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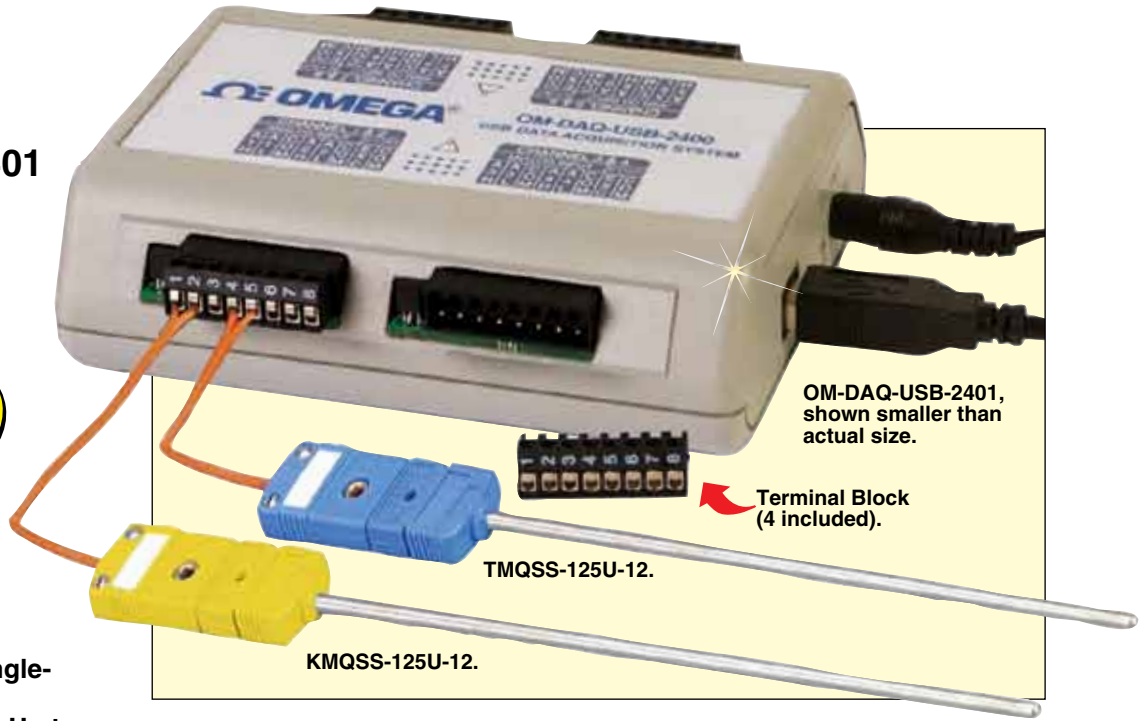
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8/16-Channel Thermocouple/Voltage Input USB Data Acquisition Module

OM-DAQ-USB-2401

1 YEAR WARRANTY

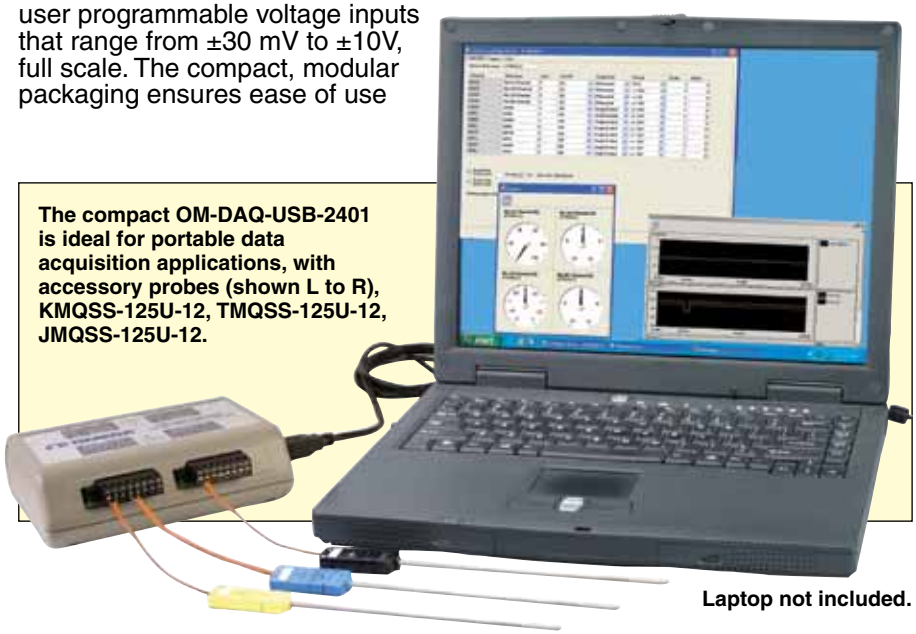
FREE Software for Configuration, Logging, Charting and Real-Time Display of Data Available for Download from OMEGA



- 8 Differential or 16 Single-Ended Analog Inputs
- 24 Bit Resolution with Up to 1000 Samples/Sec
- User Programmable for Type J, K, T, E, R, S, B, N Thermocouple or Voltage Input
- Built-In 4 Cold Junction Compensation Temperature Sensors and Open Thermocouple Detection
- Powered Directly by USB Port or External DC Power Supply
- 500 V Isolation Between Input and PC For Safe and Noise-Free Measurements
- FREE.NET API/Driver for Visual Basic, C#, and Visual C++ for Windows XP, Vista and Windows 7 Available for Download from OMEGA
- Provides +12 Vdc Output for Sensor Excitation
- Includes Hardware for Benchtop, DIN Rail or Wall Mounting

The OM-DAQ-USB-2401 is a USB 2.0 full speed thermocouple/voltage input data acquisition module (fully compatible with both USB 1.1 and USB 2.0 ports). This stand-alone module draws power from the USB port to operate. An external power supply (optional) can be used. All configurable options (including individual channel input type and range) are software programmable. The OM-DAQ-USB-2401 has user programmable voltage inputs that range from ±30 mV to ±10V, full scale. The compact, modular packaging ensures ease of use in a variety of applications. Units can be DIN rail or wall mounted with the included hardware or easily operated on a bench. All analog input channels can be measured sequentially at about 1 ms per channel. A total of 1000 samples per second can be taken, divided across all active channels.*

***Note:** At highest scan rate, 1000 samples/sec ±1% with one channel on, ±5% with all channels on.*



The compact OM-DAQ-USB-2401 is ideal for portable data acquisition applications, with accessory probes (shown L to R), KMQSS-125U-12, TMQSS-125U-12, JMQSS-125U-12.

Laptop not included.

OMEGACARE Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales respresentative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

Specifications

GENERAL

Isolation: 500V from PC

External Excitation Output Voltage: 12 Vdc regulated, max total current output 67 mA

Power Requirements: Powered direct from USB port, max 500 mA, or from external 7.5 to 12 Vdc

Environmental: 0 to 50°C (0 to 122°F) 95% RH (non-condensing)

Operating Temperature: 0 to 50°C (32 to 122°F), 0 to 95% RH non-condensing

Storage Temperature: -40 to 85°C (-40 to 185°F)

Weight: 0.23 kg (0.5 lb)

Dimensions: 107 W x 128 L x 39 mm H (4.2 x 5.1 x 1.5")

Input Voltage Range: Software programmable on a per-channel basis differential/single-ended

-10	to 10V	-500 to 500 mV
-5	to 5V	-250 to 250 mV
-2.5	to 2.5V	-125 to 125 mV
-2	to 2V	-75 to 75 mV
-1	to 1V	-30 to 30 mV

TC Input Range

Type J: -18 to 1200°C (0 to 2192°F)

Type K: -129 to 1372°C (-200 to 2502°F)

Type T: -101 to 400°C (-150 to 752°F)

Type E: -184 to 1000°C (-300 to 1832°F)

Type R: 204 to 1768°C (400 to 3214°F)

Type S: 204 to 1768°C (400 to 3214°F)

Type B: 538 to 1820°C (1000 to 3308°F)

Type N: -129 to 1300°C (-200 to 2372°F)

TC Input

Thermocouple Accuracy: Typical, in very slow mode, 24 bit resolution

J = ±1.1°C
K = ±1.2°C
T = ±1.1°C
E = ±1.0°C
R = ±2.5°C
S = ±2.6°C
B = ±3.3°C
N = ±1.5°C

Cold Junction Compensation Accuracy: ±1.0°C

Analog Input Accuracy:

Differential Input: Typical, in very slow mode, 0.015% of reading +0.004% of range +10uV (exclusive of noise)

Single-End Input: Typical, in very slow mode, 0.05% of reading +0.01% of range +50uV (exclusive of noise)

USB Device Type: USB 2.0 (full-speed)

Device Compatibility: USB 1.1, USB 2.0

Power Supply: From USB or 9 Vdc universal adaptor (included)

DIN Rail Mounted for Rack Application: Optional

Open Thermocouple Detect: Automatically enable when a channel is configured for a thermocouple sensor



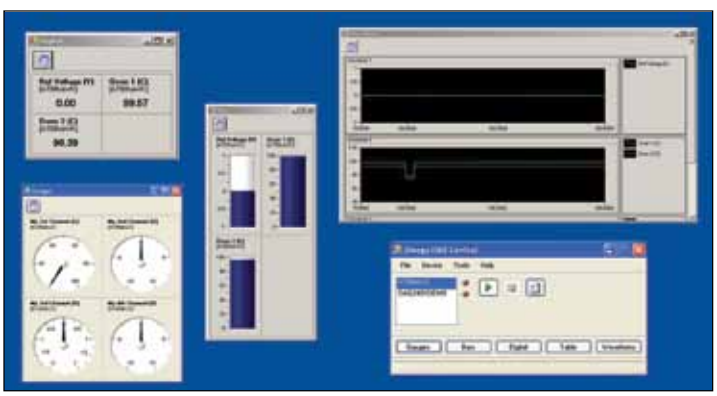
The OM-DAQ-USB-2401 comes complete with hardware for both DIN rail and wall mounting, both shown here.



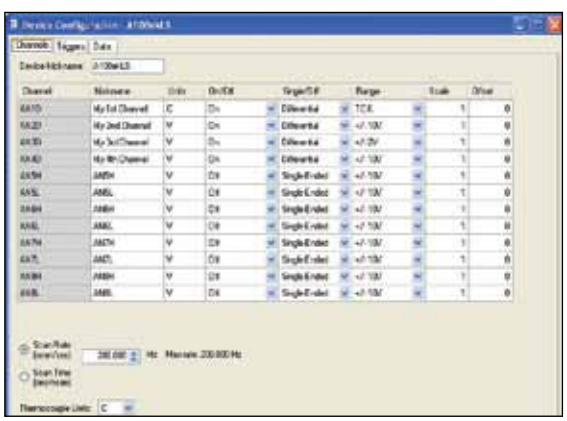
OMEGA® DAQ Central Software Device Controls

DAQ Central Software Available for Download from OMEGA®

DAQ Central is an easy-to-use software suite that allows charting, data logging, file storage and virtual instrument viewing of data in real time. Users can use the provided .NET driver for C#, Visual Basic and Visual C++ to design and develop their own application software.

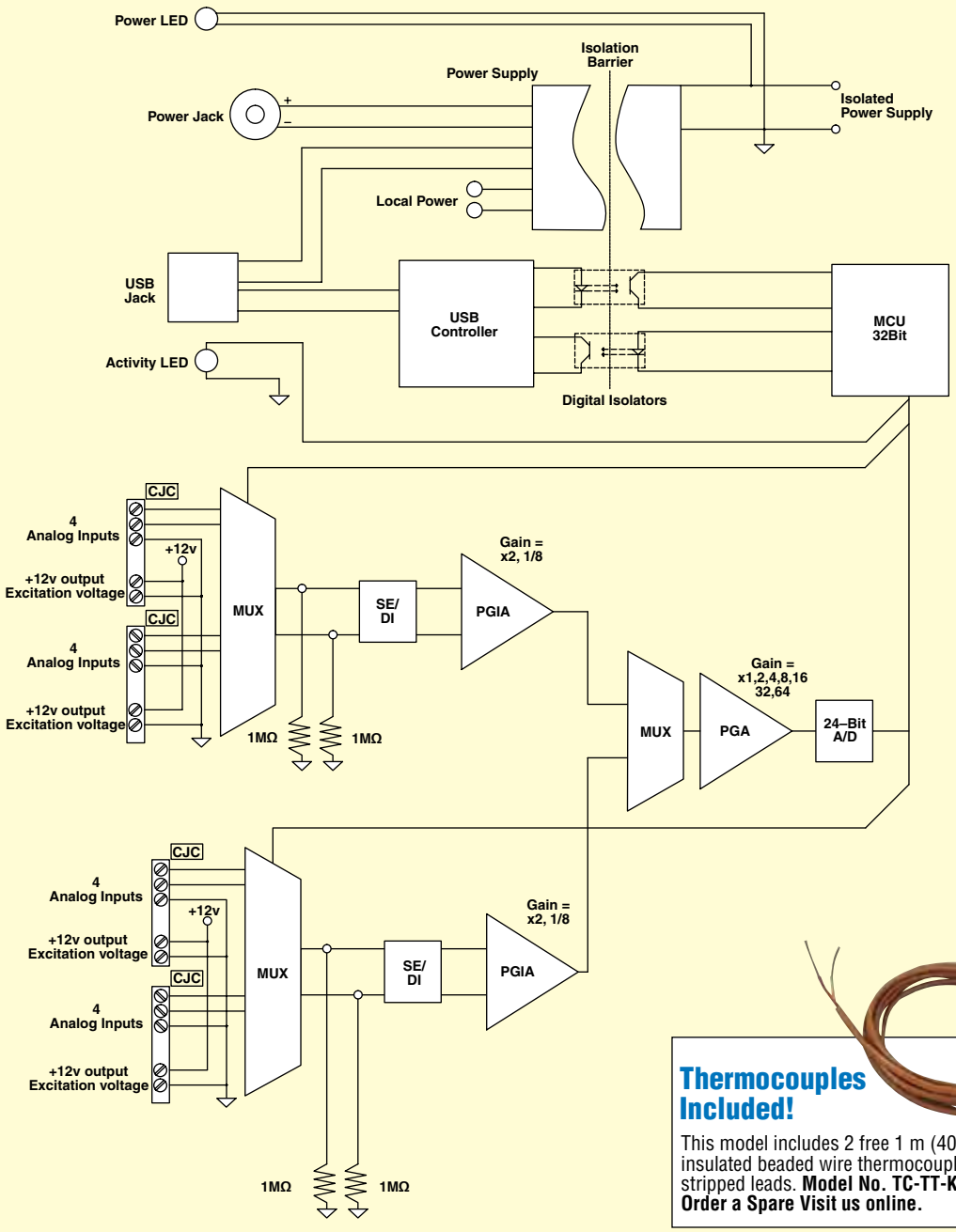


OMEGA® DAQ Central Software Data Displays



OMEGA® DAQ Central Software Configuration Screen

OM-DAQ-USB-2401 Series Block Diagram





Thermocouples Included!

This model includes 2 free 1 m (40") Type K insulated beaded wire thermocouples with stripped leads. **Model No. TC-TT-K-24-36, Order a Spare Visit us online.**

To Order

MODEL NO.	DESCRIPTION
OM-DAQ-USB-2401	8/16-channel thermocouple/voltage input USB data acquisition module
OM-DAQ-USB-CABLE	Spare 1.83 m (6') USB cable
UNIV-AC-100/240	Spare 9 Vdc universal power adaptor
OM-DAQ-USB-TB	Spare terminal blocks (pack of 4)

Comes complete with driver, quick start guide, USB cable, hardware for benchtop, DIN rail and wall mount, 4 terminal blocks, 9 Vdc universal power adaptor, OMEGA screwdriver, and 2 Type K thermocouples with stripped leads (TC-TT-K-24-36). Free DAQ central software available for download from OMEGA.

***Ordering Example: OM-DAQ-USB-2401**, data acquisition module and **OM-DAQ-USB-TB** spare terminal blocks.*

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