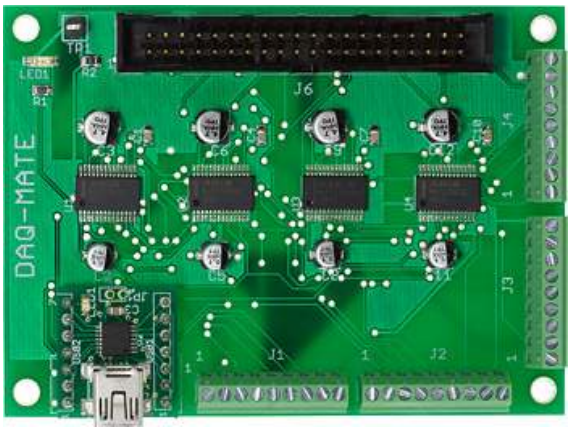
overton INSTRUMENTS

DAQ-MATE

32-CH DATA ACQUISITION MODULE



- 32 12-bit A/D channels
- 100Ksps sample rate
- Programmable inputs (32 SE, 16 Differential)
- 4 Programmable Input Ranges (0-5V, 0-10V, ±5V and ±10V)
- USB interface or embedded control
- Compact size & Low cost

USB UNIVERSAL SERIAL BUS

MARCOM-01-2009-06-12-OI

DESCRIPTION

The DAQ-MATE offers an impressive 32-channels of analog data acquisition, including 12-bit resolution (and a sample rate of 100ksps). In addition each channel can be independently programmed for either single or differential-ended operation, and 4 different input ranges (0-5V, 0-10V, ±5 and ±10V).

Many test solutions can be quickly built by connecting the DAQ-MATE to a PC laptop or desktop, and then running our GUI software. No external power source is required, since power is supplied through the USB interface. Easy access to the hardware is made available through a convenient collection of screw terminal connectors.

There are two options for controlling the DAQ-MATE (with a Host PC or embedded microcontroller). In the case of the PC, the DAQ-MATE is connected by a USB interface and responds to a simple set of ASCII commands. Programming is easy using Visual BASIC, LINUX, C/C++, LabView, LabWindows or any language that allows access to through a serial port. For embedded operation, the DAQ-MATE uses a standard OI interface to allow external control by most popular microcontrollers (i.e., ARM, PIC, Atmel or STAMP).

Try combining the DAQ-MATE with other test instruments (such as the Freq-MATE 'frequency generator', Power-MATE 'programmable power supply', Relay-MATE 'signal switching' and others). Use our ETS Series products to build unlimited test solutions quickly, confidently and affordably.

SPECIFICATIONS

Analog Inputs	
Number of inputs	32 SE, 16 Differential
Input Ranges	0-5V, 0-10V, ±5V, ±10V programmable
Max Sample Rate	100ksps
Nonlinearity	±1LSB, no missing codes
Input Control	
Embedded	Oi-Bus interface
USB Interface	Optional USB module
General	
Power Supply	+5VDC±10%@30mA
Operating Temp	0-50ºC
Dimensions	3.0" x 3.5"

ORDER INFORMATION

Part No.	Description
ETS-0800-00	DAQ-MATE, 32-CH DATA ACQUSITION MODULE
ETS-0801-00	DAQ-MATE with USB-MATE, USB Interface Module

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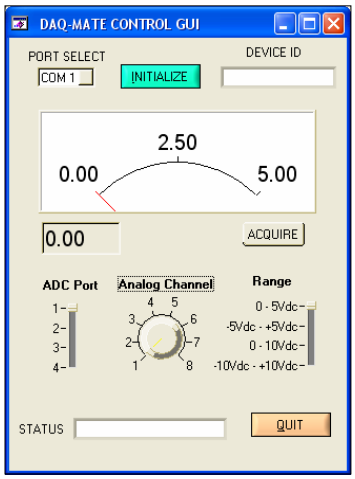
ETS SERIES

The DAQ-MATE is part of a new-breed of test instruments called the **ETS Series - EMBEDDED TEST SOLUTIONS**. The ETS Series was born out of a determined effort to reduce the high-cost of test. In addition, we built-in many features that enhance the development of custom "automated" test equipment. Like the name implies, the ETS Series' instruments are designed for "embedded" operation. Applications include Mechanical Test Fixtures, Burn-In Test Equipment, custom Desktop Test Instruments and conventional ATE Systems. In each case, the ETS series delivers a whole new level of control performance and cost-efficiency.

CUSTOMER SUPPORT

To ensure our customers receive the maximum benefit our products have to offer, we have prepared an extensive collection of support tools, technical manuals, application notes and programming examples. These items (and more) are conveniently located on our website. In addition, every one of our instrument modules comes with a Virtual Instrument Panel (or GUI). The DAQ-MATE GUI is presented on the right. It is by far the simplest way to get familiar with our product functionality. Just connect the DAQ-MATE to a PC (via the USB interface) and run the GUI software.



OTHER INSTURMENTS

Embedded Test Controller	
Mini-MATE ETS-0100-00	The Mini-MATE is the first embedded controller specifically designed to bring low-cost automation to Production Test equipment. The Mini-MATE comes loaded with a high-performance processor, 32K of SRAM and 30K of Flash ROM (data and program memory), 50 Digital I/O lines and a high-speed serial RS232 communications port. The bottom section of the board provides ample prototype area to house custom circuits and provide an interface for controlling our Embedded Test Instruments. The Mini-MATE comes fully assembled and ready to use. Just connect to your PC's serial port, apply power and start developing.
Analog Signal Acquisition & Control	
DVM-MATE ETS-0400-00	The DVM-MATE is a complete 4.5 digit, DC Voltmeter that is used to make precise voltage measurements over an extended range. The DVM-MATE has 4 software selectable ranges (±500mV, ±5V, ±50V, and ±500V), and a full scale accuracy of 0.01%.
DAQ-MATE ETS-0800-00	The DAQ-MATE is a high speed 32-channel analog acquisition module. On each channel, the DAQ-MATE can be programmed to acquire either unipolar or bipolar measurements: 0 – 5Vdc, 0 - ±5Vdc, 0 – 10Vdc & 0 - ±10Vdc.
Check-MATE ETS-1800-00	The Check-MATE is complete Data-Acquisition module. The Check-MATE includes a 8-ch 12-bit ADC, a 12-bit DAC and 8-bits of Digital I/O.
Signal Switching Solutions	
Relay-MATE ETS-1300-00	The Relay-MATE offers eight independent channels, FORM-C, 1Amp general purpose relays.
Switch-MATE ETS-1400-00	The Switch-MATE offers eight independent channels, Form-A, 10 Amp general purpose relays.
MUX-MATE ETS-1500-00	The MUX-MATE is a high-performance signal switching module. Multiple MUX-MATE's can be "stacked" together and used with the DVM-MATE to form a precision voltage scanning solution.
Digital Input/Output	
DIO-MATE ETS-0900-00	The DIO-MATE is a basic Digital I/O module that can provide up to 48-bits. All of the 48-bits are fully programmable.
Data/Tele Communications	
COM-MATE ETS-1100-00	The COM-MATE (232), is a serial communications expansion module. The COM-MATE (232), provides up to four, RS-232 com ports to support testing multiple serial devices.
DUT Power Control	
DUT-MATE ETS-0700-00	The DUT-MATE is unique 5-function module that is designed to deliver safe power to the device-under-test.
Signal Counters & Generators	
FREQ-MATE ETS-0600-00	The Freq-MATE is a programmable frequency counter capable of measuring frequencies from 1hz to 100Mhz, with 9-digits of resolution.

FOR MORE INFORMATION

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DAQ-MATE

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In the diagram below, the Micro-MATE is used to automate a complete Functional Test sequence. The DUT (device-under-test), is a PCB which contains both analog and digital circuits. A Mechanical Test Fixture (MTF), is used to support the DUT on a bed-of-nails test platform, and to also house the Micro-MATE and the Test Instrument Modules (which includes the DUT-MATE, **DAQ-MATE**, COM4-MATE and the TCI-MATE). Power to the DUT is controlled by the DUT-MATE module. The DAQ-MATE is used to provide abundant ADC circuits to capture DUT analog outputs, while the COM4-MATE provides a communications link (and other system functions). The Operator Interface is provided by the Universal Test Control Panel (which is mounted to the front panel of the MTF), and driven by the TCI-MATE. Finally, program development is greatly accelerated through the use of TES-MATE, Test Executive Suite. TES-MATE is a standard software library that is designed to manage and support all facets of a typical "Go/No-Go" test process.