

DATA ACQUISITION SYSTEMS

Instruments for Measurement and Control

HP 3852A

Serial Interface

HP 44789A

Directly provides:

- Serial programming port for the HP 3852A
- Control port for RS-232 or RS-422 devices

The HP 44789A Serial Interface allows you to:

- Interface your computer to the HP 3852A using RS-232 or RS-422 devices
- Locate the HP 3852A long distances from your host computer
- Control RS-232 or RS-422 devices directly from the HP 3852A
- Program the HP 3852A from a remote terminal

Specifications

Baud Rates: 300, 600, 1200, 2400, 4800, 9600, and 19200

Interrupts: Special character, buffer conditions, carrier detect, ring indicator, and receiver error conditions

Handshake: None, XON/XOFF, or hardware

Buffer Size: User-defined up to 8 KB on both transmitter and receiver

Arbitrary Waveform Digital-to-Analog Converter

HP 44726A

Directly outputs:

- Arbitrary waveforms
- dc voltages (2-channel, non-isolated)

The HP 44726A Arbitrary Waveform D/A Converter:

- Provides a stimulus voltage signal with a step rate of up to 800 kHz
- Gives you random-access memory (RAM) for each channel on this accessory

Digital-to-Analog Converter

HP 44727A/44727B/44727C

Directly outputs:

- dc voltage
- dc current

Simplify your test setup by providing test or control of devices with one data acquisition control system.

Specifications

dc Voltage:

Ranges: 0 to +10.235 V or -10.235 to +10.235 V

Resolution: 2.5 mV (12 bits plus a sign for bipolar range)

dc Current:

Ranges: 0 to +20.16 mA or +4 to +20.16 mA

Resolution: 2.5 μ A (13 bits)

3-Channel Stepper Motor Controller

HP 44714A

Directly provides:

- Stepper motor control signals
- Limit inputs
- Built-in quadrature counters
- Pulse output

The HP 44714A 3-Channel Stepper Motor Controller lets you:

- Completely control three stepper motors with one module
- Use the module as a pulse generator

8-Channel LVDT Signal Conditioner/Multiplexer

HP 44736A Opt H05

Directly provides:

- Conditioning/multiplexing for up to 8 LVDTs
- Independent excitation source for each transducer
- Independent demodulation circuits for each transducer
- Fast FET multiplexer scanning of demodulator outputs
- Analog output for each demodulator at terminal block

The HP 44736A will help you:

- Simplify your data acquisition system configuration
- Reduce your cost per channel

5-Channel Counter/Totalizer

HP 44715A

Directly provides:

- Count measurements
- Frequency measurements
- Period measurements
- Interrupts

Reduce your costs by taking advantage of this frequency counting versatility.

Digital Inputs with Totalize and Interrupt

HP 44721A/44722A

Directly provides:

- Logic readings
- Totalize count measurements
- Interrupts

Conveniently read a variety of digital values in your system.

32-Channel High-Speed Digital Sense/Control

HP 44723A

Directly provides:

- High-speed digital input and output
- Triggered input and output
- Interrupts
- Output handshaking

The HP 44723A allows you to:

- Input 16 channels or output 16 channels over 150,000 times per second
- Capture and load 16-bit patterns with external triggers
- Interrupt on any input channel on any transition or on a user-specified 16-bit pattern

16-Channel Digital Output

HP 44724A

Directly Provides Open Drain Digital Outputs

The HP 44724A gives you convenient control of dc devices or logic levels.

Open drain outputs are used to control dc devices of up to 55 V, or drive TTL logic levels. An external power supply and external pull-up resistors are required.

Switching

HP 44725A/44728A/44729A

Directly switches:

- Voltage
- Current
- Power

Reliably switch the voltage, current, or power you need.

Binary Mode Software

HP 44790A

HP 44790A Binary Mode Software is a collection of subprograms used to access high-speed opcodes within the HP 3852A. It helps system programmers increase the run-time speed of data acquisition functions up to *five times* over standard high-level commands. The software is written for the professional programmer familiar with opcode programming. HP systems engineers can provide consulting services for those unfamiliar with this type of programming.

System Requirements

Binary Mode Software requires HP 3852A firmware Rev. 3.5 or later. It is supplied on a 3 $\frac{1}{2}$ -in single-sided disk. The subprograms are written in HP BASIC in modular form, so they can be ported to other languages.

HP-IB Controller

HP 44788A

Directly controls:

- HP-IB disk drives (CS80/SS80)
- HP-IB printers
- HP-IB instruments

The HP-IB Controller lets you:

- Conduct remote operations without a computer
- Load subroutines at power-up into an HP 3852A from an HP-IB disk drive and start executing the subroutines
- Send data to an HP-IB disk drive without using a computer
- Print out data stored in the HP 3852A without using a computer
- Control other HP-IB instruments directly through the HP 3852A

32-Channel Isolated Digital Input/Interrupt

HP Z2204A

Directly provides:

- Logic readings
- Positive and negative interrupts
- Change of state interrupts

2 sets of three handshake lines usable for banks of 16 or 32 channels (Strobe In, Ready for Data, and Interrupt Out)