User's Guide
SWRU435A–September 2015–Revised January 2016

WiLink™ WLAN gLogger Tool

This user's guide describes how to use the Microsoft® Windows®-based WiLink 6/7/8 WLAN gLogger tool, a software application that records messages from the WiLink WLAN firmware and develops, debugs, and monitors the WLAN IP.

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1 Requirements

1.1 System Requirements

The WLAN gLogger tool requires the following hardware and software:

- PC running Pentium® II (minimum requirements)
- Operating system: Windows 2000, Windows XP, Windows 7
- Access to WL_UART_DBG pin

Debug and calibration tools for WLAN and *Bluetooth*® require four UART ports. The most efficient way to drive these ports to the PC is to use a UART-to-USB converter (not included in the wireless tools package). TI recommends using the WL18XXCOM82SDMMC adapter with the TI WL1837MODCOM8I module or the WL1835MODCOM8B module on the COM8 board.

NOTE: Multiple UART-to-USB adapters are available on the market, such as the FTDI Chip™ development modules.

1.2 Configuration Requirements

The WLAN gLogger tool for the WiLink 8 WLAN NLCP package release requires the latest versions of the following configuration files:

- WiLink 8 WLAN firmware
- WL128x firmware:
  - wl128x-fw-4-mr.bin
  - wl128x-fw-4-sr.bin
  - wl128x-fw-4-plt.bin
- WL127x firmware:
  - wl127x-fw-4-mr.bin
  - wl127x-fw-4-sr.bin
  - wl127x-fw-4-plt.bin

The installation files are located in the directory named *Wireless Tools* at the installation path configured during installation. By default, the files are located at the following path:

C:\Program Files (x86)\Texas Instruments\Wireless Tools

NOTE: Throughout this document, the directory in which the installation files reside is referred to as the *Installation directory*.

2 Installation

The WLAN gLogger tool is part of the TI wireless tools package release. When the wireless tools package is installed, the gLogger icon is created in the Texas Instrument\Wireless Tools folder at Start→Programs and on the desktop (see Figure 1).

Figure 1. gLogger Icon

To start the WLAN gLogger tool, double-click the gLogger icon. The software initializes and displays the gLogger user interface window (see Figure 2).

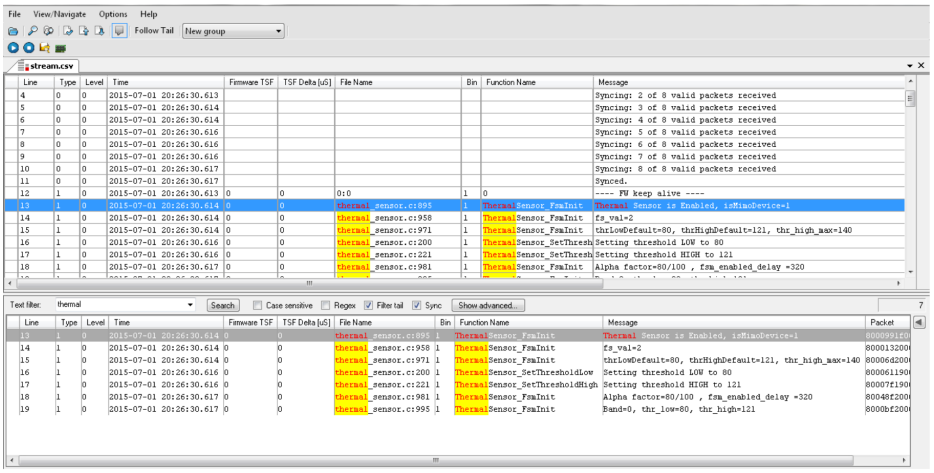

Figure 2. WLAN gLogger User Interface Window

3 Configuring WLAN gLogger for UART Mode

To configure the gLogger tool for UART mode, perform the following steps:

1. From the toolbar, open the Options menu and select Settings. The Settings window displays (see Figure 3).

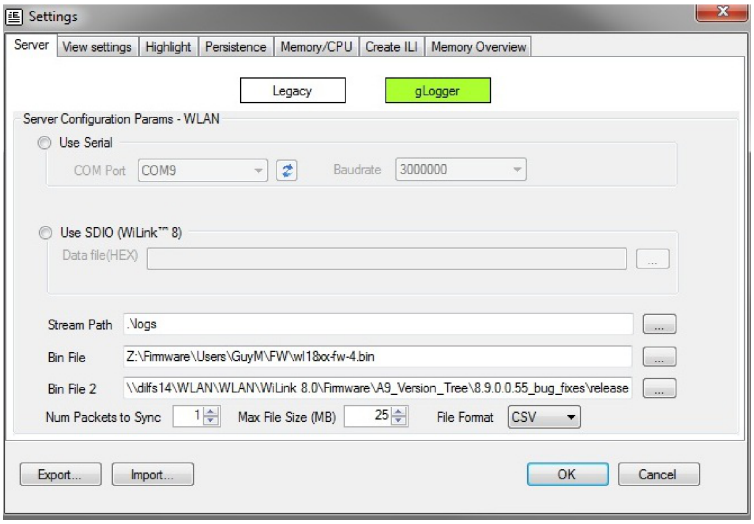

Figure 3. Configuring the gLogger for UART Mode

2. Click to highlight the gLogger button.
3. In the Server Configuration Params - WLAN area, click the Use Serial button and select the correct value from the COM Port menu.

NOTE: The UART logger COM port is usually the last COM port created.

4. Select the correct baud rate from the Baudrate menu:
   - WL127x and WL128x: Baud rate is 921600
   - WL18xx: Baud rate is 3,000,000 (default)
5. In the Bin File field, browse to the location of the firmware bin file that is running the target device and select the path. The bin file contains all debug, strings, asserts, and other information that the gLogger requires to parse the logs correctly.

NOTE: The selected bin file must be identical to the bin file running on the target device.

6. The Max File Size (MB) field is set to 25MB by default. This parameter limits the maximum size of a log file. When the maximum limit is reached, a new log file is created.

4 Configuring WLAN gLogger for SDIO Mode

To configure the gLogger tool for SDIO mode, perform the following steps:

1. Configure your platform to run with gLogger over SDIO as follows:
   (a) Update the wlconf file on your platform to enable FW logger over SDIO.
   - Static: In the wlconf file, change the Logger output to SDIO as follows:
     ./wlconf -i *wlconf.bin file* –o *wlconf.bin file* –s core.fwlog.output = 2
   - Dynamic: use the debugfs to switch from UART to SDIO (and SDIO to UART).

     NOTE: To enable dynamic operation, the gLogger must be enabled with UART/SDIO (core.fwlog.output = 1 or core.fwlog.output = 2).

     – UART configuration:
       echo 1 > /sys/kernel/debug/ieee80211/phy0/wlcore/fw_logger
     – SDIO configuration:
       echo 2 > /sys/kernel/debug/ieee80211/phy0/wlcore/fw_logger

   (b) Run the wl_logproxy application as follows:
   ./wl_logproxy 1555 /sys/devices/ocp.3/47810000.mmc/mmc_host/mmc0/mmc0:0001/mmc0:0001:2/wl18xx.0.auto/fwlog /usr/share/wl18xx/fwlogs/ 10000000 &
   where:
   - Blue text is the location of the system file (the example shows the file for the AM35x device).
   - Green text is the location of the saved logs (the folder is not created by default).
   - Orange text is the maximum size of the logger file in (TI recommends a file size of less than 1,000,000 bytes).

NOTE:
- Each log is marked with a timestamp denoting when the log is last saved.
- The only log without a timestamp is the current log to which the application writes.

2. From the toolbar, open the Options menu and select Settings. The Settings window displays (see Figure 4).

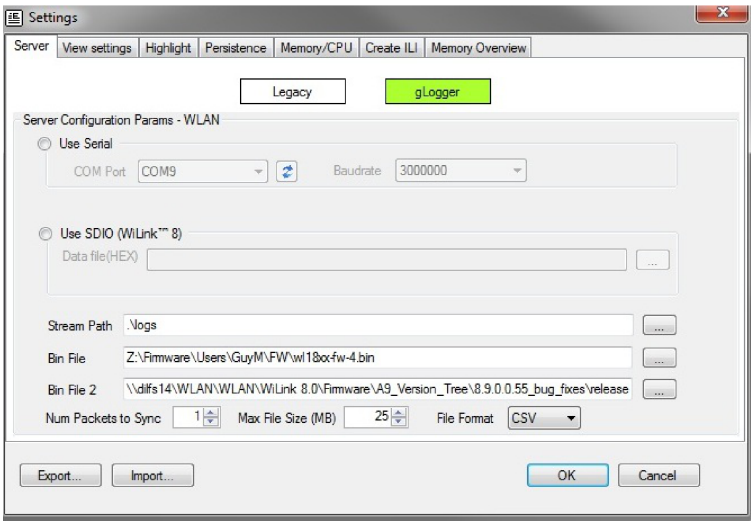

Figure 4. Configuring the Logger for SDIO Mode

3. Click to highlight the gLogger button.
4. In the Server Configuration Params - WLAN area, click the Use SDIO (WiLink™ 8) button and select the log file generated on the platform.
5. Load the log file and click OK.

5 More Information

5.1 General

- To start the gLogger, press the Play icon.
- To stop the gLogger, press the Stop icon.
- To view old logs, click the Open Logs Directory icon.
- To load and parse a binary log file, click the Open Raw Log, select the binary log file path, and then select the bin file path.
- To clear the window while the gLogger is connected to the device, press Ctrl+n.

5.2 Searching and Filtering

- Press F4 to display the search tab.
- Search for strings or regular expressions on the open log file (see Figure 5).

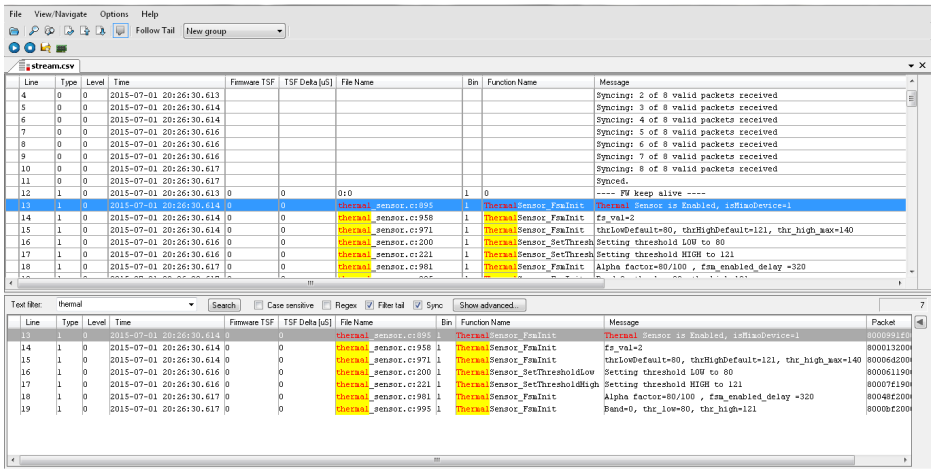

Figure 5. Searching and Filtering

- To search multiple strings, check the Regex box and type the requested strings with an OR operator in between as follows: *string1*|*string2*.

5.3 Coloring and Highlighting

To color and highlight strings and expressions, perform the following steps:

1. From the toolbar, open the Options menu and select Highlights and Triggers. The Hilighting and action triggers dialog box displays (see Figure 6).
2. Add strings or regular expressions that, if matched, will be highlighted or colored.
3. Move the selected field up to increase priority. New items are always added to the end of the list and have the lowest priority.

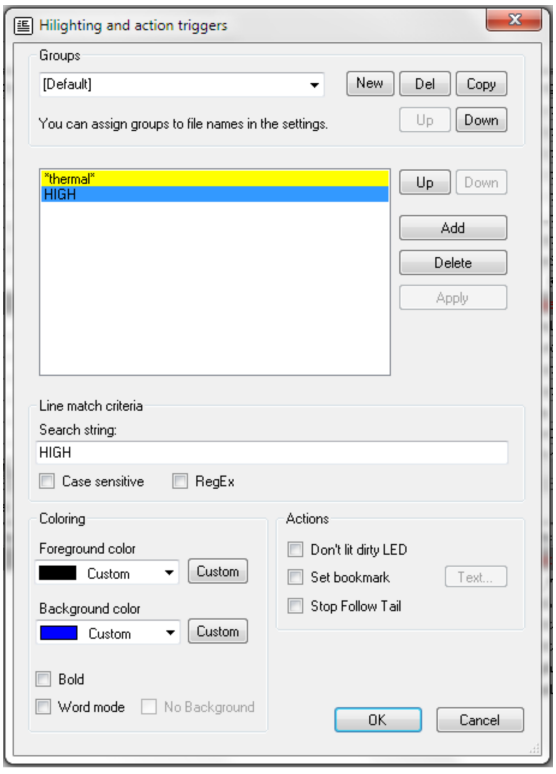

Figure 6. Hilighting and Action Triggers Dialog Box

5.4 Bookmarking

Create bookmarks manually by pressing Ctrl+F2, or automatically by setting a rule in the Hilighting and action triggers dialog box.

Figure 7 shows an example of bookmarking on the gLogger user interface window.

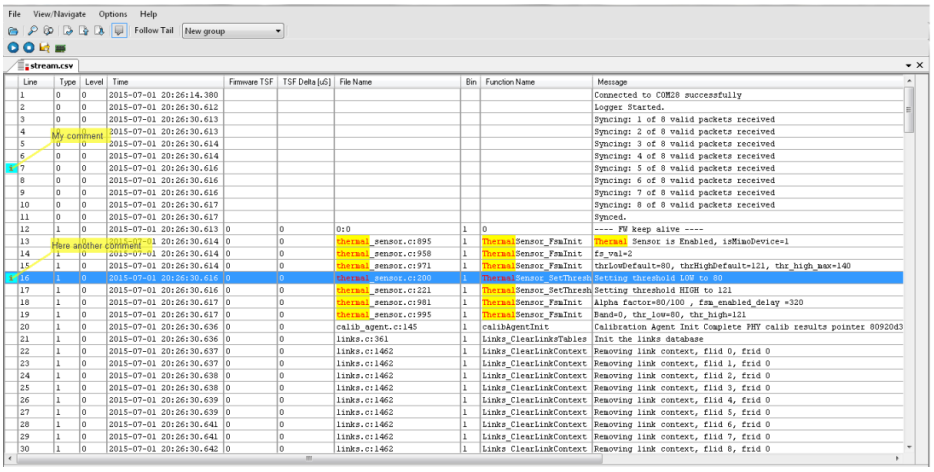

Figure 7. Bookmarking on gLogger User Interface Window

Terms and Abbreviations

Table 1 lists terms and abbreviations.

Table 1. Terms and Abbreviations

Term	Description
BD_ADDR	*Bluetooth* device address
BER	Bit error rate
BT	*Bluetooth*
HCI	Host controller interface
Host/host PC	A PC connected to the device through the serial port
LMP	Link manager protocol
LQM	Link quality monitor
PER	Packet error rate
RF	Radio frequency
RSSI	Received signal strength indication
SW	Software
VS	Vendor-specific

Revision History

Changes from Original (September 2015) to A Revision	Page
• Added Section 4, *Configuring gLogger for SDIO Mode*	4

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