences you want transmitted per channel.
- You can still log two channels of data at the same time including full time stamping.

#### Hardware Option '1': Applying or receiving power from 9-way D, pin 1 (AntiLogPro only)

Simplify equipment installation with only a single connector to your AntiLogPro unit.

- Available as a factory fitted hardware option for AntiLogPro boxed or OEM units only.
- Available in two fixed configurations, power input or power output.
- Power input: Unit can be powered from pin 1. Single connector data logging solution.
- Power output: AntiLogPro power source supplied to pin 1 to power external devices.

#### Software Option 'M': Government and Military GPS receiver logging

- Includes all standard features available in AntiLog or AntiLogPro.
- ICD-GPS-150, ICD-GPS-153 (ICD-GPS-15x) data stream compatible.
- Two sources of ICD-GPS-15x data can be recorded at once with independent settings.
- LED flashes show when checksum validated message headers are being recorded.
- Time tagging of all IP messages available to millisecond resolution.
- Message 'autoconnect' feature to automatically request user selected message IDs.
- Automatically sends out acknowledgements in response to acknowledge requests.
- Button events, supply voltage and digital input lines can be inserted as IP messages.
- Compatible with RS232 output from SPGR, PLGR, DAGR and similar GPS receivers.
- Selectable 'Real time' playback of ICD-GPS-15x data which uses time tagged data.

#### Software Option 'X': Extended 'On' button Playback delay

- 'On' button delay required to activate playback mode extended from 1.75 to 5 seconds.
- Reduces chance of inexperienced users accidentally starting AntiLog in playback mode.

#### Software Option 'S': Security

- Adds user password protection for controlled access to the terminal menu system.
- Prevents unauthorised unit configuration, inspection or change.



**DON'T RISK LOSING YOUR IMPORTANT SERIAL PORT DATA!**

For more information please visit [www.anticyclone-systems.co.uk](http://www.anticyclone-systems.co.uk) or email [info@anticyclone.co.uk](mailto:info@anticyclone.co.uk)

*Detail may be subject to change without notice. Data applicable to AntiLog boxed and OEM products with embedded software release 9.1*

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