

# Ω OMEGA® User's Guide



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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 Universal  
Library Redistribution Guide**



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## Redistributing Applications created with the Universal Library

This document explains how to distribute applications developed using the Universal Library (UL). Developers wishing to redistribute the files associated with the Universal Library may do so only if they are not altered or edited in any way.

This document includes information on how to install the Omega Engineering device drivers and InstaCal under Microsoft® Windows® 10, 8, Windows 7, Windows Vista, and Windows XP. You can install the Omega Engineering device drivers and InstaCal configuration and support files using the Omega Engineering -provided installer or with a custom installer:

- **Omega Engineering installer** — include the Omega Engineering-provided installer on your distribution disk and either run it from your application installer or instruct the user to run it as a second step.
- **Custom installer** — have your installer create the Universal Library directory, install all the required files to that directory, modify the registry, and install the required drivers.

These instructions assume InstaCal has not been installed on the target computer.

### Using the Omega Engineering-provided installer

To install the InstaCal device driver, configuration files, and support files using the Omega Engineering installer, do the following:

1. Download `icalsetup.exe` from [ftp.omega.com/public/DASGroup/products/OMB-DAQ-2416\\_OM-USB](http://ftp.omega.com/public/DASGroup/products/OMB-DAQ-2416_OM-USB) and include it on your distribution disk with your application. `icalsetup.exe` is a self-extracting installer file.
2. Configure your installer to either run `icalsetup.exe` after installing your application, or prompt the user to run `icalsetup.exe` after installing your application.

In either case, `icalsetup.exe` should be run last, since it will prompt the user to reboot upon completion.

### Using a custom installer

You can use a custom installer to install the InstaCal device driver, configuration files, and support files. Creating a custom installer involves the following steps:

- Create the UL directory on the target system
- Update the windows registry
- Update the environment variables
- Install the hardware drivers with `DPIInst.exe`
- Reboot the computer

Details on each procedure are listed next.

### Creating the Universal Library directory on the target system

1. Configure your installer to create a folder for the Universal Library, and copy the following files to it. These files are the folder where you installed Universal Library on your development machine:

- |                             |  |
|-----------------------------|--|
| • <code>cbercode.txt</code> | • <code>MccDaq.dll</code>  |
| • <code>cbw32.dll</code>    | • <code>ReadMeUL.txt</code>  |
| • <code>cbw64.dll</code>    | • <code>ulprops.txt</code>   |
| • <code>DaqLib.dll</code>   | • <code>HIDRegUpdater.exe</code> (required when using Windows 8.1 and later) |
| • <code>DaqLib64.dll</code> |  |

Include the following files when using InstaCal:

• cbi_cal.dll	• inscal32.exe
• cbi_node.dll	• logo.bmp
• cbi_prop.dll	• ReadMe.txt
• cbi_test.dll	• vicomponents.ocx (must be self-registered)

2. Add the two subdirectories, "Drivers" and "Drivers64" to your installation media.

You can copy the Drivers or Drivers64 folders from the Universal Library CD.

Your installation program needs to run `DPInst.exe` from the appropriate folder (Drivers or Drivers64) to install the hardware drivers on the system; refer to *Installing the hardware drivers with DPInst.exe* on page 6 for more information.

## Updating the Windows Registry

Configure your installer to create the following registry keys:

**Note:** On 64-bit systems, these keys must be stored in the 32-bit branch of the registry.

- Create a new key named **ComputerBoards**:

```
[HKEY_LOCAL_MACHINE]\Software\ComputerBoards
```

- Create a new key named **Universal Library**:

```
[HKEY_LOCAL_MACHINE]\Software\Universal Library
```

- Create a new string key named **RootDir** and define its String Value as follows:

```
RootDir = C:\Program Files\Omega Engineering\DAQ
```

RootDir sets the location of the directory that contains `CBW32.DLL`.

## Windows 10, Windows 8, Windows 7, and Windows Vista

When running Windows 10/8/7 or Windows Vista, you must also create the following keys in the Windows registry:

- Create a new string key named **ConfigDir** and define its String Value as follows:

```
ConfigDir = C:\ProgramData\Omega Engineering\DAQ
```

ConfigDir sets the directory where the `CB.CFG` file is created when you run InstaCal.

- Create a new key named **Daqx**.

```
[HKEY_LOCAL_MACHINE]\System\CurrentControlSet\Services\Daqx
```

## Windows XP (32-bit)

If using older devices (such as ISA or PCMCIA devices), the legacy driver needs special handling. Note that this driver is not required for PCI or USB products, so this section can be skipped if legacy devices will not be used.

When running a 32-bit Windows XP system do the following:

- Copy the `cbul32.sys` driver to the `System32\Drivers` directory.

- Create a new key named **CBUL32**, and define the following values to include the `cbul32.sys` device driver:

```
[HKEY_LOCAL_MACHINE]\System\CurrentControlSet\Services\CBUL32
```

```
DisplayName = Omega Engineering DataAcq
```

```
ErrorControl = 1
```

```
Group = Extended Base
```

```
ImagePath = System32\Drivers\CBUL32.SYS
```

```
Start = 1
Type = 1
```

Note that `Type`, `Start`, and `ErrorControl` must be `DWORD` values, while the rest are string values.

## Updating the Environment variables

- Update the `Environment` variables (`Path` string) to include the directory containing `cbw32.dll`; to do this, add the following directory to the beginning of the existing string value defined for `Path`:

**Note:** The directory containing `cbw32.dll` is the same directory as the string value defined above for `RootDir`.

```
Path = C:\Program Files\Omega Engineering\DAQ;....
```

## Installing the hardware drivers with DPInst.exe

`DPInst.exe` is a Microsoft driver package installer file.

- The installer should launch `DPInst.exe` from the `Drivers` or `Drivers64` folder (now copied where the installer is located).

The installer automatically installs the files contained within the `Drivers` or `Drivers64` folder to the appropriate folders on the target computer.

- In the `Command line arguments` field, enter the following command-line switches: `/LM /F /SA /SE /SW`  
For information about these switches, refer to the Microsoft Developer Network.

## Reboot the computer

Configure your installer to reboot the system.

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