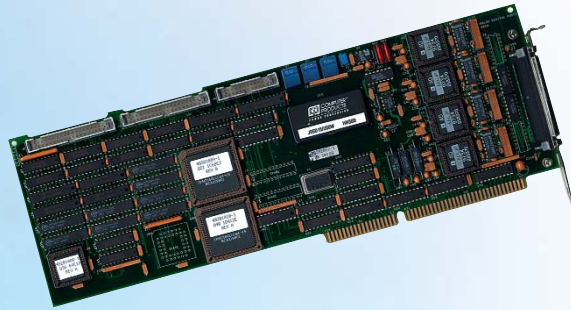


ANALOG & DIGITAL PORTS BOARD

ADP716-PC



L-3's Analog & Digital Ports board (ADP716-PC) is a convenient alternative to standalone instruments. It complements the Decom/Simulator board (DSM720) and the multi-function Telemetry I/O board (MFT733) in customizing your telemetry data acquisition system. Independently, it provides another tool for diagnostics and data redistribution.

The Analog & Digital Ports board is an ISA card that provides 16 analog and two 8-bit digital output ports — all of which are independently controlled. Analog outputs can drive strip chart recorders, oscillographs, and dials. Data is output in real time as it is received by the decom. The digital outputs can be used to output selected telemetry data in 8-bit or 16-bit parallel words, and can drive digital discrete outputs, control lamps, contact closures, and meters.

KEY FEATURES

- 16-channel, 12-bit digital-to-analog data conversion for strip chart recorders
- Independent analog and digital outputs
- Independent software-configurable output characteristics for each analog channel
- 10-word calibration sequence
- Outputs two sets of 8-bit or one set of 16-bit parallel digital data
- Can be set to output every word from the decom through the digital port
- 2 Mwords/sec throughput
- Full-speed 6th-order polynomial Engineering Unit conversion and scaling for analog output



Excellence You Can Measure

ANALOG & DIGITAL PORTS BOARD

ADP716-PC SPECIFICATIONS

Inputs

Decom data Selected decom data (binary, 2's complement, sign magnitude, offset binary) routed to analog ports for D/A conversion and/or routed to digital ports for output; supports up to 64 kword decoms; 8- to 16-bit data input

Outputs

Analog Output:
 Ports per module 16
 Range Each port independent; $\pm 10V$, $\pm 5V$, $\pm 2.5V$, 0 to 10V, 0 to 5V, software-selectable
 Resolution 12 bits
 Relative accuracy ± 4 least significant bit monotonic at all temperatures; ± 6 least significant bit for $\pm 2.5V$ and 0 to 5V ranges
 Linearity ± 1 least significant bit
 Output bandwidth 100 kHz per channel
 Output impedance 50Ω
 Maximum output current ± 5 mA (short circuit and over-voltage protected)
 Reset to 0V System reset or command
 Digital Output:
 Ports per module Two 8-bit ports or one 16-bit port
 Output strobe 250 μ sec pulse on update
 Output events 2 event lines indicate occurrence of selected parameter
 Format 8 or 16 parallel bits
 Drivers $\pm 25/-15$ mA TTL level

Processing

Process Any 12-bit to 12-bit look-up table per channel
 Function 6th-order polynomial with scaling and clipping
 Maximum throughput rate 2M parameters/sec
 Calibration 10-step sequence

Power Consumption

+5V supply 2.0 A max.
 +12V supply 0.1 A max.
 -12V supply 0.1 A max.
 Power dissipation 12.4 W max.

Physical Characteristics

Mechanical ISA-compatible board; requires one ISA slot
 Size Full slot
 Operating temperature 0° to 55° C
 Relative humidity < 90% (non-condensing)

Compatibility

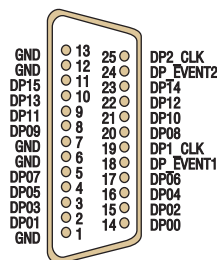
VTS Software
 Windows 2000, XP

Ordering Information

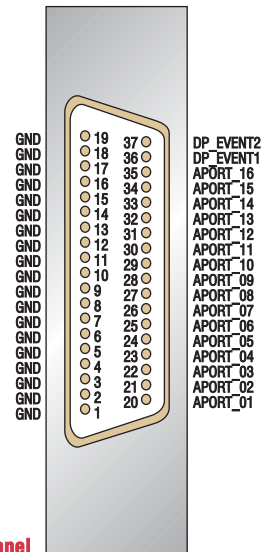
ADP716-PC ISA Analog & Digital Ports Module (16 Channel DAC)

Connector Pin Assignments

Analog output is through a standard 37-pin D-type connector; digital output is through a standard 25-pin D-type auxiliary connector at the computer's rear panel. Connect the signals to your oscilloscope or strip chart recorder.



Auxiliary Connector



Rear Panel

Telemetry-West

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