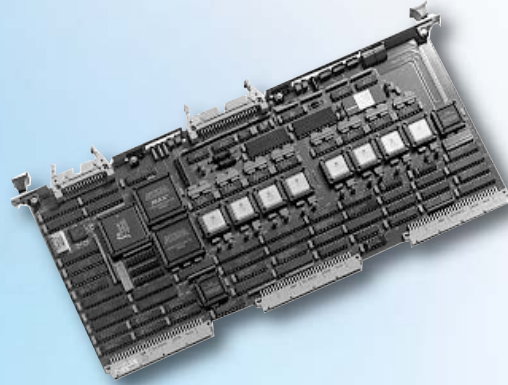


ADP572



The Analog and Digital Ports module provides 32 analog and two 16-bit independently controlled digital output ports. Analog outputs can drive strip chart recorders, oscillographs, and dials; digital discrete outputs control lamps, contact closures, and meters. The Avalon and System 500 data flow architecture permits modules to be added as necessary for an application (limited by the number of chassis in the configuration).

KEY FEATURES

- Converts 32-bit scalar or floating point digital to analog data
- Outputs two sets of 16-bit parallel digital data
- Offers real-time user-defined scaling and offset with powerful MIPS® R3000 RISC Processor, eliminating the need for intermediate processing and tags
- Automatically calculates first-order scaling arguments, reducing data entry
- Offers independent and software-configurable output characteristics for each analog channel and digital word
- Mounts directly in panels
- Works with Time Code Decoder/Generator module to correlate strip chart output to time
- Steps through a 5-word calibration level sequence from DAC Calibration Parameter algorithm to calibrate strip charts and oscillographs

Excellence You Can Measure



ANALOG & DIGITAL PORTS

ADP572 SPECIFICATIONS

Inputs

MUXbus II Data Selected prime or processed data (binary, 2's complement, IEEE floating point) routed to analog ports for D/A conversion and/or routed to digital ports for output

Outputs

Analog Output:
Ports per Module 32
Range Each port independent; $\pm 10V$, $\pm 5V$, $\pm 2.5V$, 0 to 10V, 0 to 5V, software selectable
Resolution 12 bits
Accuracy ± 1 least significant bit monotonic at all temperatures; ± 2 least significant bit for $\pm 2.5V$ range
Linearity $\pm \frac{1}{2}$ least significant bit
Slew Rate 10V/ μ sec. minimum
Settling Time to .01% 10 μ sec, typical
Output Impedance 50 Ω
Maximum Output Current ± 20 mA (short circuit protected)
Reset to 0V System reset or command
Max. Throughput Rate 100K parameter/sec max per analog port; 400K parameter/sec per module throughput across all 32 analog ports

Digital Output:

Ports per Module 2 (configurable as two 16-bit ports or as one 32-bit port)
Trigger Presence of tag
Strobe 200 nsec on update, programmable polarity
Format 16/32 parallel bits
Drivers + 48/-15 mA
Max. Throughput Rate 1.5 x (400K - analog port rate) parameters/sec

Processing

Processor MIPS® R3000 IDT 79R3081
Function MX+B, with cutoff limit
Auto Calibration Software commands for single/multiple channel n-step auto calibration (i.e., 3-step); automatic DAC offset measurement

Functions

Converts discrete digital data to continuous analog output Outputs to strip chart recorders, oscillographs
Switches data from any input source to any output port PCM, disk, parallel, analog, 1553
Drives strip chart with time line With Time Code Decoder/Generator Module
Calibrates analog outputs with MUXbus II write algorithm Calibration of strip chart recorders, oscillographs

Program Setup

Keyboard and Mouse Fill-in-the-blank OSF/Motif™ displays aided by list-pick selections
ASCII Text File User-created description

General Requirements

Chassis Requirement 1 9U slot
Maximum per Chassis 15
Maximum per System Virtually unlimited
Power 5V @ 1.5 A, 15V @ 1.0 A, 15V @ 1.0 A
Rear Panel 3 slots (6 connectors)
Connector Type DB-25S (25-pin D shell)
Environment See System 550 Base System data sheet
Module Size 365mm (9U) x 160mm
Diagnostic Display 9 status LEDs: BRD_OK, DTACK, MXDIS, SHIFT_IN, FFOVFL, DAC, DPA, DPB, ADC

Compatibility

Base 550 System Chassis (PR0550A, PR0550B)
Avalon System Chassis (AVALON-R)
SWA500 Applications Software
VISTA Software

Ordering Information

ADP572 Analog & Digital Ports Module (32 Channels)

Telemetry-West

9020 Balboa Avenue
San Diego, CA 92123-3507
858.694.7500 800.351.8483
Fax: 858.279.0693
www.L-3Com.com/TW



Telemetry & RF Products