

**AD-32-16** is a board-based low speed general-purpose data acquisition and control system that can be embedded into any customised systems.

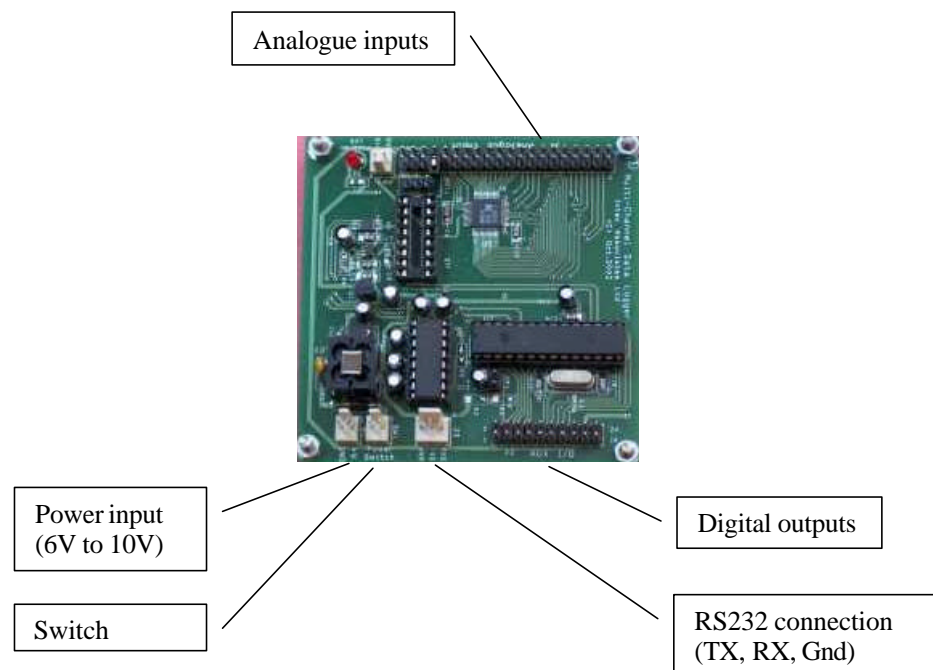
It features 32 analogue inputs (16-bit resolution) and 8 digital output lines. The system also has a 3-wire RS232 port through which the host system can talk with the module to read all analogue voltages and to set the logic statuses of outputs.

The system accepts three commands sent by the host system: (1) to read 32 analogue voltages in ASCII format, (2) to read 32 conversion counts, (3) to read analogue voltages in binary format, and (4) to set logic status of 8 digital outputs (optional).

## Specification

Number of input channels:	32 analogue voltage inputs
Input voltage range:	0 - 4.096V
Resolution:	16-bit (0.0000625V)
Accuracy:	+/- 0.1mV after calibration
Number of output channels:	8 channels
Output voltage range:	TTL level
Output current source and sink:	20 mA
Communication:	RS232 (TX, RX and Ground, no handshake)
Data packet format:	19200, n, 8,1
Input supply voltage:	5.5 to 10V DC
Power consumption active:	<10.0mA maximum

## Pin function



**Command set**

The AD card accepts three commands. Each command consists of one ASCII characters plus a Carriage Return.

<b>Command set (ASCII)</b>	<b>Descriptions</b>
T (uppercase) + <CR>	Tigger –To get 32 analogue inputs in ASCII format from channel 1 to channel 32. Each voltage is represent by 7 digits and reads micro volt ( $\mu$ V) and is ended with a Return (binary 13) and a Line Feed (binary 10).
C (uppercase) + <CR>	A/D counts - To get 32 analogue inputs in ASCII format from channel 1 to channel 32. Each count is ended with a Return (binary 13) and a Line Feed (binary 10).
B (uppercase) + <CR>	Binary - To get 32 analogue inputs in binary format (upper bytes and lower bytes) from channel 1 to channel 32.