

LB3264 - LadyBug 32 / 64 Bit Bridge Brief

Background: The recent migration to 64 bit windows operating systems has created IO issues for users running 32 bit applications in 64 bit operating systems. Windows 64 systems will not allow 32 bit kernel level dll's to load; as a result WoW64 will not load 32 bit kernel level dll's. The Test and Measurement industry has many devices that are built around custom drivers. LadyBug provides 32 and 64 bit drivers, however LadyBug's 64 bit dll must be used on 64 bit systems and 32 bit programs cannot directly access the dll in those environments. LadyBug provides its LB3264 driver package to bridge the operating system bit-sizes.

It is important to note that Windows XP, 7 and 8 versions have all been sold in 64 and 32 bit word sizes. This issue relates to the Word Bit Size and not to the Windows version. Normal sensor operation should be verified by installing and running LadyBug's power meter application prior to working with LadyBug's 3264 Bridge.

To convert the data word-size, LadyBug has created a TCP/IP Socket Server. The server receives data from 32 bit applications via LadyBug's 32 bit special dll (LB_API2_32_64.dll). The server passes the newly converted 64 bit wide data stream to LadyBug's 64 bit dll (LB_API2.dll) which passes it on to the sensor. Data flows both ways of course. The Socket Server is an executable that must be launched prior to functioning. The Socket Server is launched and controlled by LB_API2_32_64.dll using the StartSocket and StopSocket instructions. Visibility and certain other items are controlled by data in the file lb_api_32_64.ini. By default, the socket has been left visible so that it can be seen and closed manually if necessary, the setting is located in the file lb_api_32_64.ini. The API calls are compatible with our standard LB_API2 interface so that changes to existing code are very minor. Additional documentation is provided with the socket server.

For LabVIEW users, drivers are provided in the LabVIEW download that automatically start the socket then stop it when the program is closed.