OMEGASOFT®

Software for OMB-DAQ-2400, OMB-DAQ-TC-RACK, OM-NET,
OM-USB, OM-WEB and OM-WLS Series Data Acquisition Modules

Rev. 6.51

OMB-DAQ-TC-RACK

OMB-DAQ-2416

OM-NET-1608

OM-USB-32DIO

Includes:
InstaCal™
Installation utility
TracerDAQ®
Ready-to-run DAQ application
Universal Library™
Windows® programming
libraries and examples
ULx for NI LabVIEW™
Drivers and examples
Hardware/User Manuals
and documents
System Requirements
Windows® 10/8/7/Vista®/XP

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SOFTWARE FOR
OMB-DAQ-2400,
OMB-DAQ-TC-RACK,
OM-NET, OM-USB, OM-WEB,
and OM-WLS SERIES
Data Acquisition Modules

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Getting Started with Omegasoft Software

Please read this booklet completely before you install your Omega Engineering software or device.

You can install Omegasoft Software from the CD on a computer running Windows® 10/8/7/Vista®/XP (32- or 64-bit).

Install the Omegasoft Software

To install the Omegasoft Software, complete the following steps:

1. Insert the installation CD and wait for the setup program to start.

All software packages are selected for installation if the requirements for the package are met.

2. Click **Install** and follow the instructions to install each software package.

Each selected software package is installed one after the other using separate installers, so make sure each installer finishes completely.

Next, install your device by following the instructions in the hardware user's guide so that it gets detected by Windows.

Getting Started with InstaCal

InstaCal™ is a software utility for installing, configuring, and testing Omegasoft Software devices. A supported Windows operating system is the only requirement for installing InstaCal.

Adding a Device

Once you launch InstaCal, how you add your device depends on the type of bus interface.

Adding Auto-Detected Devices

The following device types are automatically detected by InstaCal:

- OMB-DAQ-2400
- OMB-DAQ-TC-RACK connected by USB
- OM-USB
- OM-WEB
- OM-WLS

Select the devices to add on the **Plug and Play Board Detection** dialog box and click **OK**.

Each added device is listed on the **PC Board List** and added to the InstaCal configuration file.

Manually Adding a Device

Complete the following steps to manually add OM-NET devices and OMB-DAQ-TC-RACK devices that are connected by Ethernet:

1. Select **Install**»**Add Board** to display a group of tabs.

2. Click on the **ENET** tab.

3. Select the device(s) to add and click **Add**.

Each added device is listed on the **PC Board List** and added to the InstaCal configuration file.

Configuring a Device

To configure a device with InstaCal, complete the following steps:

1. Select the device on the **PC Board List** and then select
   Install»Configure.

2. Configure the device and click **OK**.

InstaCal stores hardware configuration settings in a configuration file which
is read by other Omegasoft software when you run an application.

Note: Only one application program that calls the Omegasoft driver can
be running at a time. If the device is used by a Universal
Library™ program, device configuration changes can only be
made when the program is not running.

Testing a Device

The tests available with InstaCal depend on the features of the device.

- If the device samples analog signals, select **Test**»**Analog** and follow the
  onscreen instructions to perform analog input tests such as a loopback test
  and a Scan test.

- If the device samples digital signals, select **Test**»**Digital**. to perform
  digital I/O tests such as an external DI test, an external DO test, an
  internal CTR test, and an external CTR test.

Calibrating a Device

If your device supports field calibration, complete the following steps to
calibrate it with InstaCal:

1. Select the device on the **PC Board List** and the select **Calibrate»A/D** or
   Calibrate»D/A.

2. Follow the onscreen instructions to calibrate the channels.

Getting Started with the Universal Library (UL)

The UL is an application development programming library for Omega Engineering devices that require one or more of these development languages:

- **Microsoft Windows languages:** Visual Basic and Visual C/C++
- **.NET languages**: VB .NET, C# .NET (Visual Studio® 2005 and later)

Most UL users detect and configure their hardware with InstaCal.

The UL API also includes functions and methods for detecting many types of Omega Electronics devices at runtime. You can use these features in addition to or instead of using InstaCal for detection and configuration.

UL example programs are installed by default to
Users\Public\Documents\Omega Engineering\DAQ for Windows OS except Windows XP. On Windows XP, the example programs are installed to Program Files\Omega Engineering\DAQ.

When you install the example programs, an *Examples* shortcut is added to the directory where you installed the UL. When selected, the directory containing the example programs opens in Windows Explorer.

   Note: Most UL example programs use API functions and methods to detect and configure hardware.

Getting Started with ULx for NI LabVIEW™

ULx for NI LabVIEW is a library of virtual instruments (VIs) and example programs used with National Instruments LabVIEW that requires the following software:

- InstaCal and UL
- NI LabVIEW 2010 or later
- Microsoft .NET Framework 2.0

Omega Engineering devices must first be detected and added to the InstaCal configuration file before they can be used with ULx for NI LabVIEW.

You can open a ULx for NI LabVIEW example program from its default installation directory (`Program Files\National Instruments\LabVIEW <version>\examples\ULx`) or with the NI Example Finder utility in NI LabVIEW.

Getting Started with TracerDAQ®

TracerDAQ is a virtual instrument application suite with strip chart, oscilloscope, function generator, and rate generator that requires the following software:

- Microsoft .NET® Framework 2.0 (installs automatically)
- DirectX 9.0c (installs automatically)
- InstaCal

TracerDAQ requires the following hardware:

- Video card with 16 MB of memory and support for Direct3D Acceleration
- Minimum screen resolution of 1024×768
- Computer with Pentium® 4 processor and 256 MB of RAM
- A Microsoft-compatible mouse
- A supported Omega Engineering device

Omega Engineering devices must first be detected and added to the InstaCal configuration file before they can be used with TracerDAQ.

Refer to the *TracerDAQ Help* (`TracerDAQHelp.chm`) for quick start examples of each TracerDAQ application – strip chart/data logger, oscilloscope, function generator, and rate generator.

Omega Engineering Hardware User's Guides

If you installed the Omega Engineering hardware user's guides, run InstaCal and select **Help**»**User's Guides**. Browse the folders to find your hardware user's guide.

Adobe® Reader® is installed with the user's guides if it is not already installed on the computer.

For More Information

InstaCal

For more information about InstaCal, refer to the readme files in the `\ICalUL` folder on the *Omegasoft Software* CD.

Universal Library

For more information about UL, refer to the *Universal Library Help* (`ULHelp.chm`). Use the **Search** tab in the help file to find information about the UL functions that your device supports.

ULx for NI LabVIEW

For more information about ULx for NI LabVIEW, refer to the *ULx for NI LabVIEW Help* (`lvulx.chm`).

TracerDAQ

For more information about TracerDAQ, refer to the *TracerDAQ Help* (`TracerDAQHelp.chm`).

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2. Model and serial number of the product under warranty, and	2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.	3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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