Coolwatcher_User Guide

BC25&BC32&BC65&BC92&BC95B5R&BC95B8R&BC35GR

Module Series

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About the Document

Revision History

Version	Date	Author	Description
-	2022-12-01	Herbert Pan	Creation of the document

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1 Foreword

In this document, it illustrates how to capture DEBUG log on BC25/BC32/BC35GR/BC95B5R/BC95B8R /BC65/BC92 Series under LPWA modules. In addition, it can be available to capture DEBUG log of such above modules in a fast and effective way via this document. Finally, it can be implemented on relevant applicable analysis based on certain contents.

1.1. Scope

Tools	Manufacturer Revision	Applicable Module Type
Coolwatcher	AT+CGMI/RDA_89xx	BC25/BC32/BC35-GR/BC95-B5R/BC95-B8R/BC65/BC92

1.2. Download

Coolwatcher	cooltools-win32_custom_P3.R2.0.0005.rar

1.3. Device Connection

If the module has been welded or debugged separately, it is recommended to connect to the Coolwatcher and capture log as shown below.
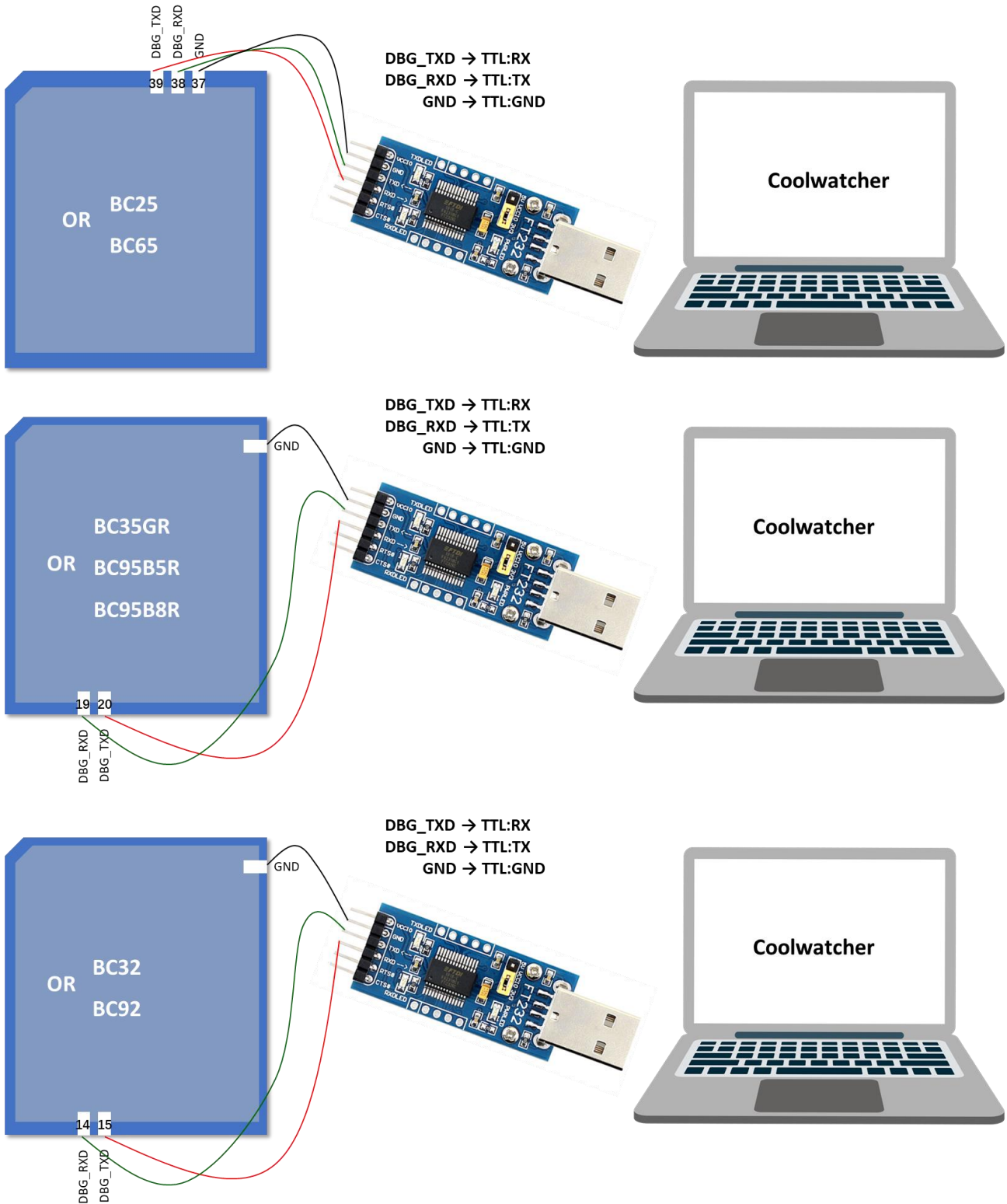
If the TE-B corresponding to BC25/BC32/BC35-GR/BC95-B5R/BC95-B8R/BC65/BC92 module is used, please select the second COM port (XR21V1412 USB UART ChB) in the "Port" under the drop-list of "Device Manager" .

2 Installation

Being installation-free, it is available to run Coolwatcher after being tarried. Run *coolwatcher_debughost.exe* in the directory of *\cooltools-win32_custom_P3.R2.0.0005*.

Coolwatcher icon

3 Connection

Before connecting to the device, run AT command **AT^TRACECTRL=1** via the main UART to enable debugging output. It is recommended to disable it via executing AT command **AT^TRACECTRL=0** after capturing log.

AT^TRACECTRL=1

Click the Coolwatcher icon above and following that the configuration window as shown below will be displayed. Select "8910" for Profiles; while for "lastcomport", please select corresponding debug port. See following figure for specific.
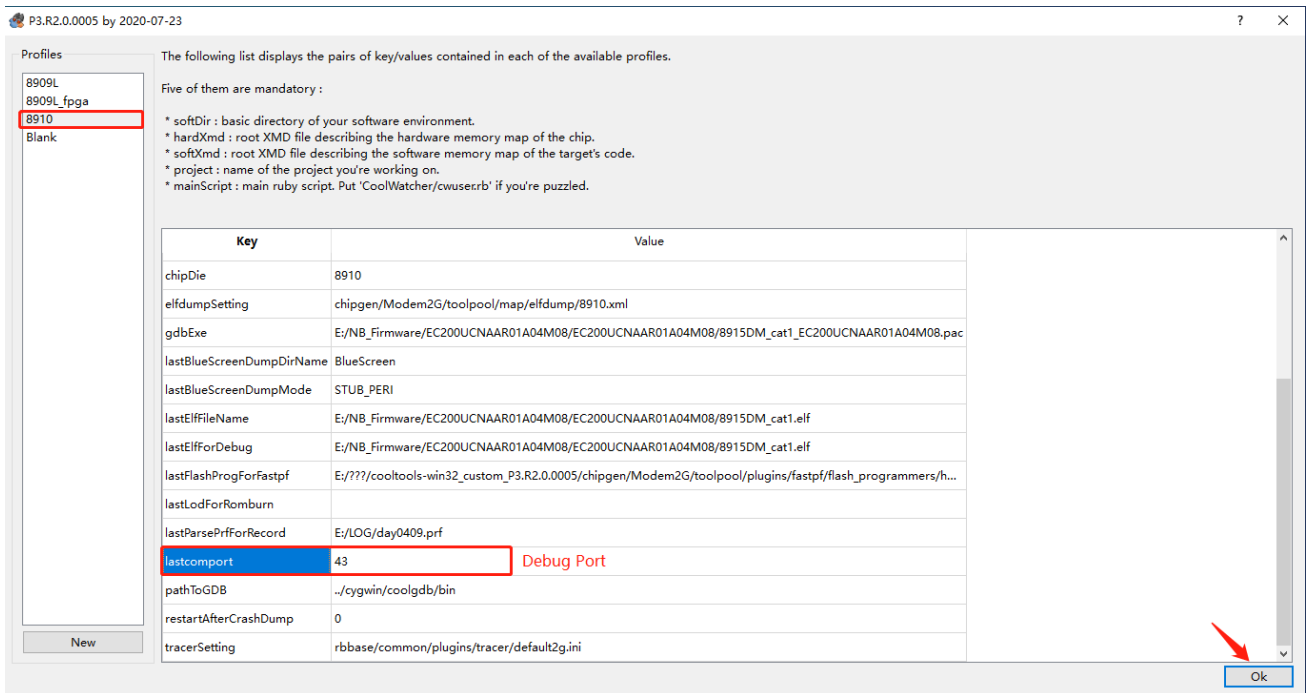
If it succeeds to connect to device, following window will be outputted.
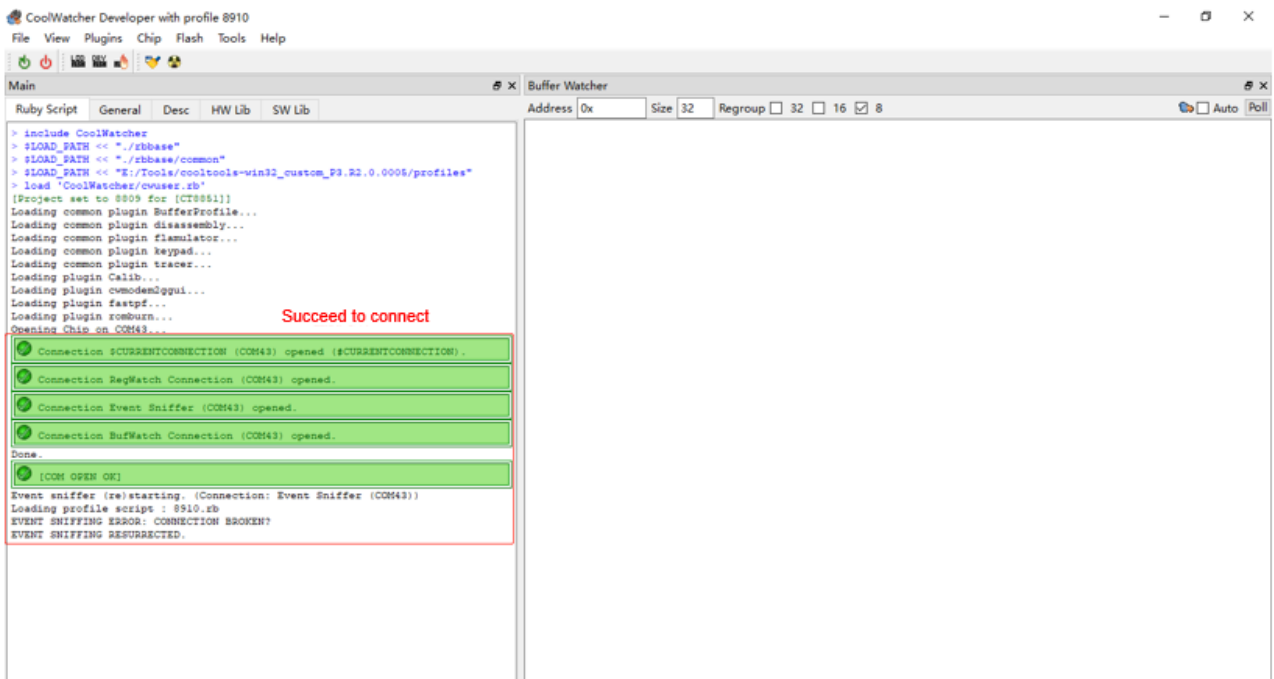
Select "Activate Tracer" in "Plugins" as described below and open log trace window.
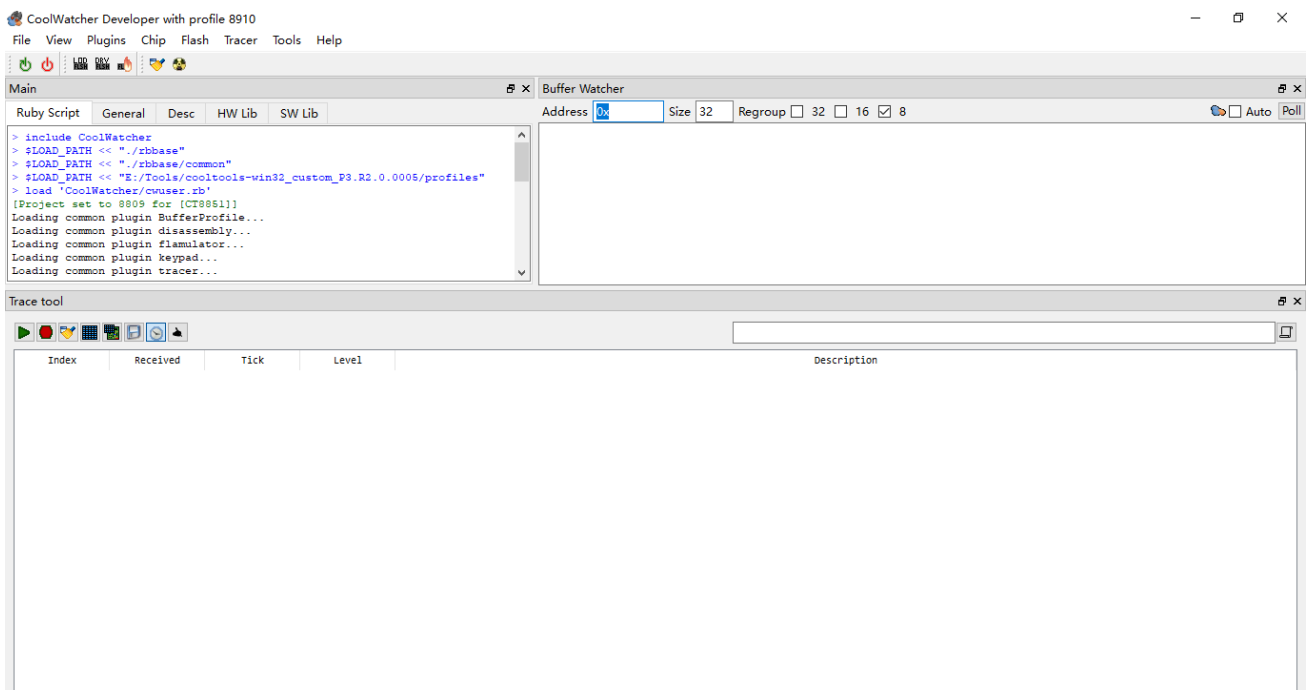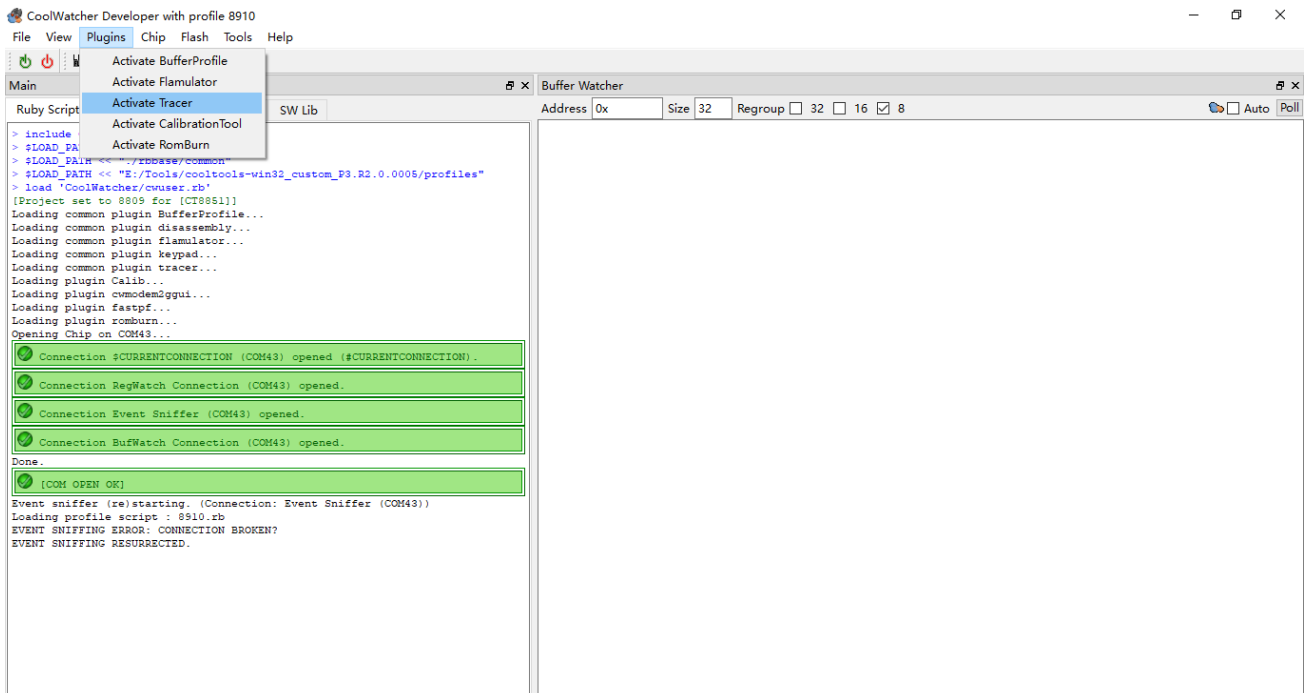
Click "Set Trace Levels" in the menu of "Tracer" or the icon shown in "Trace tool" to select all log types correspondingly. In addition, it is suggested to tick "Save Pcap".
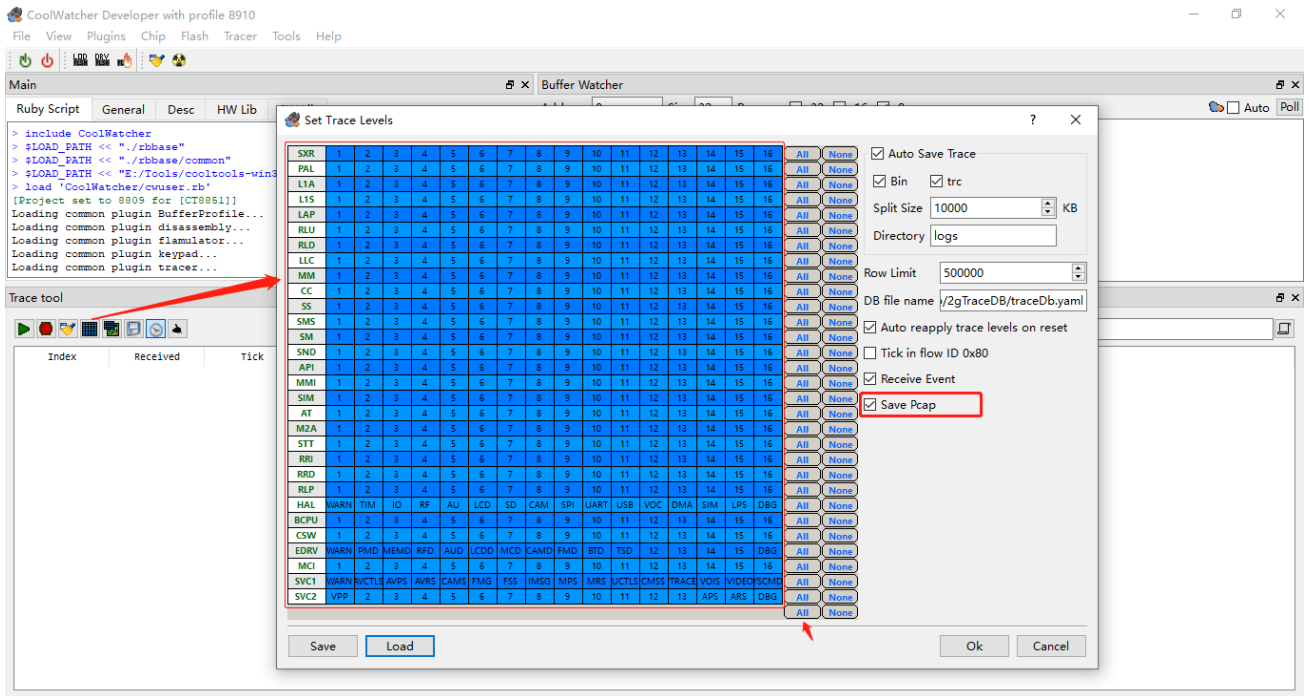
Click "Start/Stop Tracer" in the menu bar or the icon as shown below to start or stop tracing log.
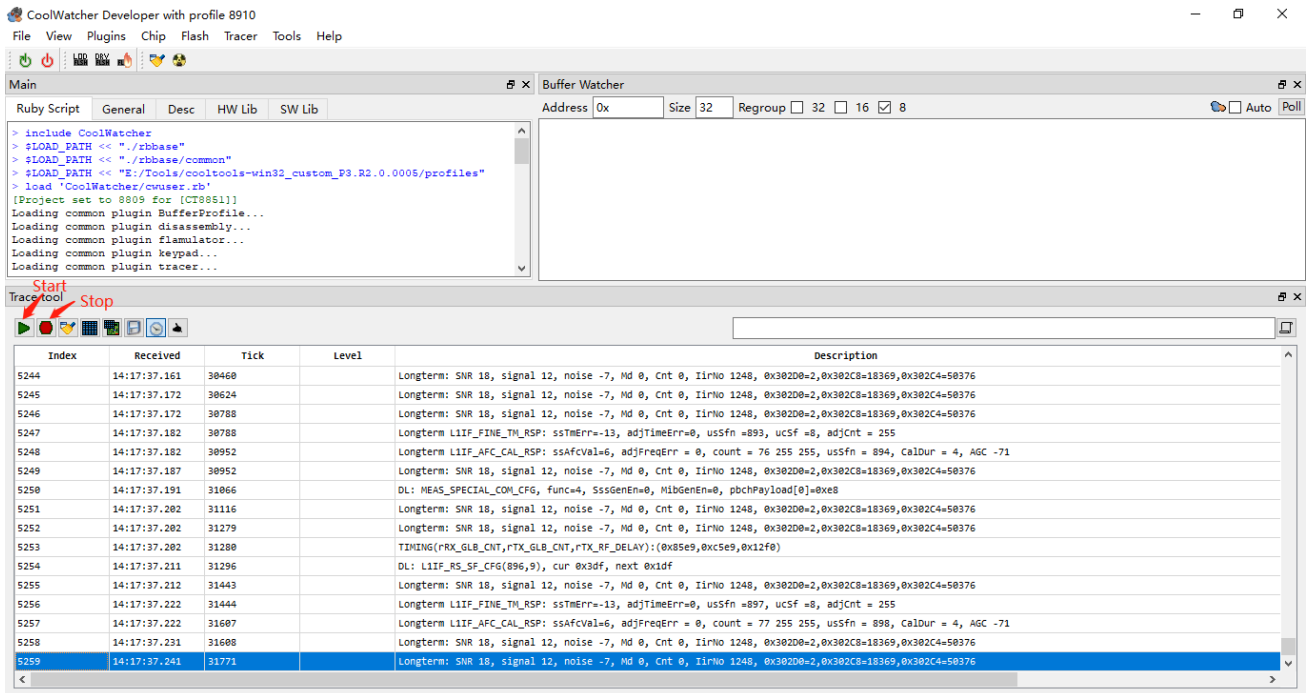
4 Save Log

4.1. Auto Save

Select "Set Trace Levels" in the menu of "Tracer" or the icon shown as below, tick Auto Save, and set the path to save log correspondingly. Normally, the *\coolTools-win32_custom_P3.R2.0.0005 \logs* will serve as the default path to save log; under which the Pcap file is located in the directory of *\cooltools-win32_custom_P3.R2.0.0005\logs\cap*.
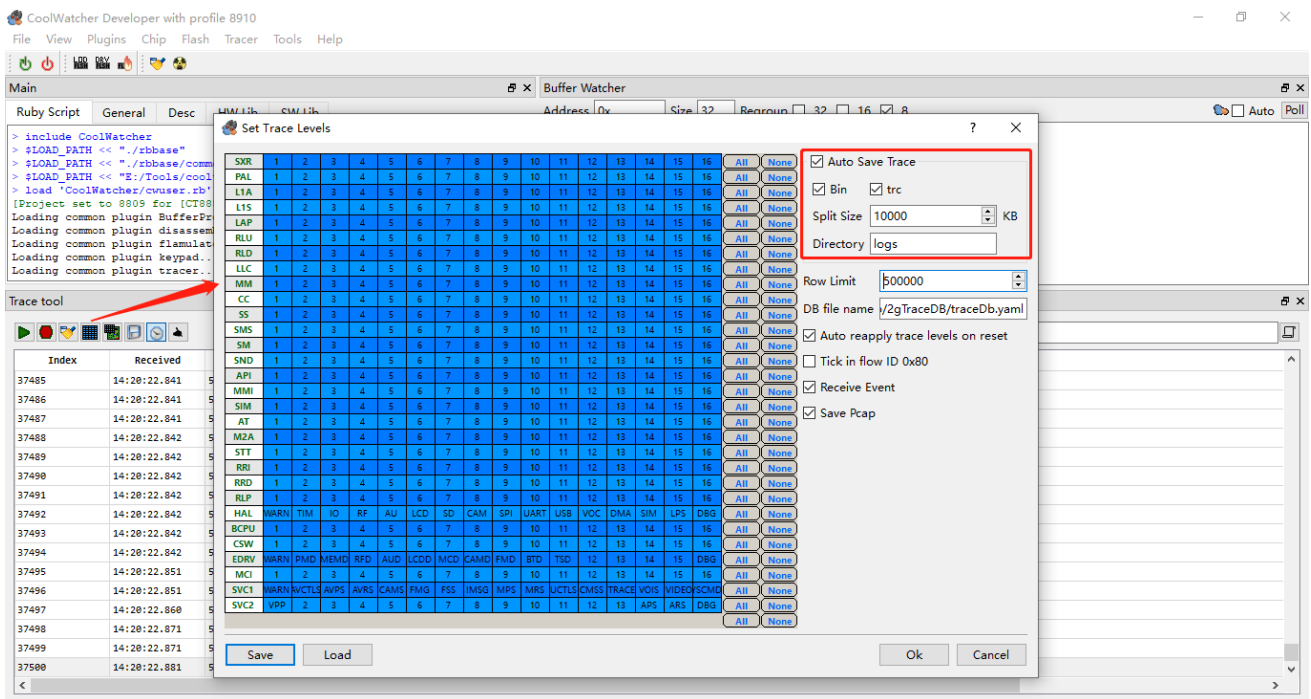
4.2. Manual Save

It is available to select "Save Trace" in the menu of "Tracer" or save by the method as described below.

5 Common Analytical Application

5.1. Import Log

Currently, Notepad++ or UltraEdit can be applied to query or analyse Log; Or it is also available to import log via Coolwatcher. In the menu of "Tracer", choose "Load Trace (bin)" and select corresponding *xxx.bin* file.
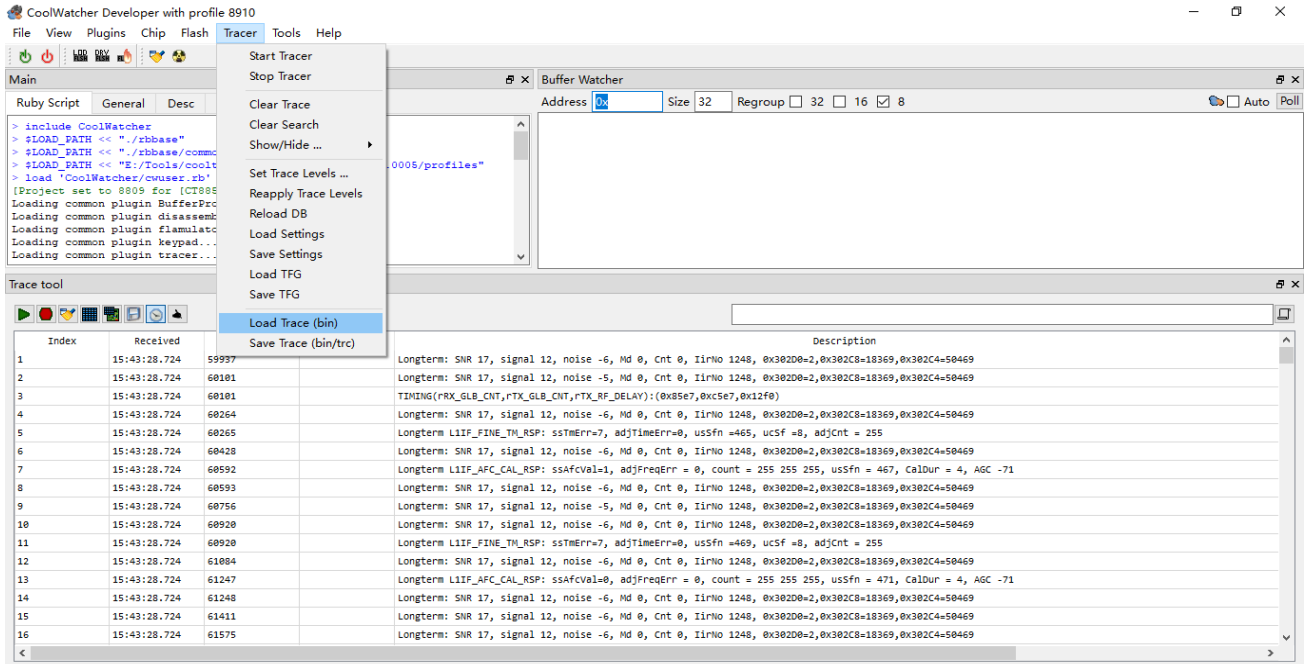
5.2. Filter Log

In this chapter, it tells how to filter log in Coolwatcher via inputting corresponding keywords. In addition, it supports filtering in a way of RE (Regular Expression) based on vertical bar "|".
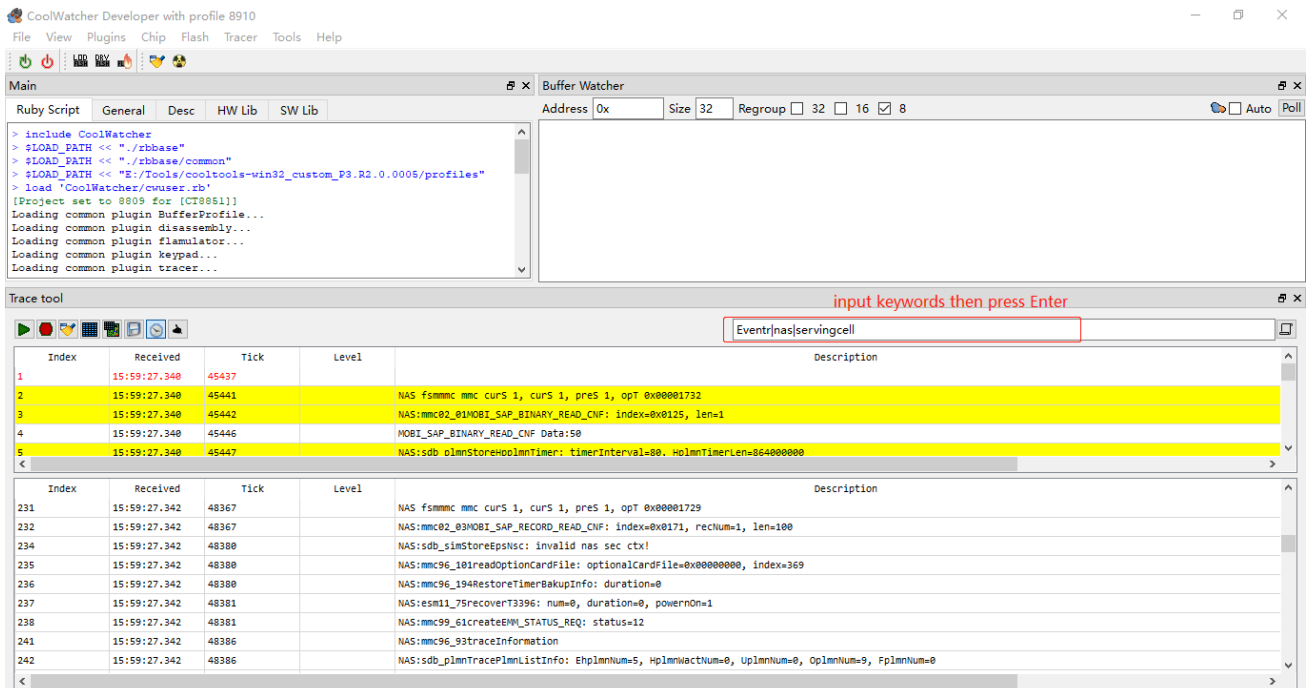
5.3. Common Keywords for Filtering

Camp Cell	cell search|Servcell frequency|ServingRSRP
AT Command	AT CMD0
NAS/AS message	EventReport|NAS:data
Data Analysis	AT CMD0|RAB:rab03|NAS:esm03|NAS:esm11|NAS:esm10|NAS:emm00|EventReport|NAS:data |errc06_26|errc00_32|cpDataCnfCount|CFN:

5.4. Export Pcap

Select "Set Trace Levels" in the menu of "Tracer" and tick "Save Pcap". See default path to save log:

\cooltools-win32_custom_P3.R2.0.0005\logs\cap; In this situation, Pcap is valid to analyse data interaction via Wireshark.
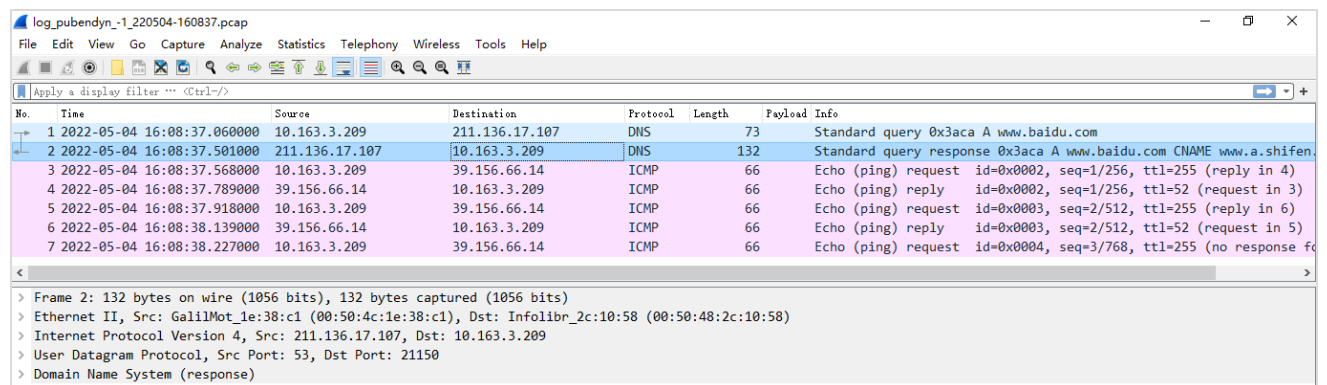
6 Notes

1) If the issue that debugging or analyzing can be attributed to the event of registration, please run AT command **AT+CFUN=0/AT+CFUN=1** or reboot module/terminal after connecting to Coolwatcher to capture the complete registration network process, which can be applied for the possible cause of the failure to current registration network.