



QUECTEL BC20 Genie Herbert Pan Module User Manual

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*QUECTEL BC20 Genie Herbert Pan Module
User Manual*

Genie 操作指导与参考

Genie User manual

(Herbert Pan) —



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1. Foreword

1.1 Suitable Condition

Tools	Manufacturer Revision	Applicable Module Type
Genie	AT+CGMI/MTK_2625	BC20/BC26/BC66

Note: This tool has a validity period. If you download it and use it, the validity period is expired, please contact Quectel to get it.

1.2 Related to Download

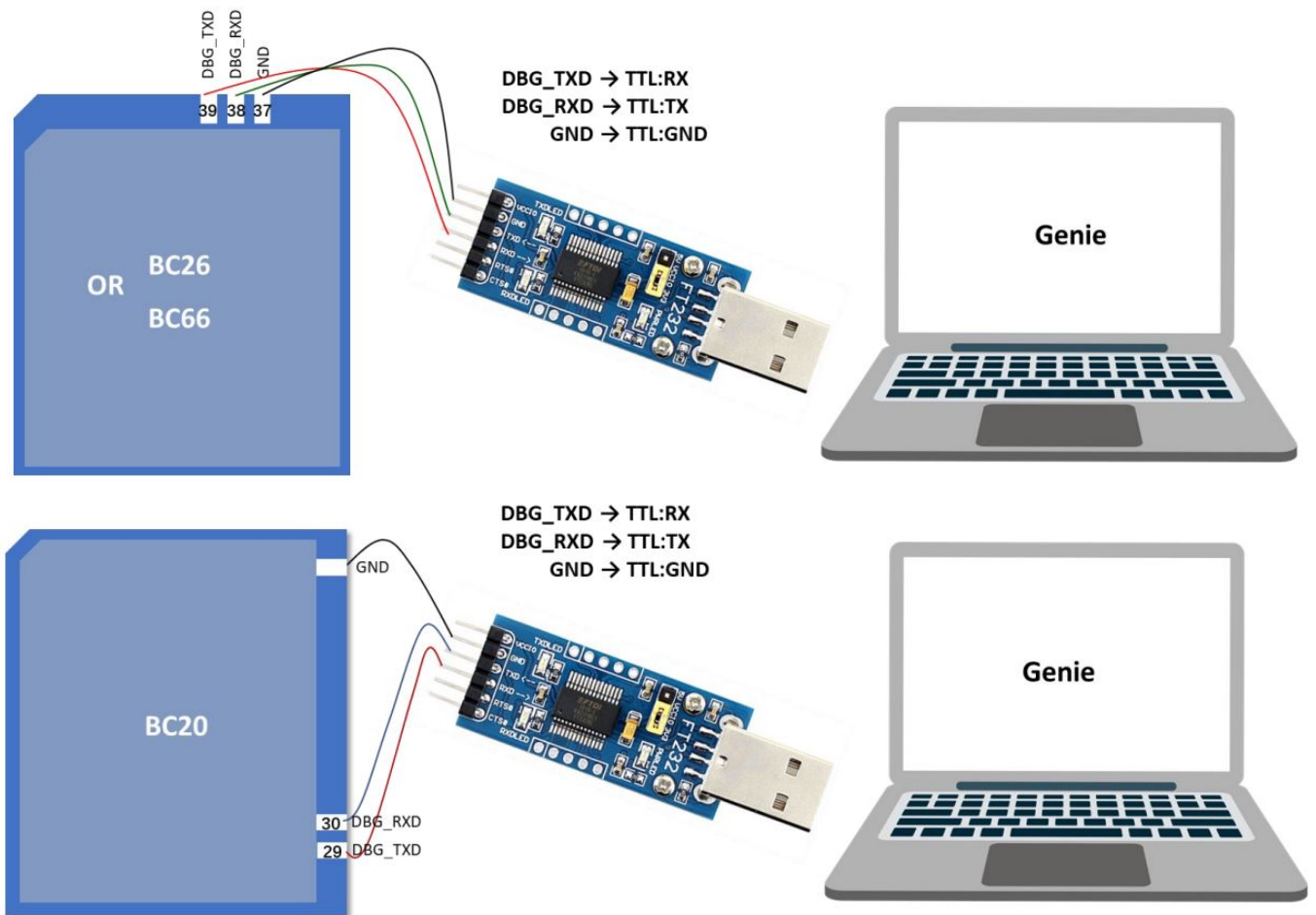
https://quectel123-my.sharepoint.cn/:u:/g/personal/aefae_dom_quectel_com_cn/EQd_Uw6KR3RBjkYhP6HmlrUBiu3Ve385GFKcPgKuMEmY4Q?e=ZM62Qt

https://quectel123-my.sharepoint.cn/:u:/g/personal/aefae_dom_quectel_com_cn/EW4QuNYKPJ9Gspu8DYAdDGIBL8TVG5z3-twrZO5WTLSaw?e=fYUPPj

https://quectel123-my.sharepoint.cn/:u:/g/personal/aefae_dom_quectel_com_cn/EYuJgu1Xu31Mq6EnzdLX7p0BkiJqKGlnX2JTIIhqJcOrRQ?e=j4adGb

1.3 Device Connection

Genie log If the module has been welded or debugged separately, it is recommended that you connect to the Genie and grab the log as shown below.



If TE-B corresponding to MTK module is used, from “Device Manager Port” to Select the second COM port (Silicon Labs Quad CP2108 USB to UART Bridge: Interface 1) corresponding to the GKI port, to Select the third COM port (Silicon Labs Quad CP2108 USB to UART Bridge: Interface 2) corresponding to HSL port.

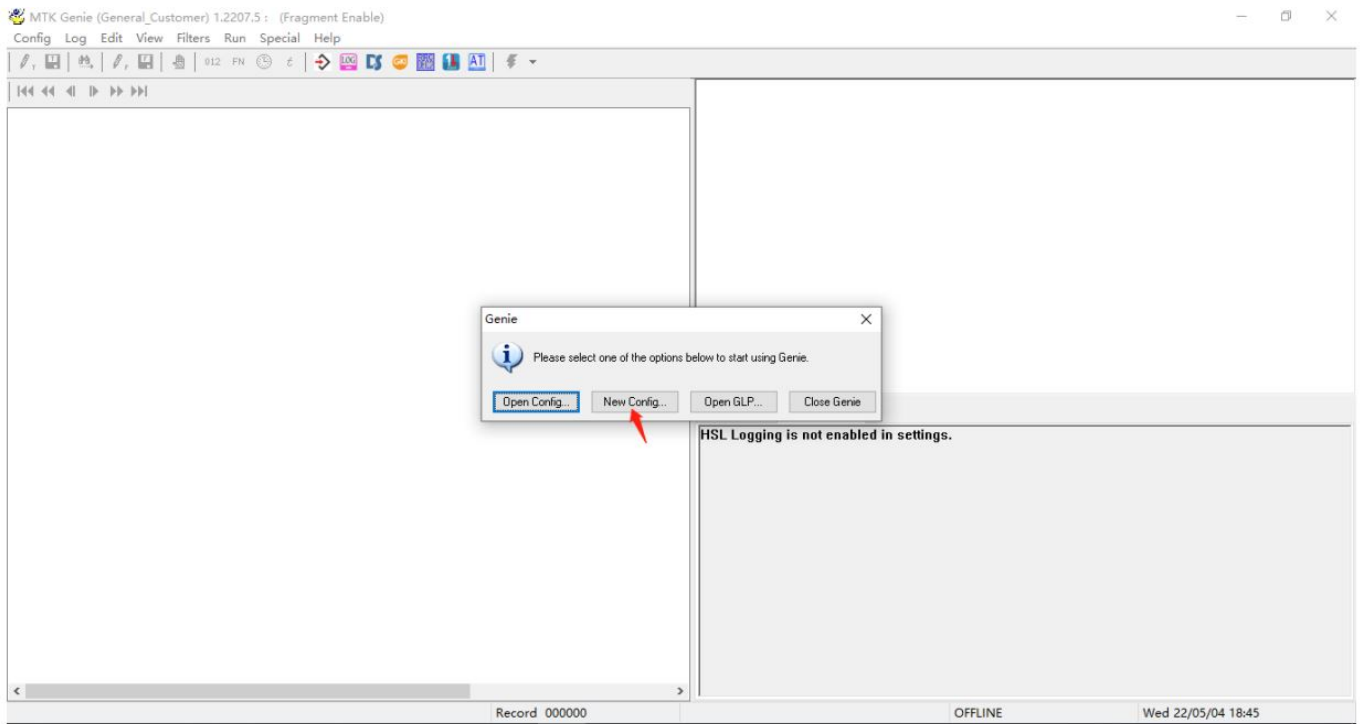
2. Genie Installation

Genie is installation-free and can be used after decompression. Run genie.exe in the MT2625_nbiot_tools_20220211_exe_V1.2207.5nbiottoolscoregenie.



Genie icon

Click the genie icon above to start, and the initial display is as shown below; Select “New Config” for related Settings;



2.1 UART Connection

GKI(mandatory) corresponds to Debug port, HSL(optional, If AUX port is not pulled out, deselect it) corresponds to AUX port, and the. Dec file in the corresponding firmware file is imported into the Database, as shown below; "AT+EPORT=4", UART

To configure the baud rate, run the "AT+EPORT=4" command to query the baud rate supported by the UART port of the current module. And according to the return value and the corresponding table to set ;

```
[2022-05-05_20:00:08:213]at+eport=4
[2022-05-05_20:00:08:213]+EPORT: 0
[2022-05-05_20:00:08:213]baudrate = 9
[2022-05-05_20:00:08:213]+EPORT: 1
[2022-05-05_20:00:08:213]baudrate = 9
[2022-05-05_20:00:08:213]+EPORT: 2
[2022-05-05_20:00:08:213]baudrate = 9
[2022-05-05_20:00:08:213]+EPORT: 3
[2022-05-05_20:00:08:213]baudrate = 9
[2022-05-05_20:00:08:213]+EPORT: 4
[2022-05-05_20:00:08:213]none
[2022-05-05_20:00:08:213]+EPORT: 5
[2022-05-05_20:00:08:213]none

[2022-05-05_20:00:08:213]OK
```

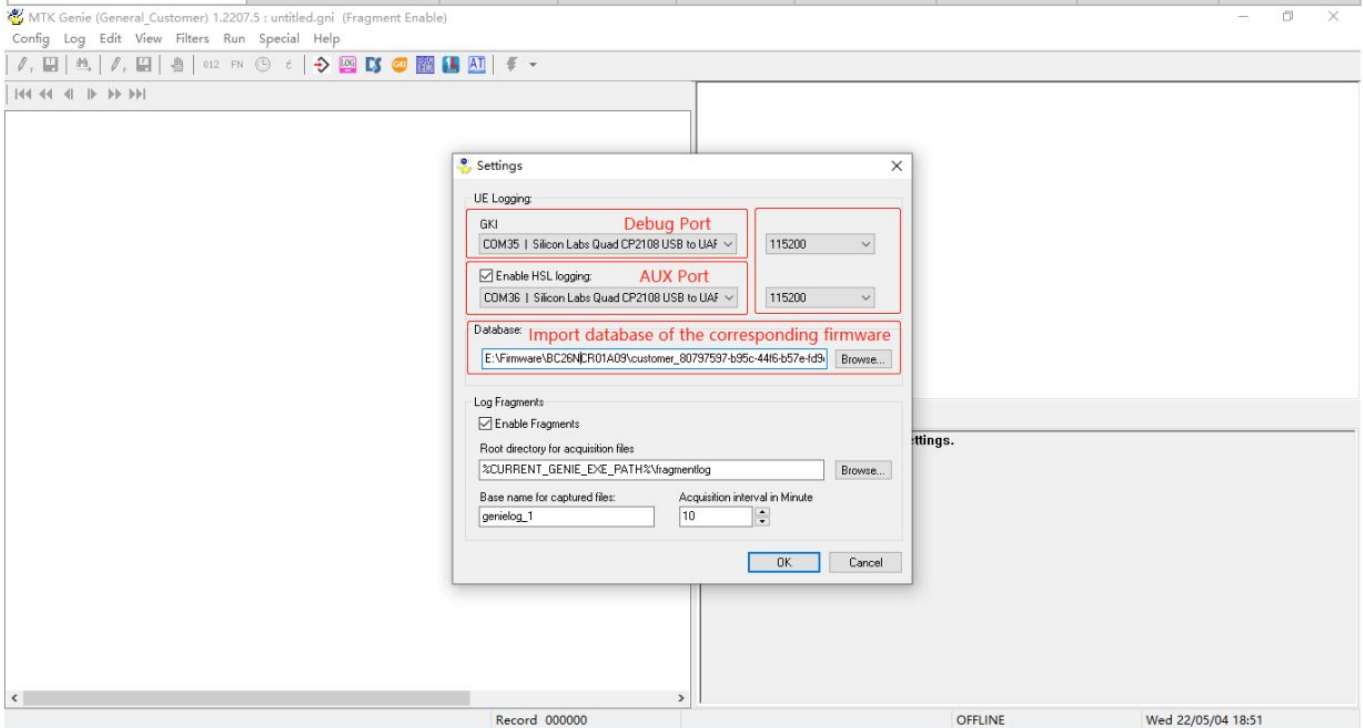
To change the baud rate of DEBUG port, refer to the following AT command and corresponding configuration list.

AT+EPORT=3,2,<baudrate_index> // To change the baud rate of DEBUG port by the AT command

+EPORT:	0	1	2	3	4	5
	URAT	URAT	URAT	URAT	USB	USB
	variable				921600(fixed)	

Genie 波特率配置/ Genie Baud rate configuration (AT+EPORT=4)

Baudrate_index	baudrate=	0	1	2	3	4	5	
	baudrate	110	300	1200	2400	4800	9600	
Baudrate_index	baudrate=	6	7	8	9	10	11	12
	baudrate	19200	38400	57600	115200	230400	460800	921600



2.2 USB Connection

If USB is used to output Log, please execute the following AT command and set as shown below; It is recommended that you run the command to close USB output after logging output.

*****Open USB output*****

AT+EPORT=1,uls,5

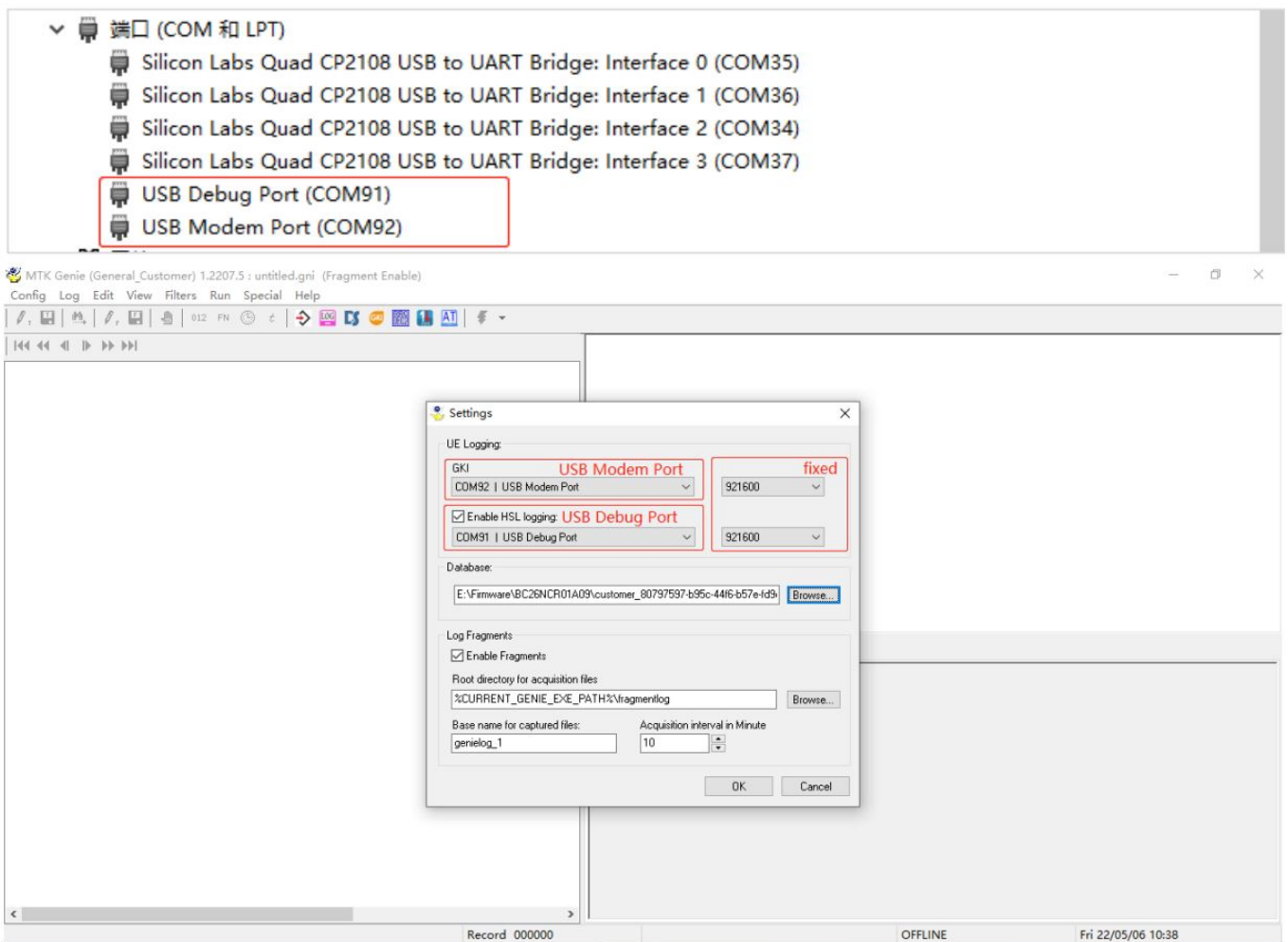
AT+EPORT=1,emmi,4

*****Close USB output*****

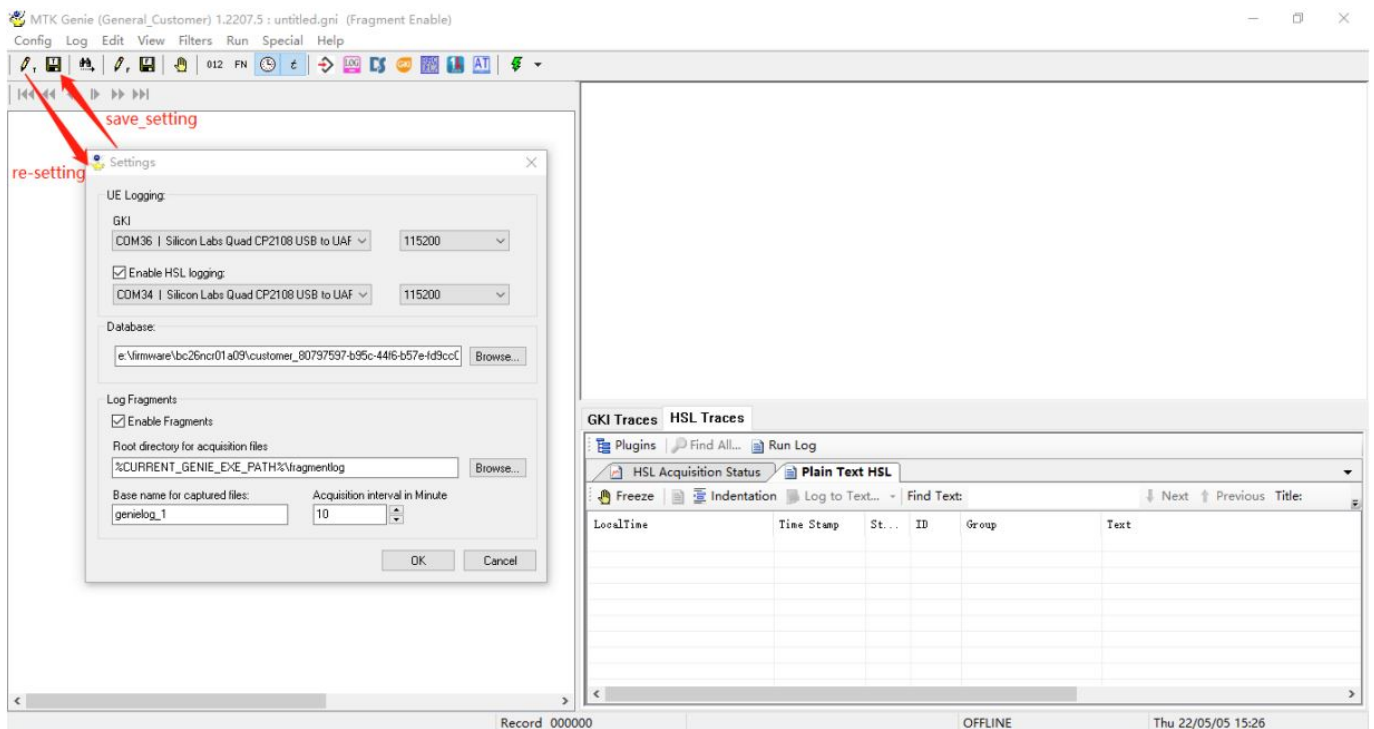
AT+EPORT=1,uls,2

AT+EPORT=1,emmi,1

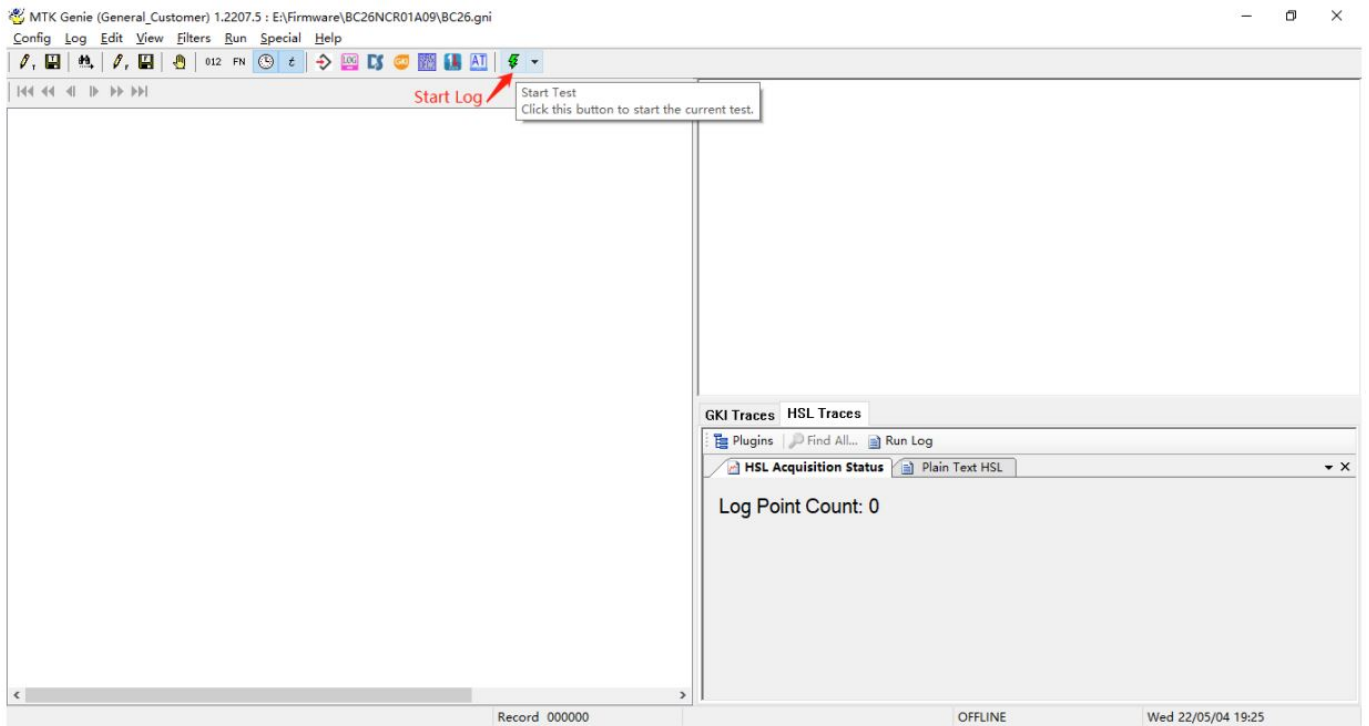
Power on or restart the device for the configuration to take effect. The ports displayed in device Manager are as follows:



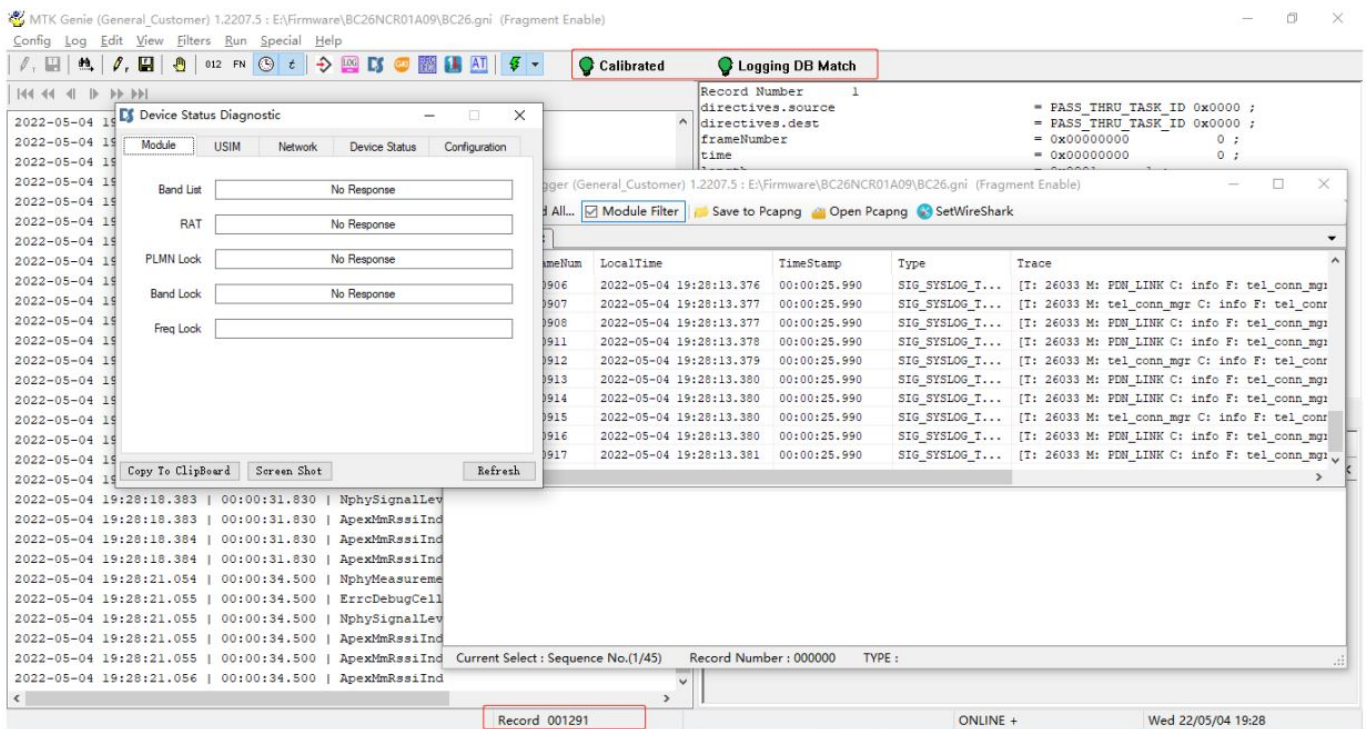
You can modify and Save the configuration parameters by using icon in the toolbar as shown below, or by “ConfigNew Config”/” ConfigSave Config “in the menu bar.



Then click the icon in the toolbar as shown below to start recording log; Note: After the device is powered on, you need to use POWERKEY to power on the module.



Then the window as shown below pops up;



MTK Genie (General_Customer) 1.2207.5 : E:\Firmware\BC26NCR01A09\BC26.gni (Fragment Enable)

Config Log Edit View Filters Run Special Help

Calibrated Logging DB Match

Record Number 1420

directives.source = ERRR_TASK_ID 0x0510 ;

directives.dest = TEST_TASK_ID 0x0102 ;

frameNumber = 0x00000450 1104 ;

time = 0x00002279 8825 ;

length = 0x00a9 169 ;

id = SIG_ERRR_DEBUG_CELL_LIST_IND 0x00080035 ;

.servingCell.cellPresent = TRUE 0x01 1 ;

.servingCell.physCellId = 0xffff 65535 ;

.errrDebugCellListInd.servingCell.rsrp = 0xfffb3 -77 ;

.errrDebugCellListInd.servingCell.rsrq = 0x00 0 ;

.errrDebugCellListInd.servingCell.srxlev = 0x002d 45 ;

.servingCell.rankingValue = 0xffb6 -74 ;

.servingCell.rReselectionRunning = FALSE 0x00 0 ;

.servingCell.rReselectionExpired = FALSE 0x00 0 ;

.intraFreqInfoList.eutraArfcn = 0x00000e68 3688 ;

.eutraCellInfo[0].cellPresent = FALSE 0x00 0 ;

.eutraCellInfo[0].physCellId = 0xffff 65535 ;

.intraFreqInfoList.eutraCellInfo[0].rsrp = 0x0000 0 ;

.intraFreqInfoList.eutraCellInfo[0].rsrq = 0x00 0 ;

GKI Traces HSL Traces

Plugins Find All... Run Log

HSL Acquisition Status Plain Text HSL

Freeze Indentation Log to Text... Find Text: Next Previous Title:

LocalTime	Time Stamp	St...	ID	Group	Text
2022-05-04 19:29:14.968	66.400296	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb
2022-05-04 19:29:14.968	66.402495	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb
2022-05-04 19:29:14.968	66.404470	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb
2022-05-04 19:29:20.058	68.519086	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_NPHY_MEASUREMENT_IND, Fra
2022-05-04 19:29:20.058	68.519089	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_ERRR_DEBUG_CELL_LIST_IND, Fr
2022-05-04 19:29:20.058	68.521338	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_NPHY_SIGNAL_LEVEL_IND, Fr
2022-05-04 19:29:20.058	68.521794	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb
2022-05-04 19:29:20.058	68.522867	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb
2022-05-04 19:29:20.058	68.523759	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb

Record 001439 19:29:14.833 | 00:01:28.250 | ErrrDebugCellList ONLINE + Wed 22/05/04 19:29

As shown below, the engineering mode in Genie is enabled to facilitate the observation of the signal reference received by the terminal.

MTK Genie (General_Customer) 1.2207.5 : E:\Firmware\BC26NCR01A09\BC26.gni (Fragment Enable)

Config Log Edit View Filters Run Special Help

Calibrated Logging DB Match

Record Number 1420

directives.source = ERRR_TASK_ID 0x0510 ;

directives.dest = TEST_TASK_ID 0x0102 ;

frameNumber = 0x00000450 1104 ;

time = 0x00002279 8825 ;

length = 0x00a9 169 ;

id = SIG_ERRR_DEBUG_CELL_LIST_IND 0x00080035 ;

.servingCell.cellPresent = TRUE 0x01 1 ;

.servingCell.physCellId = 0xffff 65535 ;

.errrDebugCellListInd.servingCell.rsrp = 0xfffb3 -77 ;

.errrDebugCellListInd.servingCell.rsrq = 0x00 0 ;

.errrDebugCellListInd.servingCell.srxlev = 0x002d 45 ;

.servingCell.rankingValue = 0xffb6 -74 ;

.servingCell.rReselectionRunning = FALSE 0x00 0 ;

.intraFreqInfoList.eutraArfcn = 0x00000e68 3688 ;

.eutraCellInfo[0].cellPresent = FALSE 0x00 0 ;

.eutraCellInfo[0].physCellId = 0xffff 65535 ;

.intraFreqInfoList.eutraCellInfo[0].rsrp = 0x0000 0 ;

.intraFreqInfoList.eutraCellInfo[0].rsrq = 0x00 0 ;

GKI Traces HSL Traces

Plugins Find All... Run Log

HSL Acquisition Status Plain Text HSL

Freeze Indentation Log to Text... Find Text: Next Previous Title:

ConfigPlugin

COMMON

☒ AcquisitionStatus.dll

☒ EngineeringMode.dll

☐ PCapDataServer.dll

OK Cancel

LocalTime	Time Stamp	St...	ID	Group	Text
2022-05-04 19:31:58	215.147878	3	0xd53d	HSL_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSST_IND, FrameNb: 15

Record 001837 19:29:14.833 | 00:01:28.250 | ErrrDebugCellList ONLINE + Wed 22/05/04 19:31

MTK Genie (General_Customer) 1.2207.5 : E:\Firmware\BC26NCR01A09\BC26.gni (Fragment Enable)

Config Log Edit View Filters Run Special Help

Calibrated Logging DB Match

Record Number 1420

```

directives.source = ERR_TASK_ID 0x0510 ;
directives.dest = TEST_TASK_ID 0x0102 ;
frameNumber = 0x00000450 1104 ;
time = 0x00002279 8825 ;
length = 0x00a9 169 ;
id = SIG_ERR_DEBUG_CELL_LIST_IND 0x00080035 ;
.servingCell.cellPresent = TRUE 0x01 1 ;
.servingCell.physCellId = 0xffff 65535 ;
.errDebugCellListInd.servingCell.rsrp = 0xffb3 -77 ;
.errDebugCellListInd.servingCell.rsrq = 0x00 0 ;
.errDebugCellListInd.servingCell.srxlev = 0x002d 45 ;
.servingCell.rankingValue = 0xffb6 -74 ;
.servingCell.tReselectionRunning = FALSE 0x00 0 ;
.servingCell.tReselectionExpired = FALSE 0x00 0 ;
.intraFreqInfoList.eutraArfcn = 0x00000e68 3688 ;
.intraFreqInfoList[0].cellPresent = FALSE 0x00 0 ;
.eutraCellInfo[0].physCellId = 0xffff 65535 ;
.intraFreqInfoList.eutraCellInfo[0].rsrp = 0x0000 0 ;
.intraFreqInfoList.eutraCellInfo[0].rsrq = 0x00 0 ;

```

GKI Traces HSL Traces

Plugins Find All... Run Log

HSL Acquisition Status Plain Text HSL Engineering Mode

2022-05-04 19:27:52.482 LP Count: 545 0:01:00.000

2022-05-04 19:30:17.802

2022-05-04 19:30:17.802

Plot Summary Cell Measurement RAI Effective Delay Run Trace

RSRP(dBm)

RRR State ERR_STATE_IDLE

EMM State EMM_DEREGISTERED_NO...

RRR PSM

Param	Serving	Int...	Int...	U
EARFCN	3688			
PCI	121			

Record 001746 19:29:14.833 | 00:01:28.250 | ErrDebugCellList ONLINE + Wed 22/05/04 19:31

If as shown below, through the menu bar "Special RRC Decoder", open genie signaling window, easy to observe the terminal signaling interaction;

MTK Genie (General_Customer) 1.2207.5 : E:\Firmware\BC26NCR01A09\BC26.gni (Fragment Enable)

Config Log Edit View Filters Run Special Help

Calibrated Logging DB Match

Record Number 1420

```

directives.source = ERR_TASK_ID 0x0510 ;
directives.dest = TEST_TASK_ID 0x0102 ;
frameNumber = 0x00000450 1104 ;
time = 0x00002279 8825 ;
length = 0x00a9 169 ;
id = SIG_ERR_DEBUG_CELL_LIST_IND 0x00080035 ;
.servingCell.cellPresent = TRUE 0x01 1 ;
.servingCell.physCellId = 0xffff 65535 ;
.errDebugCellListInd.servingCell.rsrp = 0xffb3 -77 ;
.errDebugCellListInd.servingCell.rsrq = 0x00 0 ;
.errDebugCellListInd.servingCell.srxlev = 0x002d 45 ;
.servingCell.rankingValue = 0xffb6 -74 ;
.servingCell.tReselectionRunning = FALSE 0x00 0 ;
.servingCell.tReselectionExpired = FALSE 0x00 0 ;
.intraFreqInfoList.eutraArfcn = 0x00000e68 3688 ;
.eutraCellInfo[0].cellPresent = FALSE 0x00 0 ;
.eutraCellInfo[0].physCellId = 0xffff 65535 ;
.intraFreqInfoList.eutraCellInfo[0].rsrp = 0x0000 0 ;
.intraFreqInfoList.eutraCellInfo[0].rsrq = 0x00 0 ;

```

GKI Traces HSL Traces

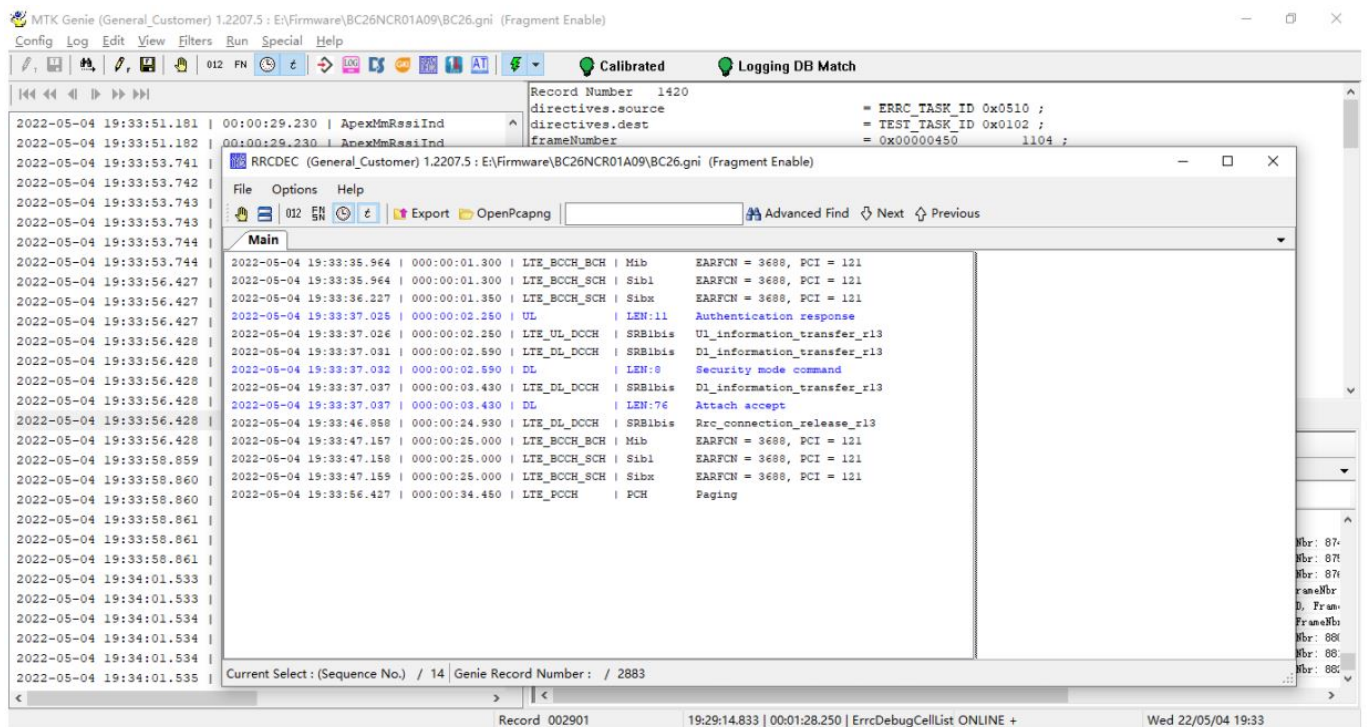
Plugins Find All... Run Log

HSL Acquisition Status Plain Text HSL

Freeze Indentation Log to Text... Find Text: Next Previous Title:

LocalTime	Time Stamp	St...	ID	Group	Text
2022-05-04 19:34:19.562	320.429410	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSSI_IND, FrameNbr: 93
2022-05-04 19:34:19.562	320.431497	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSSI_IND, FrameNbr: 93
2022-05-04 19:34:19.562	320.432265	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSSI_IND, FrameNbr: 93
2022-05-04 19:34:24.718	322.699854	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_NPHY_MEASUREMENT_IND, FrameNbr: 93
2022-05-04 19:34:24.718	322.700593	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_ERR_DEBUG_CELL_LIST_IND, FrameNbr: 93
2022-05-04 19:34:24.718	322.702294	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_NPHY_SIGNAL_LEVEL_IND, FrameNbr: 93
2022-05-04 19:34:24.718	322.702750	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSSI_IND, FrameNbr: 93
2022-05-04 19:34:24.718	322.703812	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSSI_IND, FrameNbr: 94
2022-05-04 19:34:24.718	322.704508	3	0x063D	NLS_SYS_LOG_WARNING	GKI_SYNC: sig:SIG_APEX_MM_RSSI_IND, FrameNbr: 94

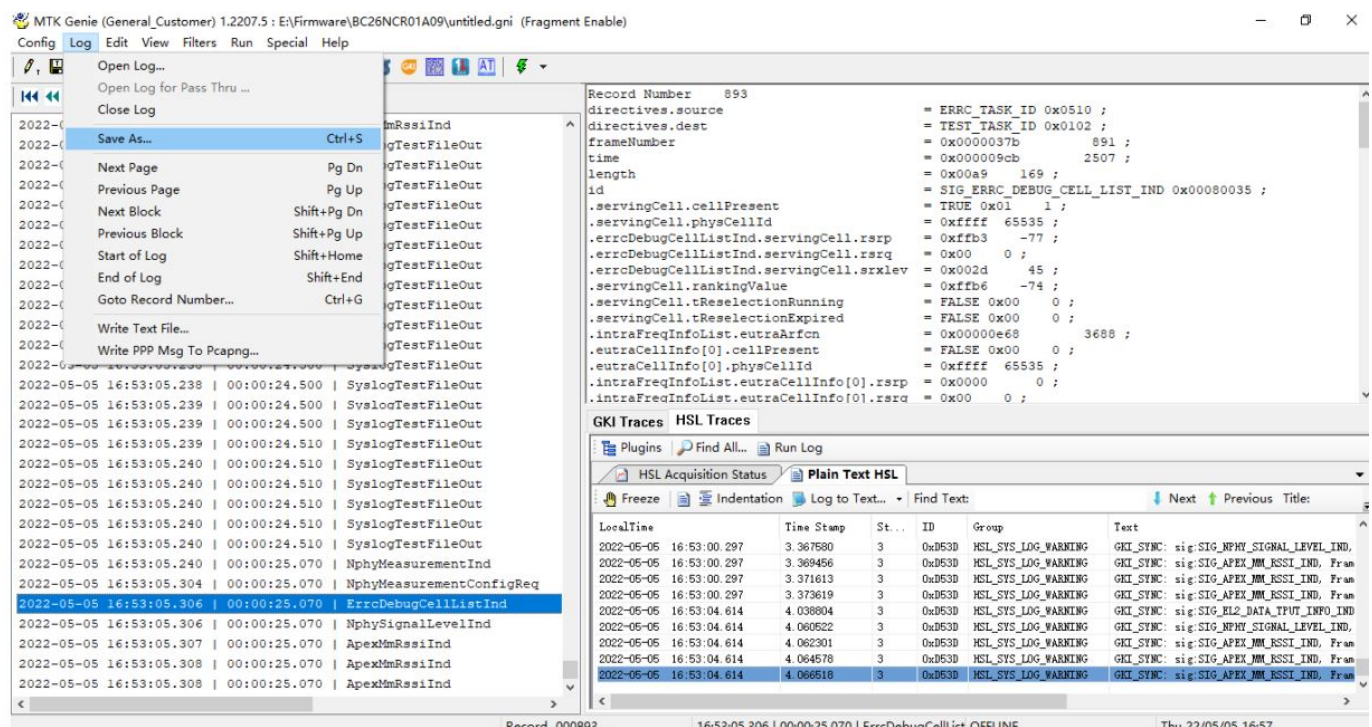
Record 002960 19:29:14.833 | 00:01:28.250 | ErrDebugCellList ONLINE + Wed 22/05/04 19:34



3. Save Log

3.1 Manual save

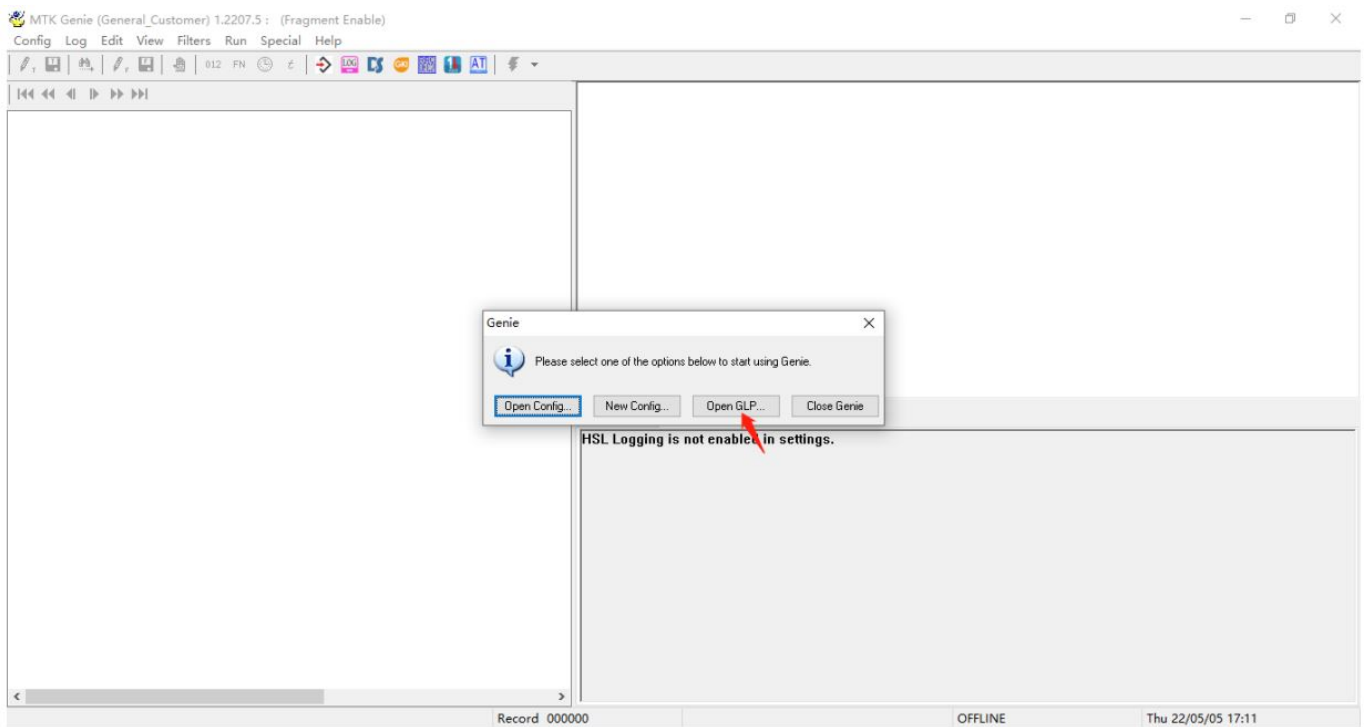
After the log is finished, Save the log xxx.glp by “LogSave As” in the menu bar, As shown below.



4. Common Analytical Application

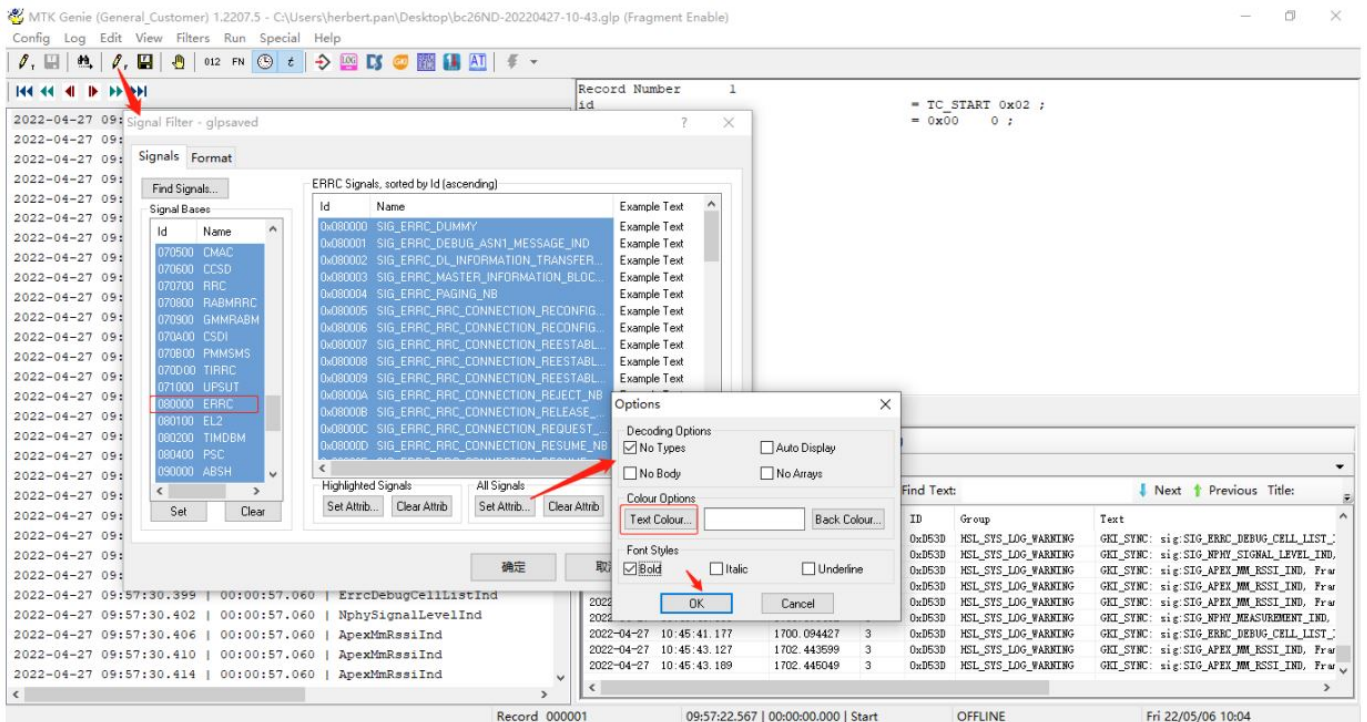
4.1 LOG (Import Log)

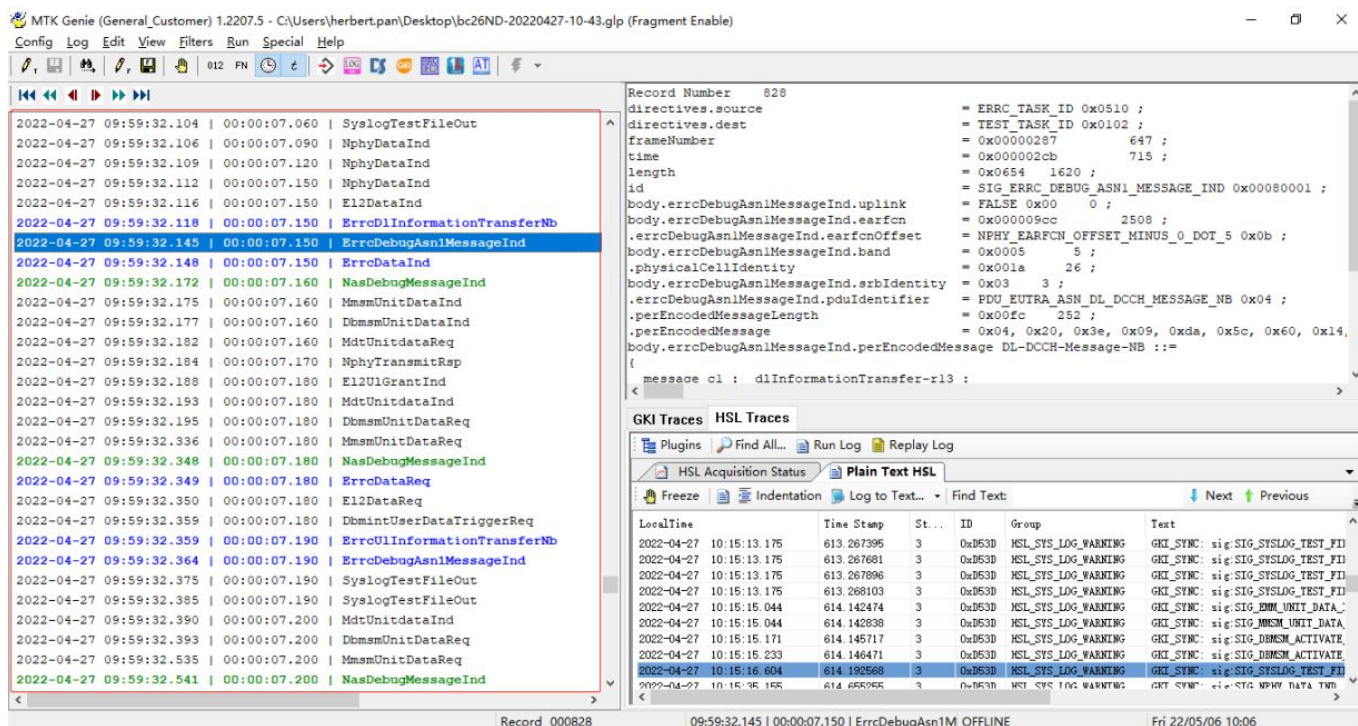
Click on the saved xxx. GLP file to open Log. Or after starting genie, import the Log as the below.



4.2 Color the Message

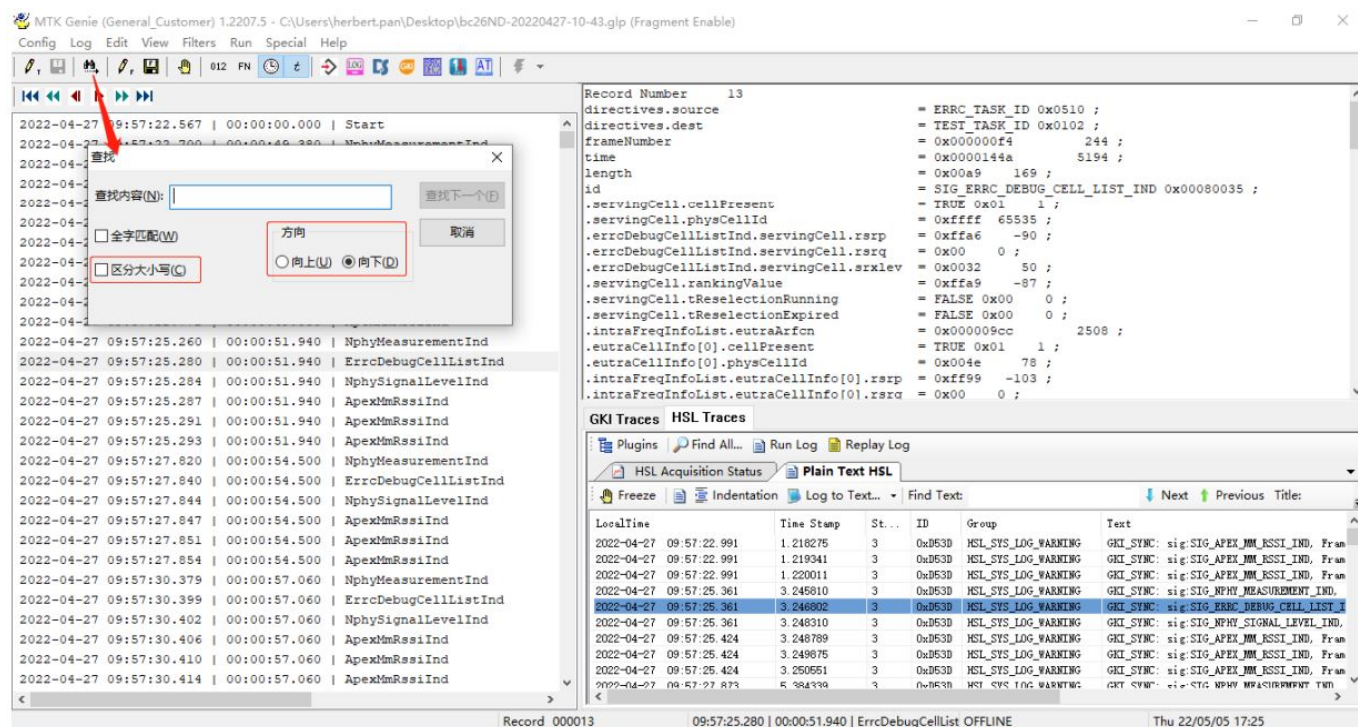
By using ICONS in the toolbar as shown below, different types of Log messages can be marked and colored, which makes it easier to identify and view.



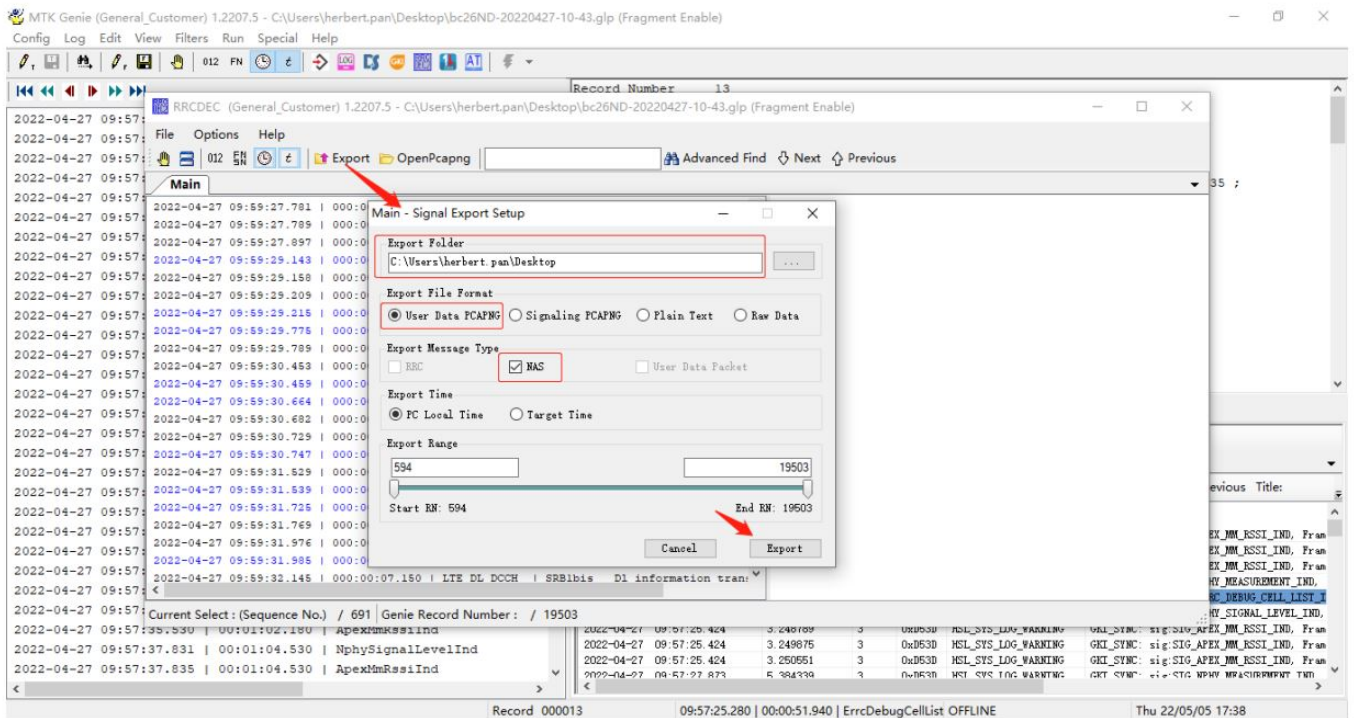


4.3 Filter Log

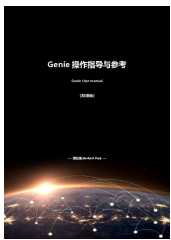
Open the Find/search window through the ICONS shown in the toolbar below, or through the menu bar “EditFind”, note the case-sensitive options and search direction;



You can also use the menu bar “Special” to filter specific attribute logs, such as AT Command Logger;



Documents / Resources



[QUECTEL BC20 Genie Herbert Pan Module \[pdf\] User Manual](#)
 BC26, BC66, Genie Herbert Pan Module, BC20 Genie Herbert Pan Module

Manuals+.