

Information Broker

What it is, why to use it, and how to integrate it

v1.0

INTRODUCTION

The Information Broker (IB) is an interface that allows the capture of driver, supplicant, and other software component debugs into a single interlaced log – time stamped and consistent. The use of this interface reduces the load on the host processor and file system, allowing for reduced overhead and more reliable log capturing.

The Information Broker improves on previous debugging methods in the following ways:

- Separate DLLs are not required to enable debug logging.
- All debug output is in the same location (typically LairdIBLog.txt in the root). This enables Support to more readily detect issues with multiple component interaction. It also requires that only a single file be collected by the customer.
- Writing the log data is no longer handled by each component. This reduces the number of timing issues within each component and reduces overall file system stress.

INTEGRATING THE INFORMATION BROKER

The following sections summarize how to integrate the Information Broker interface.

CAB Files

The IB is installed and enabled after the release CAB file is installed. However, on some more secure systems and most Microsoft Windows Mobile devices, it may be necessary to include the following registry entry.

- [HKLM\Software\Laird\IB]
LoadLrdIBS=dword:1

Note: If the IB is not active after the CAB install, review the requirements in the *Manual* section below.

CID

If the Information Broker is included using the CID, no additional steps should be required to begin using it.

Manual (zip)

Manual installation requires the OS builder to add the following entries to their platform build files:

- Registry settings – this key is required to load the Information Broker
 - [HKLM\Drivers\Builtin\Irdibs]
Dll="Irdibs.dll"
Prefix="IBS"
Index=dword:1
Order=dword:1
- BIB file settings

- Lrdibs.dll must be added to the OS image.

The following components are supported in current releases (with plans to add more):

- Driver
- Supplicant
- Sdc_gina
- Scutray

More information can be found in the [Laird Information Broker User Guide](#).

INFORMATION BROKER SETTINGS

Once the Information Broker has been included in the OS image, the following settings provide basic configuration of the Logger and other components.

- Registry setting example (level 3 driver output to a file; all other output is disabled)
 - [HKLM\Software\Laird\IB\Logger]
OutputDestination=dword:0
Driver=dword:3
Supplicant=dword:0
Global=dword:0
- Common settings
 - OutputDestination – A value of 0 results in log entries being sent to text file output. A value of 1 results in log entries being sent to platform debug output.
 - MaxLogSize – This is a dword value which represents the maximum log size; the default value is 1,048,576 bytes.
 - LogPath – String value which indicates the path for the log file; the default is root.

Note: Moving the file while in use does not result in a new log file being created.

- Components – Most components support four levels of output: 0 = off, 1 = low, 2 = medium, and 3 = high with 3 being the most verbose output level.
 - Driver – This value controls the driver output. It is similar to the previously used dbgLevel setting. There are additional driver specific zones that can be enabled using this value.
 - Supplicant – This value controls the supplicant output.
 - Global – The global value enables logging for all components at the set value. Note that this can get noisy.

The higher of the component and global value is used to drive debug output verbosity.

The [Laird Information Broker User Guide](#) provides details on the various configuration options.

- LCM configuration
 - The LCM debug setting globally configures the debug logging (sets the previously mentioned Global and OutputDestination keys).
 - Changes made using the LCM debug setting are applied dynamically; there is no need to reset the device or eject/insert the card for the new settings to take effect.

REVISION HISTORY

Version	Date	Notes	Approver
1.0	12 Feb 2016	Initial Release	Aaron Bowdle