

EPAT 操作指导与参考

EPAT User manual

(双语版)

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一、相关说明 (Foreword)

1.1 适用条件 (Suitable Condition)

工具/Tools	芯片版本/Manufacturer Revision	适用模组类型/Applicable Module Type
EPAT	EC618/EC718 QCX216	EC600E/EC800E/EC801E/EC800Z/EG800Z EG800Q/EG915Q/EG916Q

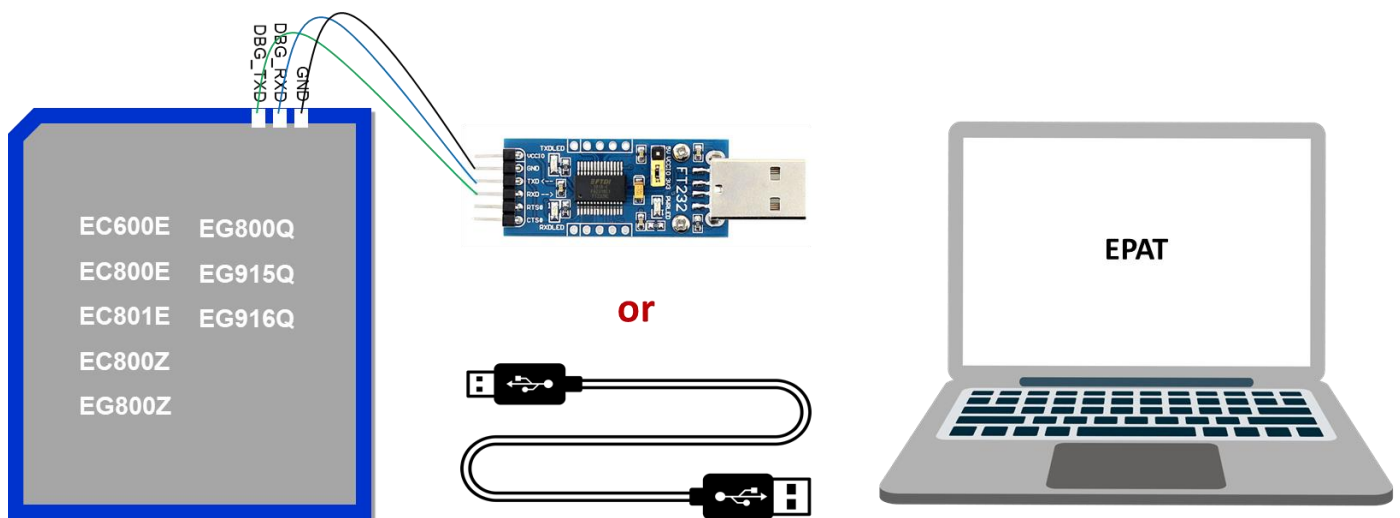
1.2 相关下载 (Related to Download)

EPAT	EPAT V1.3.189.357.zip	
USB Driver	EC600E/EC800E/EC801E/EC800Z	Quectel Windows USB Driver(Y) V1.0.2.zip
	EG800Q/EG915Q/EG916Q	Quectel Windows USB Driver(Q) ECM V1.0.17.zip

1.3 设备连接 (Device Connection)

如果模组已完成贴片或对单独对模组进行调试，建议参考下面连接方式连接 EPAT 并抓取 log；同时建议[使用支持 6M 速率的 UART-to-USB Convertor \(TTL\)](#)；

If the module has been welded or debugged separately, it is recommended that you connect to the EPAT and grab the log as shown below. meanwhile, you are advised to use uart-to-usb Convertor (TTL) that supports 6M baudrate.



如果使用 EC600E/EC800E 模组对应的 TE-A 和 EVB，请在“设备管理器→端口”选择“USB DIAG Port”或如下图所示；

If THE TE-A and EVB corresponding to EC600E/EC800E modules are used, from "Device Manager → Ports" to select the "USB DIAG Port" or the second COM port.

- ▼ 端口 (COM 和 LPT)
 - USB 串行设备 (COM3) **AT Port**
 - USB 串行设备 (COM4) **CP debug log Port**
 - USB 串行设备 (COM7)
- > 固件

二、EPAT 安装 (Installation)

EPAT 绿色安装，解压后即可使用；在 EPAT\bin 目录下，运行 EPAT.exe。

EPAT is installation-free and can be used after decompression. Run EPAT.exe in the EPAT\bin.

注意:因为 EPAT 需要 VCMFCDLLs，所以如果第一次运行 EPAT 失败，请在 EPAT\bin 目录下安装 vc_redistEPAT.x86.exe.

Note: EPAT requires VCMFCDLLs, if your first run of EPAT fails, install vc_redistepat.x86. exe in the EPAT\bin directory.



EPAT icon

三、EPAT 连接 (Connection)

由于 EC618/EC718/QCX216 相关模组默认关闭 Log 输出，因此，在抓取 Log 之前，需要执行如下相关指令；

By default, Log output is disabled for modules of EC618/EC718/QCX216. Therefore, you need to run the following AT commands before obtaining the Log.

EC600E/EC800E/EC801E/EC800Z

执行下面指令，打开 Debug 输出：

AT+ECPCFG="logCtrl",2 //Enable DIAG output

建议抓取 Log 任务结束后，关闭 Debug 输出：

AT+ECPCFG="logCtrl",0 //Disable DIAG output

EG800Q/EG915Q/EG916Q

执行下面指令，打开 Debug 输出：

AT\$QCPCFG="logCtrl",2 //Enable DIAG output

建议抓取 Log 任务结束后，关闭 Debug 输出：

AT\$QCPCFG="logCtrl",0 //Disable DIAG output

控制 Log 输出端口：

Control Log output port:

EC600E/EC800E/EC801E/EC800Z

控制 Log 输出至 USB Control Log output to the USB port	AT+ECPCFG="logPortSel",0	配置，重启后生效 The configuration takes effect after the restart
控制 Log 输出至 Debug 串口 Control Log output to the Debug port	AT+ECPCFG="logPortSel",1	配置，重启后生效 The configuration takes effect after the restart
控制 Log 输出至 USB 和 Debug 串口 Control Log output to the USB port and Debug port	AT+ECPCFG="logPortSel",2	配置，重启后生效 The configuration takes effect after the restart

EG800Q/EG915Q/EG916Q

控制 Log 输出至 USB Control Log output to the USB port	AT\$QCPCFG="logPortSel",0	配置，重启后生效 The configuration takes effect after the restart
控制 Log 输出至 Debug 串口 Control Log output to the Debug port	AT\$QCPCFG="logPortSel",1	配置，重启后生效 The configuration takes effect after the restart
控制 Log 输出至 USB 和 Debug 串口 Control Log output to the USB port and Debug port	AT\$QCPCFG="logPortSel",2	配置，重启后生效 The configuration takes effect after the restart

查询 Log 输出相关配置：

To query Log output configurations:

EC600E/EC800E/EC801E/EC800Z

AT+ECPCFG?

+ECPCFG:

"faultAction":4,"uartDumpPort":1,"startWDT":1,"logCtrl":2,"logLevel":0,"logOwnerId&logOwnerLevel":0x00000000,"logBaudrate":3000000,"slpWaitTime":0,"logPortSel":0,"usbCtrl":0,"usbSwTrace":0,"usbSlpMask":0,"usbSlpThd":0,"pwrKeyMode":1,"usbNet":1,"fotaUrcBaudrate":115200,"fotaUrcPortSel":0,

EG800Q/EG915Q/EG916Q

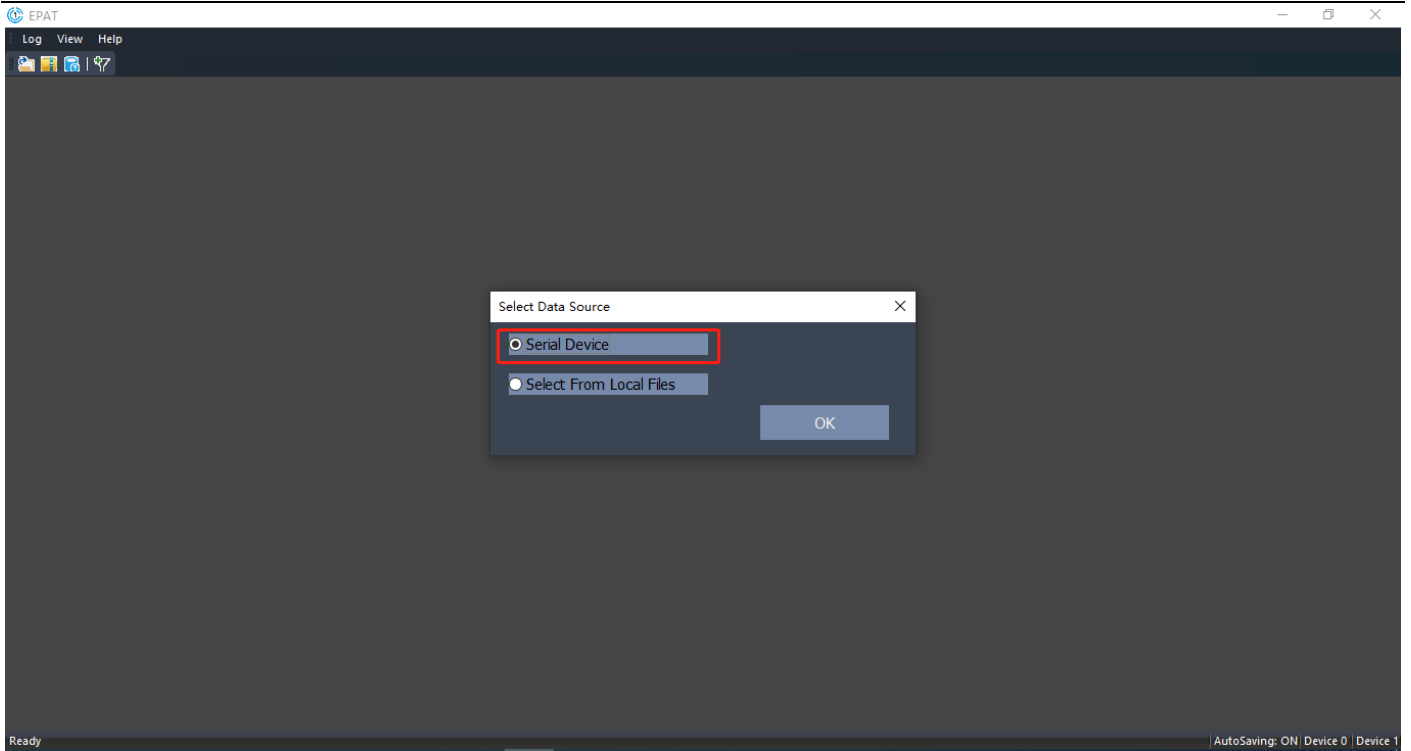
AT\$QCPCFG?

+ECPCFG:

"faultAction":4,"uartDumpPort":1,"startWDT":1,"logCtrl":2,"logLevel":0,"logOwnerId&logOwnerLevel":0x00000000,"logBaudrate":3000000,"slpWaitTime":0,"logPortSel":0,"usbCtrl":0,"usbSwTrace":0,"usbSlpMask":0,"usbSlpThd":0,"pwrKeyMode":1,"usbNet":1,"fotaUrcBaudrate":115200,"fotaUrcPortSel":0,

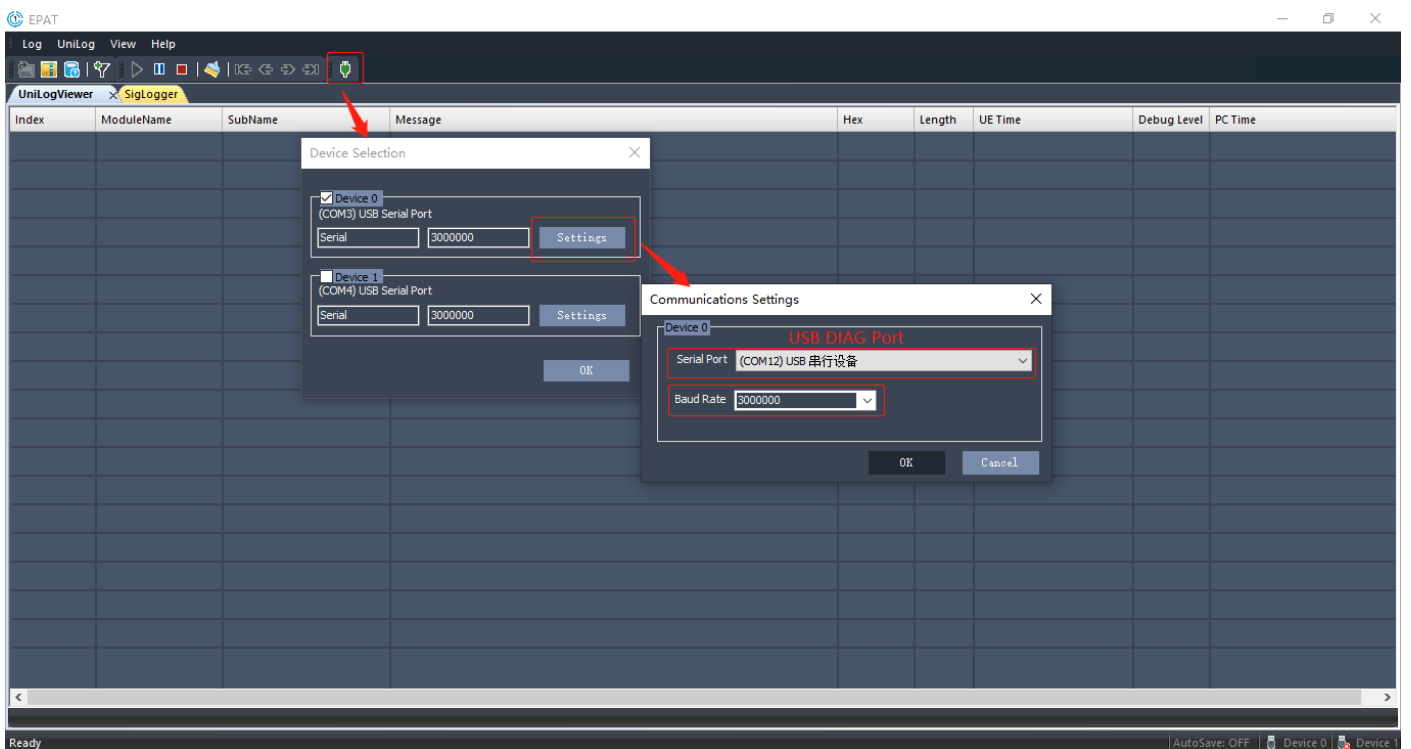
初始打开 EPAT 显示如下窗口，需要选择“Serial Device”选项获取 Log;

When the EPAT is initially started, the following window is displayed. Select “Serial Device” to obtain the Log.



点击如下图所示工具栏中的图标，选择“USB DIAG Port”端口和配置波特率（建议使用 6M）；

Click the icon in the toolbar as shown below, select “USB DIAG Port” and set baudrate (6000000 is recommended);



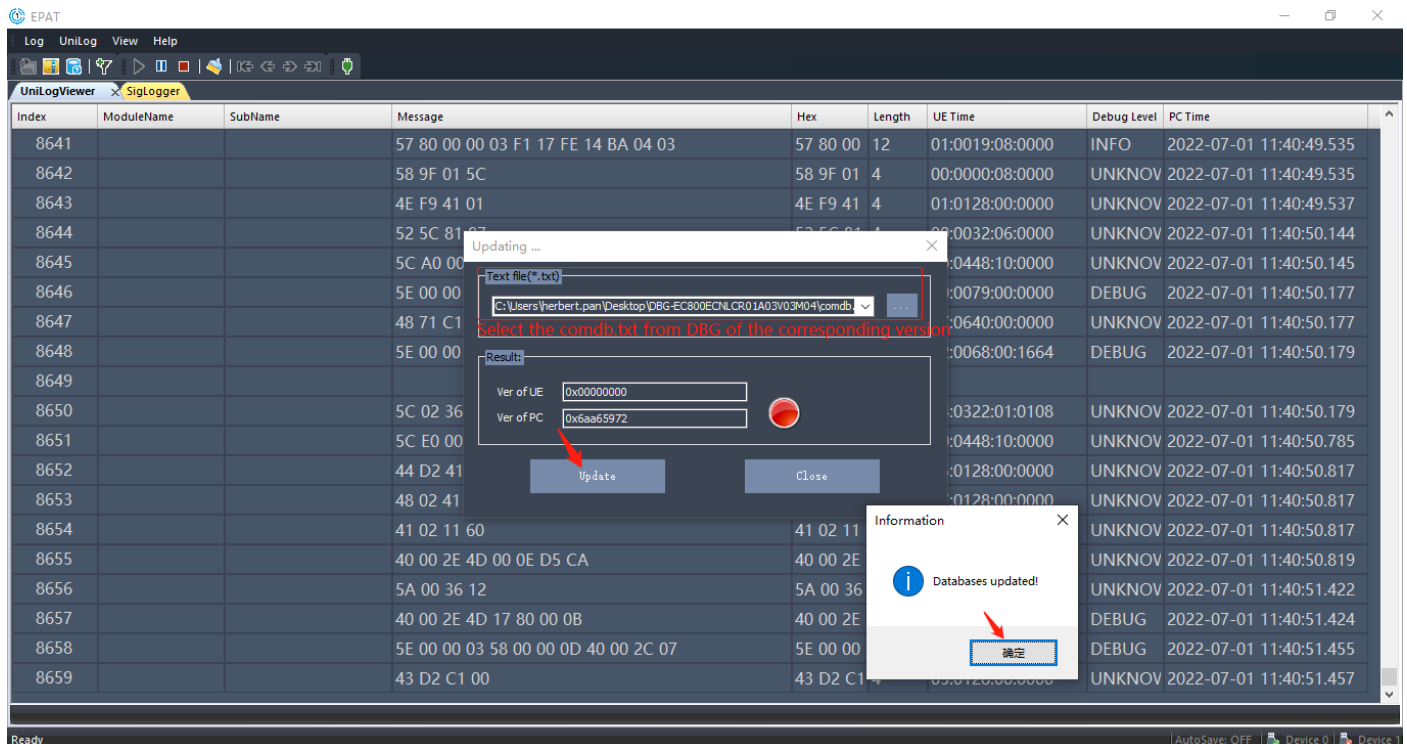
如果 message 中输出大量 hex 码，需导入或更新 DBG 文件；如下图所示；

If a lot of HEX codes are output in Message, the DBG file needs to be imported or updated; As shown below;

Index	ModuleName	SubName	Message	Hex	Length	UE Time	Debug Level	PC Time
120			4D 40 C0 40	4D 40 C0 4	4	17:0640:00:0000	UNKNOV	2022-07-01 11:20:40.592
121			5C E0 00 00	5C E0 00 4	4	00:0448:10:0000	UNKNOV	2022-07-01 11:20:41.198
122			5E 00 00 00 52 A8 93 E4 04 18 80 1C	5E 00 00 12	12		UNKNOV	2022-07-01 11:20:41.229
123			4A 59 40 40	4A 59 40 4	4	17:0640:00:0000	UNKNOV	2022-07-01 11:20:41.232
124			52 54 67 67	52 54 67 4	4	00:0032:06:0000	UNKNOV	2022-07-01 11:20:41.838
125			5E 00 00 01 78 80 00 00 7E 14 74 5E E2 C4 00 04	5E 00 00 16	16	14:0192:00:0000	DEBUG	2022-07-01 11:20:41.850
126			57 80 00 00 1E 00 00 00	57 80 00 8	8	01:0019:08:0000	DEBUG	2022-07-01 11:20:41.869
127			5E 24 0E 02 5F 90 00 37 F0 00 31 80	5E 24 0E 12	12	02:0901:10:0000	DEBUG	2022-07-01 11:20:41.870
128			49 51 C0 41	49 51 C0 4	4	01:0128:00:0000	UNKNOV	2022-07-01 11:20:41.871
129			4C C9 C0 40	4C C9 C0 4	4	17:0640:00:0000	UNKNOV	2022-07-01 11:20:41.872
130			5C A0 00 00	5C A0 00 4	4	00:0448:10:0000	UNKNOV	2022-07-01 11:20:42.478
131			45 C2 40 40	45 C2 40 4	4	17:0640:00:0000	UNKNOV	2022-07-01 11:20:42.512
132			41 42 C0 40	41 42 C0 4	4	05:0128:00:0000	UNKNOV	2022-07-01 11:20:43.152
133			4A DA C0 40	4A DA C0 4	4	17:0640:00:0000	UNKNOV	2022-07-01 11:20:43.152
134			5E 00 00 03 42 1A 34 07 04 58 80 34	5E 00 00 12	12	31:1023:15:2047	UNKNOV	2022-07-01 11:20:43.790
135			5E 00 00 03 42 78 B4 07 04 18 1A 34	5E 00 00 12	12	02:0068:00:1536	UNKNOV	2022-07-01 11:20:43.791
136			46 B3 40 41	46 B3 40 4	4	01:0128:00:0000	UNKNOV	2022-07-01 11:20:43.791
137			4B EB 40 41	4B EB 40 4	4	01:0128:00:0000	UNKNOV	2022-07-01 11:20:43.792
138			5E 00 00 03 45 38 34 07 04 78 20 38	5E 00 00 12	12	00:0064:00:0000	UNKNOV	2022-07-01 11:20:43.794

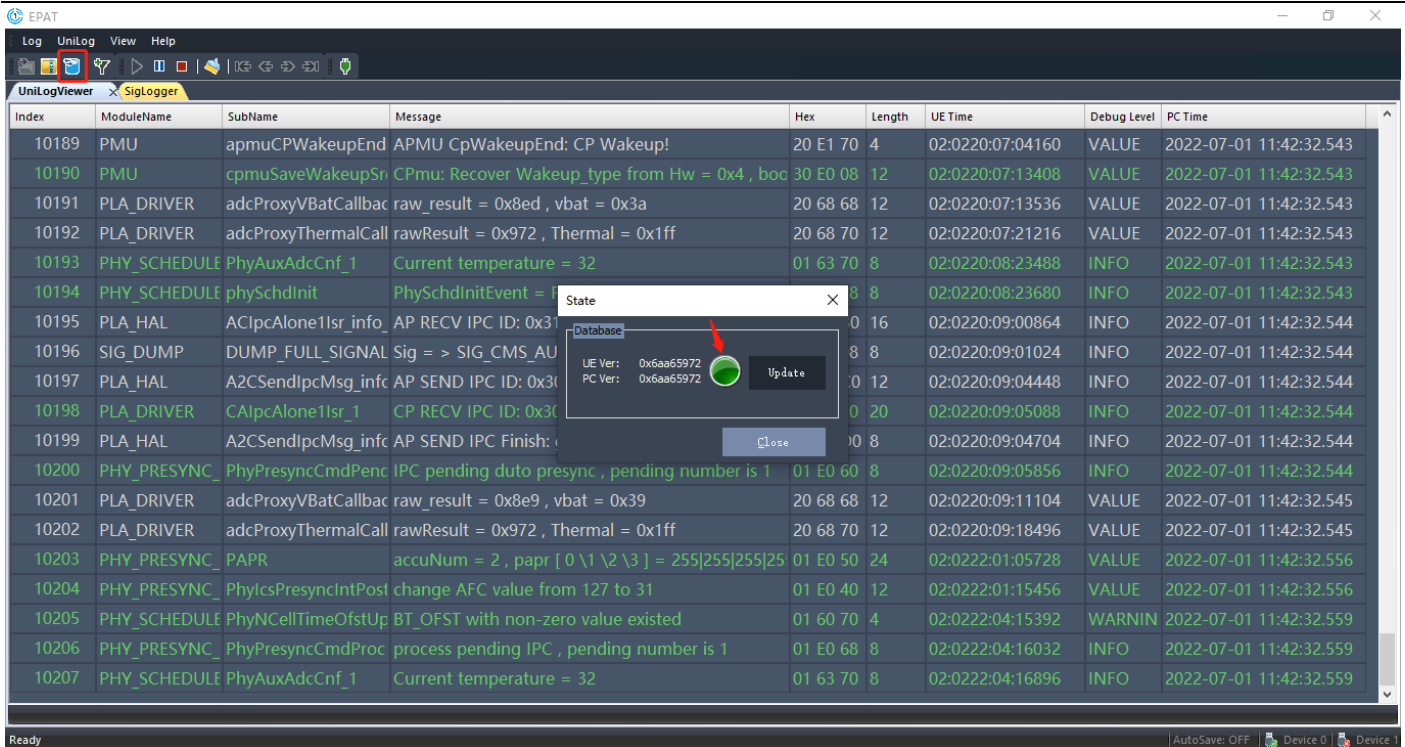
点击如下图所示工具栏中的图标 , 选择模组对应固件版本的 DBG 文件(向 Quectel 或 FAE 助理申请), 导入 comdb.txt 文件;

Click the icon in the toolbar as shown below, select the DBG file (Apply to Quectel or FAE Assistant) of the corresponding firmware of the module, and import/update the comdb.txt file.



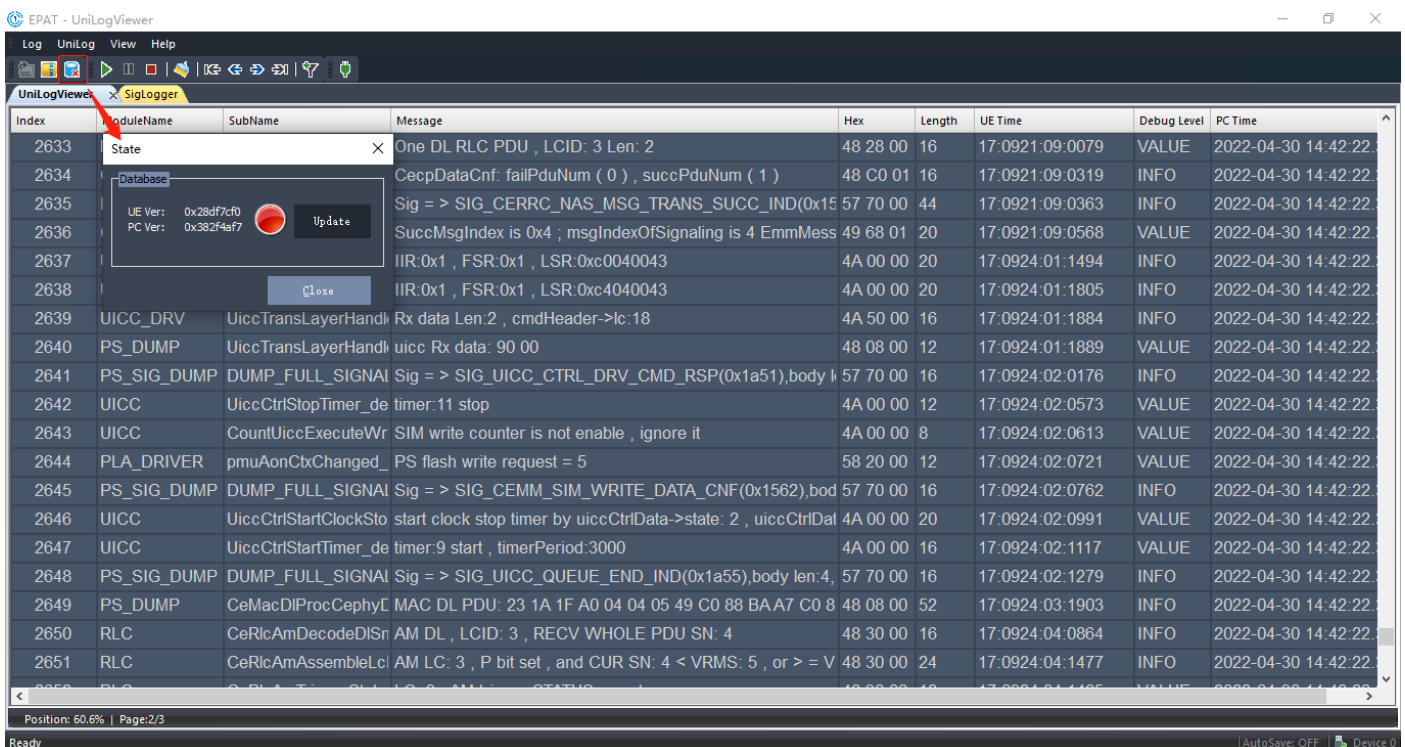
The screenshot shows the EPAT software interface with the UniLogViewer window. The log entries are as follows:

Index	ModuleName	SubName	Message	Hex	Length	UE Time	Debug Level	PC Time
8641			57 80 00 00 03 F1 17 FE 14 BA 04 03	57 80 00 12	12	01:0019:08:0000	INFO	2022-07-01 11:40:49.535
8642			58 9F 01 5C	58 9F 01 4	4	00:0000:08:0000	UNKNOV	2022-07-01 11:40:49.535
8643			4E F9 41 01	4E F9 41 4	4	01:0128:00:0000	UNKNOV	2022-07-01 11:40:49.537
8644			52 5C 81 07	52 5C 81 4	4	00:0032:06:0000	UNKNOV	2022-07-01 11:40:50.144
8645			5C A0 00 00	5C A0 00 4	4	00:0448:10:0000	UNKNOV	2022-07-01 11:40:50.145
8646			5E 00 00 00	5E 00 00 4	4	00:0079:00:0000	DEBUG	2022-07-01 11:40:50.177
8647			48 71 C1 00	48 71 C1 4	4	00:0640:00:0000	UNKNOV	2022-07-01 11:40:50.177
8648			5E 00 00 00	5E 00 00 4	4	00:0068:00:1664	DEBUG	2022-07-01 11:40:50.179
8649								
8650			5C 02 36	5C 02 36 4	4	00:0322:01:0108	UNKNOV	2022-07-01 11:40:50.179
8651			5C E0 00 00	5C E0 00 4	4	00:0448:10:0000	UNKNOV	2022-07-01 11:40:50.785
8652			44 D2 41	44 D2 41 4	4	00:0128:00:0000	UNKNOV	2022-07-01 11:40:50.817
8653			48 02 41	48 02 41 4	4	00:0128:00:0000	UNKNOV	2022-07-01 11:40:50.817
8654			41 02 11 60	41 02 11 4	4	00:0000:00:0000	UNKNOV	2022-07-01 11:40:50.817
8655			40 00 2E 4D 00 0E D5 CA	40 00 2E 4	4	00:0000:00:0000	UNKNOV	2022-07-01 11:40:50.819
8656			5A 00 36 12	5A 00 36 4	4	00:0000:00:0000	UNKNOV	2022-07-01 11:40:51.422
8657			40 00 2E 4D 17 80 00 0B	40 00 2E 4	4	00:0000:00:0000	DEBUG	2022-07-01 11:40:51.424
8658			5E 00 00 03 58 00 00 0D 40 00 2C 07	5E 00 00 12	12	00:0000:00:0000	DEBUG	2022-07-01 11:40:51.455
8659			43 D2 C1 00	43 D2 C1 4	4	00:0000:00:0000	UNKNOV	2022-07-01 11:40:51.457



如果导入的 DBG 文件与当前模组固件版本不匹配，DB 状态将变更如下图所示；

If the imported DBG file does not match the current module firmware, the DB status will change as shown below.



可以通过下图所示，选择 SigLogger 窗口，并且选择选项栏中 “SigLog→Only Show Protocol Signalling”，查看 NAS/AS 层消息；

AS shown below,select “SigLog→Only Show Protocol Signalling” in the SigLogger window, to view NAS/AS Signalling/message.

EPAT

Log SigLog View Help

UniLogViewer **SigLogger**

Index	UETime	Type	Message	PCTime
1418	12:0466:07:02432	PHY	Random Access: RaStage = RAR_RECVD	2022-07-02 10:09
1458	12:0468:00:24032	PHY	Random Access: RaStage = MSG3_TRANSMITTED	2022-07-02 10:09
1464	12:0468:01:18240	PS	PRACH SUCC	2022-07-02 10:09
1468	12:0468:01:21152	PHY	Crnti Configured (RA SUCC) : cRnti = 61748	2022-07-02 10:09
1478	12:0468:02:10176	PS	RrcConnectionSetup	2022-07-02 10:09
1488	12:0468:02:30304	PS	RLC AM , LCID: 1 , pollPdu too large: 0xffff , cut to: 64	2022-07-02 10:09
1489	12:0468:03:00000	PS	RLC AM , LCID: 1 , pollByte too large: 0xffffffff , cut to: 100 kB	2022-07-02 10:09
1506	12:0468:03:29056	PS	RrcConnectionSetupComplete	2022-07-02 10:09
1545	12:0469:05:05856	PS	RrcConnectionSetup	2022-07-02 10:09
1546	12:0469:05:06240	PS	Invalid RrcConnectionSetup , RccState RCC_CONN_NORMAL(0x4)	2022-07-02 10:09
1565	12:0469:08:12128	P/A	AT CMD , URC: +CPIN: READY	2022-07-02 10:09
1567	12:0469:08:16352	P/A	AT CMD , URC: +QUSIM: 1	2022-07-02 10:09
1798	12:0476:00:03936	PHY	new speed est. data is invalid	2022-07-02 10:09
1927	12:0481:07:09696	PS	CONNECTED: SERV CELL (39148 , 204) : RSRP (-87) , RSRQ (-4) , SNR (31)	2022-07-02 10:09
2006	12:0485:01:19040	PS	UeCapabilityEnquiry	2022-07-02 10:09
2007	12:0485:01:22176	PS	ROHC shoule ALWAYS be supported for eMTC / Cat1!	2022-07-02 10:09
2009	12:0485:02:26464	PS	UeCapabilityInformation	2022-07-02 10:09
2064	12:0485:07:08928	PS	No simUsatDynCtx is available!	2022-07-02 10:09
2066	12:0485:07:19040	P/A	MW AON , PS DIAL AON info changed	2022-07-02 10:09
2105	12:0489:06:27168	PS	AM DL , recv a SN: 0 PDU , fall out of window: [1 ~ 513)	2022-07-02 10:09
2106	12:0489:06:27424	PS	LC: 1 , DL AM PDU SN: 0 , pBit: 1 , need to discard	2022-07-02 10:09
2107	12:0489:06:27520	PS	DL AM , discard PDU , and status report need	2022-07-02 10:09
2188	12:0491:05:18208	PS	SecurityModeCommand	2022-07-02 10:09
2222	12:0491:08:02320	PS	SecurityModeComplete	2022-07-02 10:09

Ready | AutoSave: OFF

EPAT

Log SigLog View Help

Export As pcap file

Find

Start Record

Pause Record

Stop Record

Clear Viewer

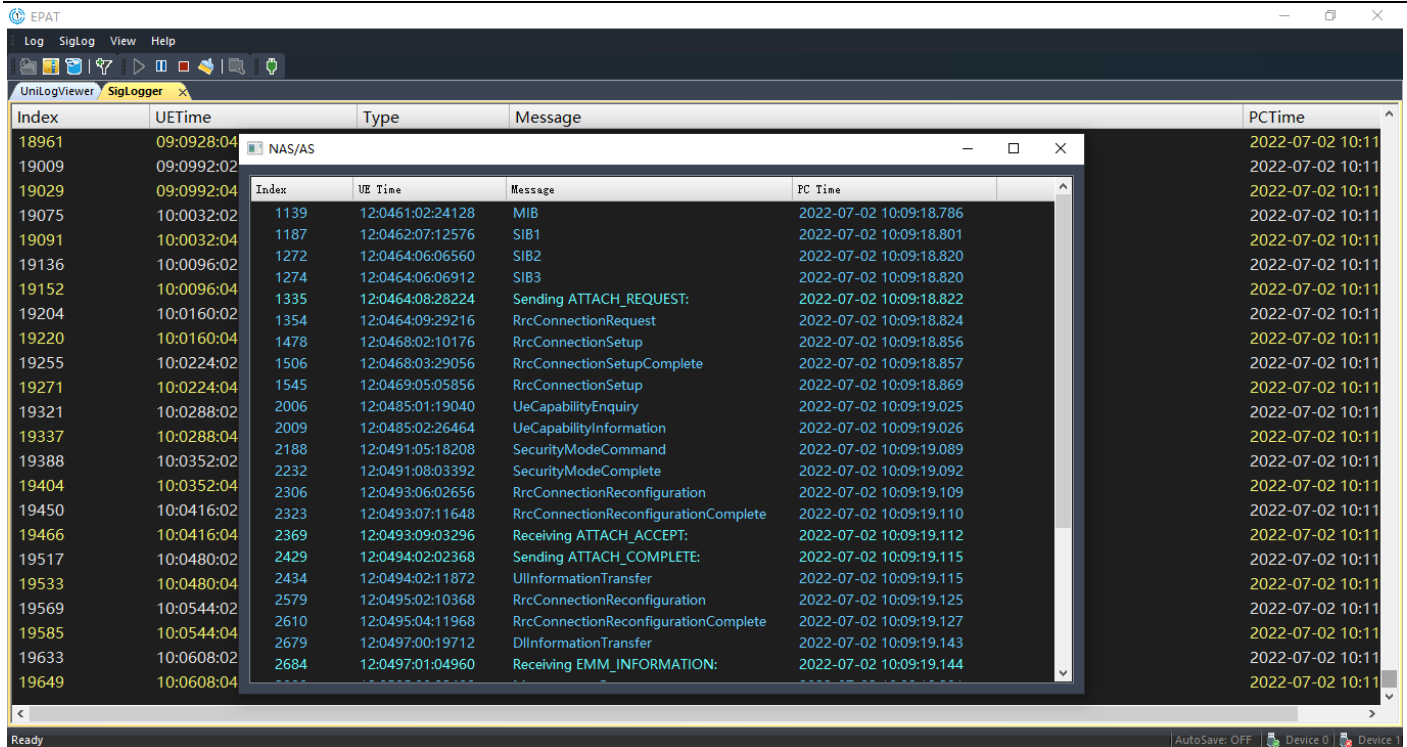
Save As Text

Only Show Protocol Signalling

Only Show Favorite Signalling

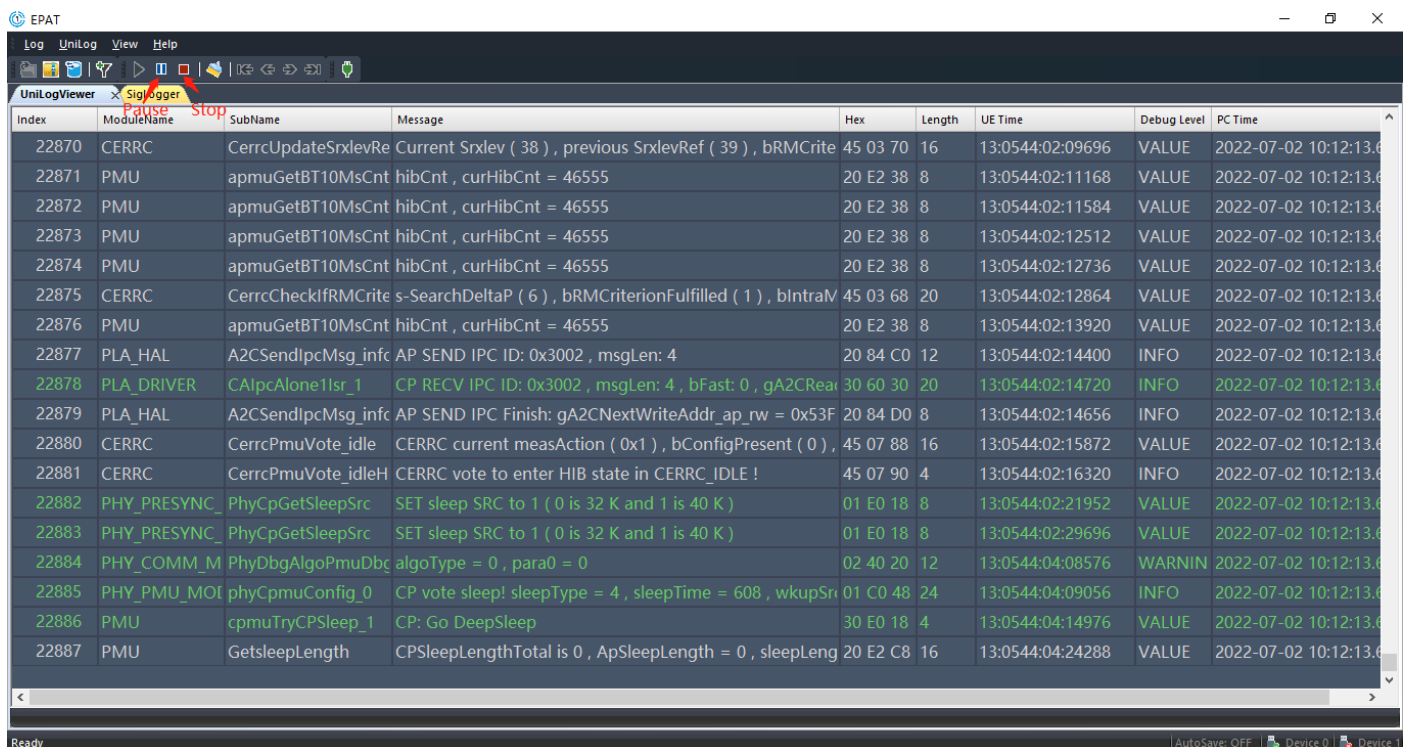
Index	UETime	Type	Message	PCTime
1508	06:0288:02:03456	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-88) , RSRQ (-4) , SNR (35)	2022-07-02 10:10
1509	06:0288:04:03712	PHY	algoType = 0 , para0 = 0	2022-07-02 10:10
1512	06:0350:01:21216	PHY	BT_OFST with non-zero value existed	2022-07-02 10:10
1514	06:0352:02:01216	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-88) , RSRQ (-4) , SNR (35)	2022-07-02 10:10
1515	06:0352:04:00992	PHY	algoType = 0 , para0 = 0	2022-07-02 10:10
1518	06:0414:01:19200	PHY	BT_OFST with non-zero value existed	2022-07-02 10:10
15194	06:0416:02:07808	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-88) , RSRQ (-4) , SNR (27)	2022-07-02 10:10
15210	06:0416:04:08448	PHY	algoType = 0 , para0 = 0	2022-07-02 10:10
15244	06:0478:01:19328	PHY	BT_OFST with non-zero value existed	2022-07-02 10:11
15253	06:0480:02:05408	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-88) , RSRQ (-4) , SNR (35)	2022-07-02 10:11
15269	06:0542:01:20864	PHY	algoType = 0 , para0 = 0	2022-07-02 10:11
15300	06:0544:04:08896	PHY	BT_OFST with non-zero value existed	2022-07-02 10:11
15320	06:0606:01:19360	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-88) , RSRQ (-4) , SNR (35)	2022-07-02 10:11
15336	06:0608:02:08128	PHY	algoType = 0 , para0 = 0	2022-07-02 10:11
15363	06:0608:04:08768	PHY	BT_OFST with non-zero value existed	2022-07-02 10:11
15383	06:0608:06:08512	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-87) , RSRQ (-4) , SNR (35)	2022-07-02 10:11
15399	06:0608:08:10240	PHY	algoType = 0 , para0 = 0	2022-07-02 10:11
15427	06:0608:10:11968	PHY	BT_OFST with non-zero value existed	2022-07-02 10:11
15447	06:0608:12:13712	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-88) , RSRQ (-4) , SNR (37)	2022-07-02 10:11
15463	06:0608:14:15456	PHY	algoType = 0 , para0 = 0	2022-07-02 10:11
15489	06:0608:16:17200	PHY	BT_OFST with non-zero value existed	2022-07-02 10:11
15509	06:0608:18:18944	PS	IDLE: SERV CELL (39148 , 204) : RSRP (-87) , RSRQ (-4) , SNR (35)	2022-07-02 10:11
15525	06:0608:20:20688	PHY	algoType = 0 , para0 = 0	2022-07-02 10:11

AutoSave: OFF | Device 0 | Device 1



通过如下图所示工具栏中的暂停或停止图标，可以暂停或停止抓取 Log；

the pause or stop icon in the toolbar as shown below,to pause or stop grabbing Log.



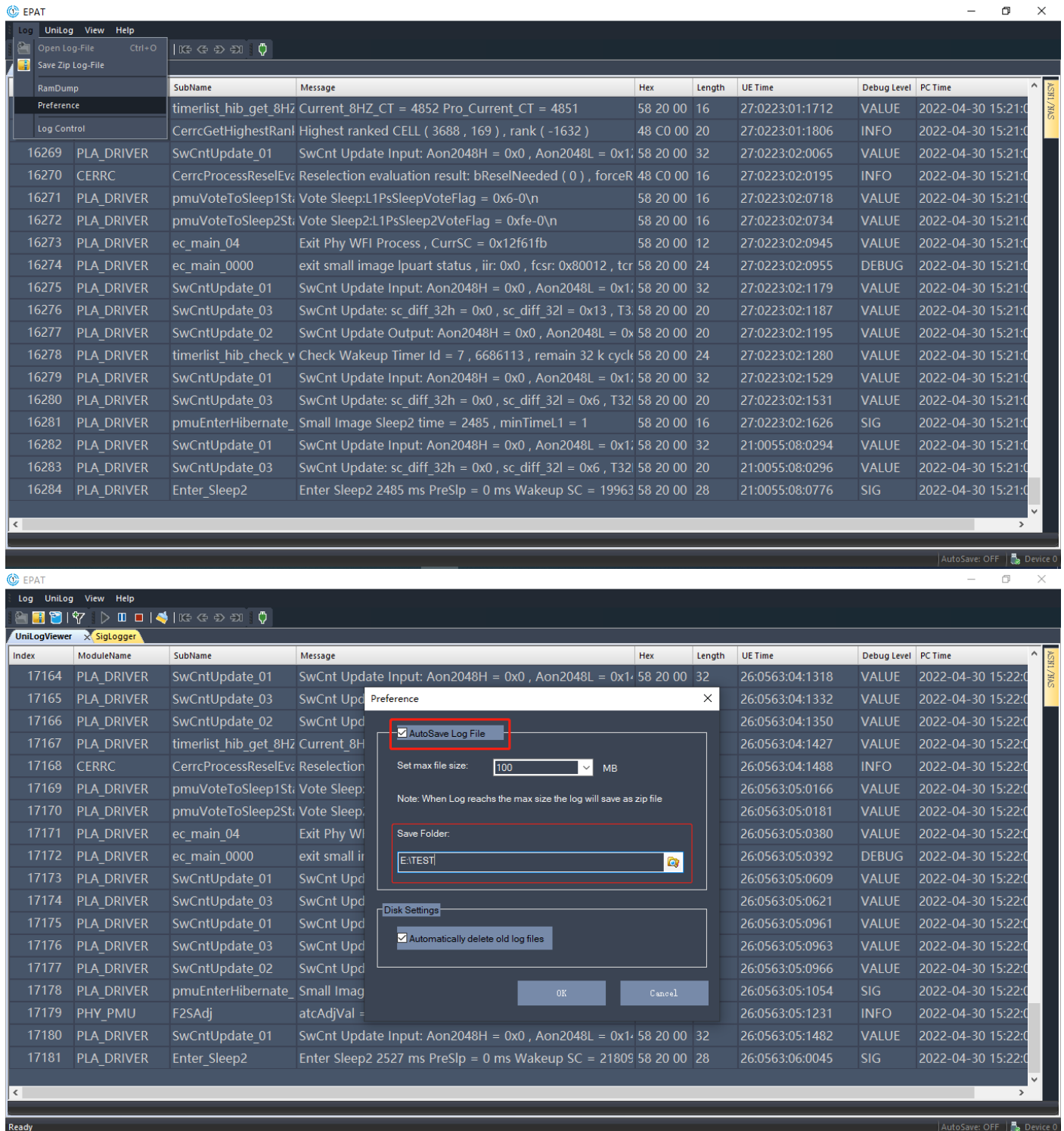
四、日志保存 (Save Log)

4.1 自动保存(Auto Save)

如下图所示，通过选项栏“Log→Preference”，在弹窗中选择自动保存选项和保存路径，以及配置保存最大文件大小；

(不推荐使用自动保存，当 Log 达到最大自动保存大小时才能输入至自动保存路径)

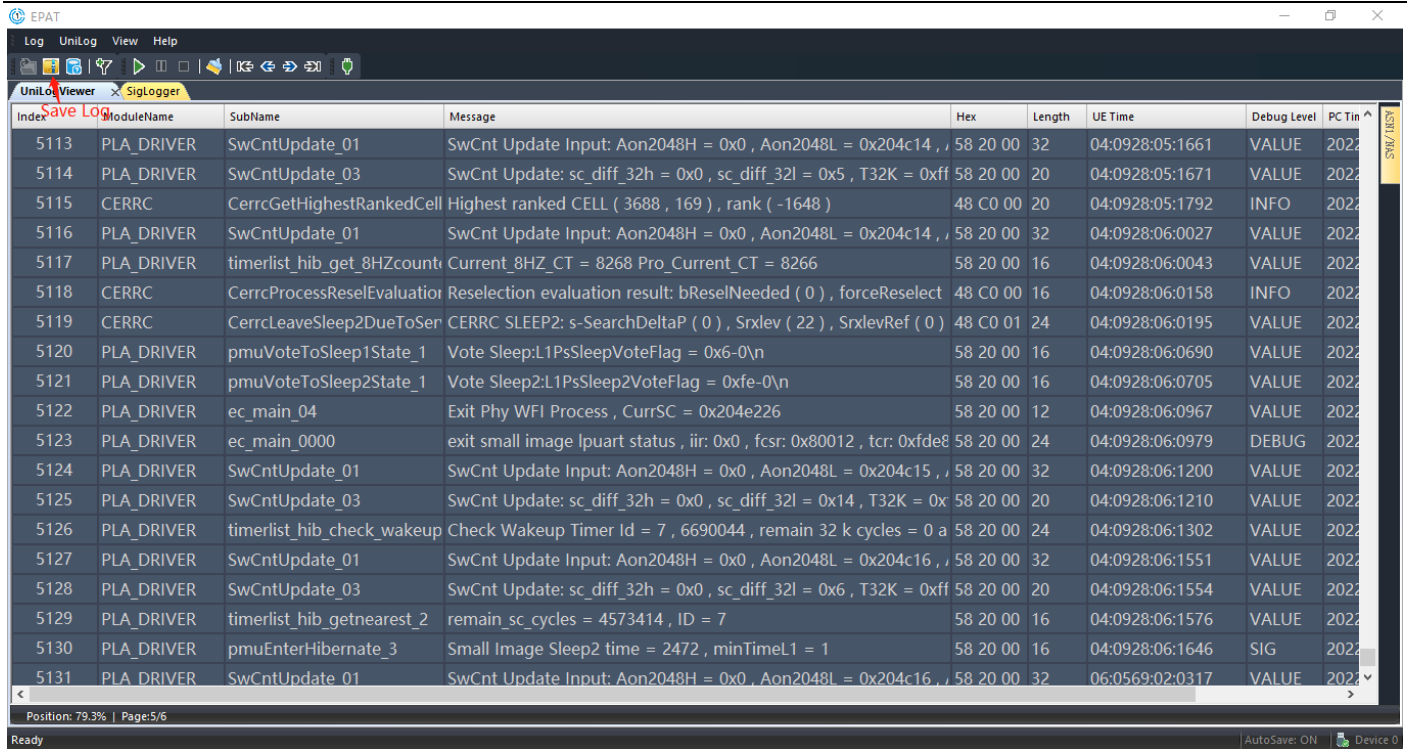
As shown below, by the option bar "Log→Preference", select the automatic save option and save path in the popup window, and configure the maximum file size to save. (Automatic saving is not recommended, When Log meets the maximum autosave size, it can only be output to the autosave path)



4.2 手动保存(Manual save)

点击如下图工具栏图标，或 "Ctrl+S"，或选择 "Log→Save Zip Log-File"，保存 Log；

Click the toolbar icon in the below, or "Ctrl+S", or choose "Log→Save Zip log-file" to Save the Log;



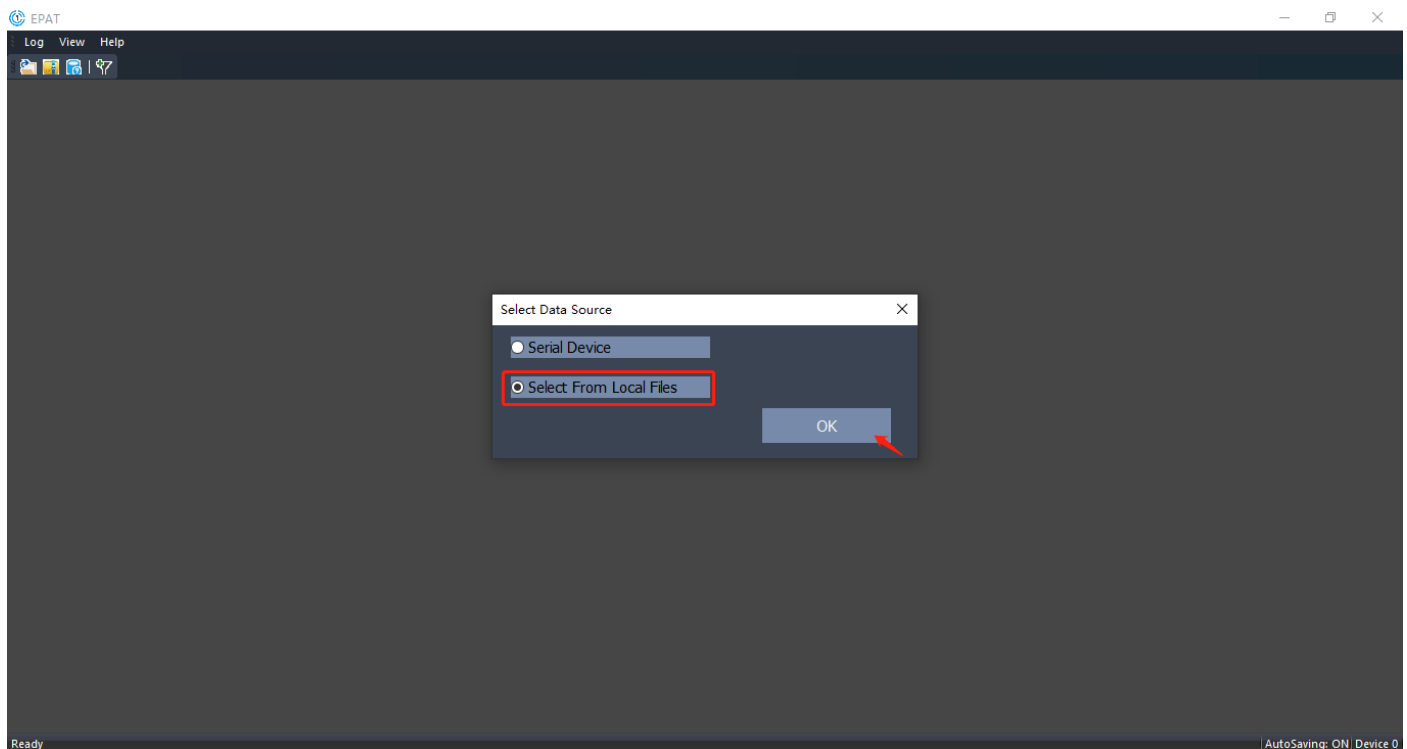
Index	ModuleName	SubName	Message	Hex	Length	UE Time	Debug Level	PC Tin
5113	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x0, Aon2048L = 0x204c14, ,	58 20 00	32	04:0928:05:1661	VALUE	2022
5114	PLA_DRIVER	SwCntUpdate_03	SwCnt Update: sc_diff_32h = 0x0, sc_diff_32l = 0x5, T32K = 0xff	58 20 00	20	04:0928:05:1671	VALUE	2022
5115	CERRC	CerrcGetHighestRankedCell	Highest ranked CELL (3688 , 169) , rank (-1648)	48 C0 00	20	04:0928:05:1792	INFO	2022
5116	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x0, Aon2048L = 0x204c14, ,	58 20 00	32	04:0928:06:0027	VALUE	2022
5117	PLA_DRIVER	timerlist_hib_get_8HZcount	Current 8HZ_CT = 8268 Pro_Current_CT = 8266	58 20 00	16	04:0928:06:0043	VALUE	2022
5118	CERRC	CerrcProcessReselEvaluation	Reselection evaluation result: bReselNeeded (0) , forceReselect	48 C0 00	16	04:0928:06:0158	INFO	2022
5119	CERRC	CerrcLeaveSleep2DueToSer	CERRC SLEEP2: s-SearchDeltaP (0) , Srxlev (22) , SrxlevRef (0)	48 C0 01	24	04:0928:06:0195	VALUE	2022
5120	PLA_DRIVER	pmuVoteToSleep1State_1	Vote Sleep:L1PsSleepVoteFlag = 0x6-0\n	58 20 00	16	04:0928:06:0690	VALUE	2022
5121	PLA_DRIVER	pmuVoteToSleep2State_1	Vote Sleep2:L1PsSleep2VoteFlag = 0xfe-0\n	58 20 00	16	04:0928:06:0705	VALUE	2022
5122	PLA_DRIVER	ec_main_04	Exit Phy WFI Process, CurrSC = 0x204e226	58 20 00	12	04:0928:06:0967	VALUE	2022
5123	PLA_DRIVER	ec_main_0000	exit small image lpuart status , iir: 0x0 , fcsr: 0x80012 , tcr: 0xfde8	58 20 00	24	04:0928:06:0979	DEBUG	2022
5124	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x0, Aon2048L = 0x204c15, ,	58 20 00	32	04:0928:06:1200	VALUE	2022
5125	PLA_DRIVER	SwCntUpdate_03	SwCnt Update: sc_diff_32h = 0x0, sc_diff_32l = 0x14, T32K = 0x	58 20 00	20	04:0928:06:1210	VALUE	2022
5126	PLA_DRIVER	timerlist_hib_check_wakeup	Check Wakeup Timer Id = 7 , 6690044 , remain 32 k cycles = 0 a	58 20 00	24	04:0928:06:1302	VALUE	2022
5127	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x0, Aon2048L = 0x204c16, ,	58 20 00	32	04:0928:06:1551	VALUE	2022
5128	PLA_DRIVER	SwCntUpdate_03	SwCnt Update: sc_diff_32h = 0x0, sc_diff_32l = 0x6, T32K = 0xff	58 20 00	20	04:0928:06:1554	VALUE	2022
5129	PLA_DRIVER	timerlist_hib_getnearest_2	remain_sc_cycles = 4573414 , ID = 7	58 20 00	16	04:0928:06:1576	VALUE	2022
5130	PLA_DRIVER	pmuEnterHibernate_3	Small Image Sleep2 time = 2472 , minTimeL1 = 1	58 20 00	16	04:0928:06:1646	SIG	2022
5131	PLA_DRIVER	SwCntUpdate_01	SwCnt Update Input: Aon2048H = 0x0 , Aon2048L = 0x204c16, ,	58 20 00	32	06:0569:02:0317	VALUE	2022

五、常见分析应用 (Common Analytical Application)

5.1 导入 LOG(Load Log)

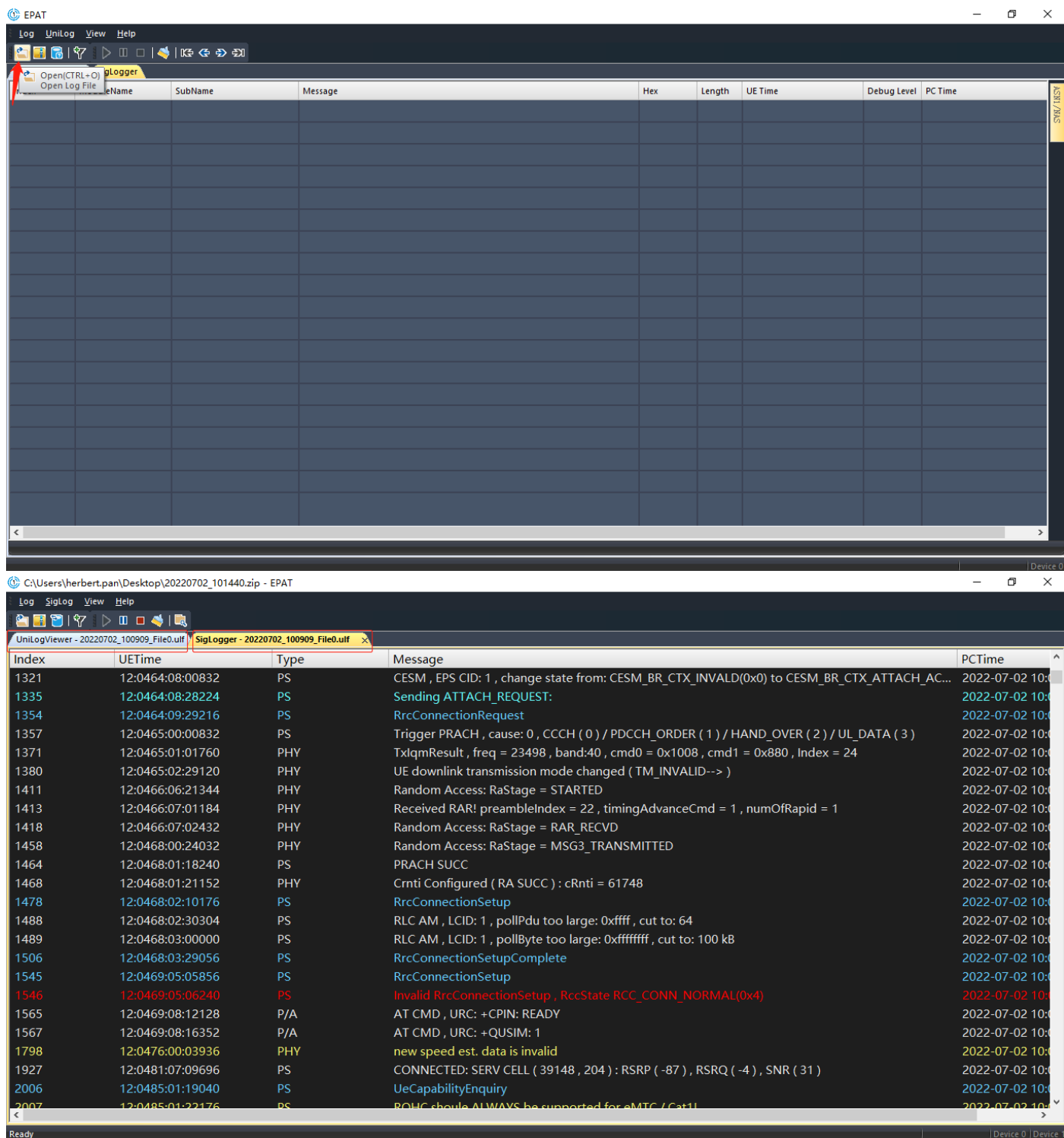
对输出的 LOG 进行分析时，需选择 “Select From Local Files” ,如下图；

To analyze the output logs, Select “Select From Local Files”, as shown below.



可以通过如下图所示工具栏的图标或选项栏 “Log→Open Log File”，导入分析 LOG 文件；

To import the analysis Log File through the toolbar icon or option bar "Log→Open Log File" as shown below.

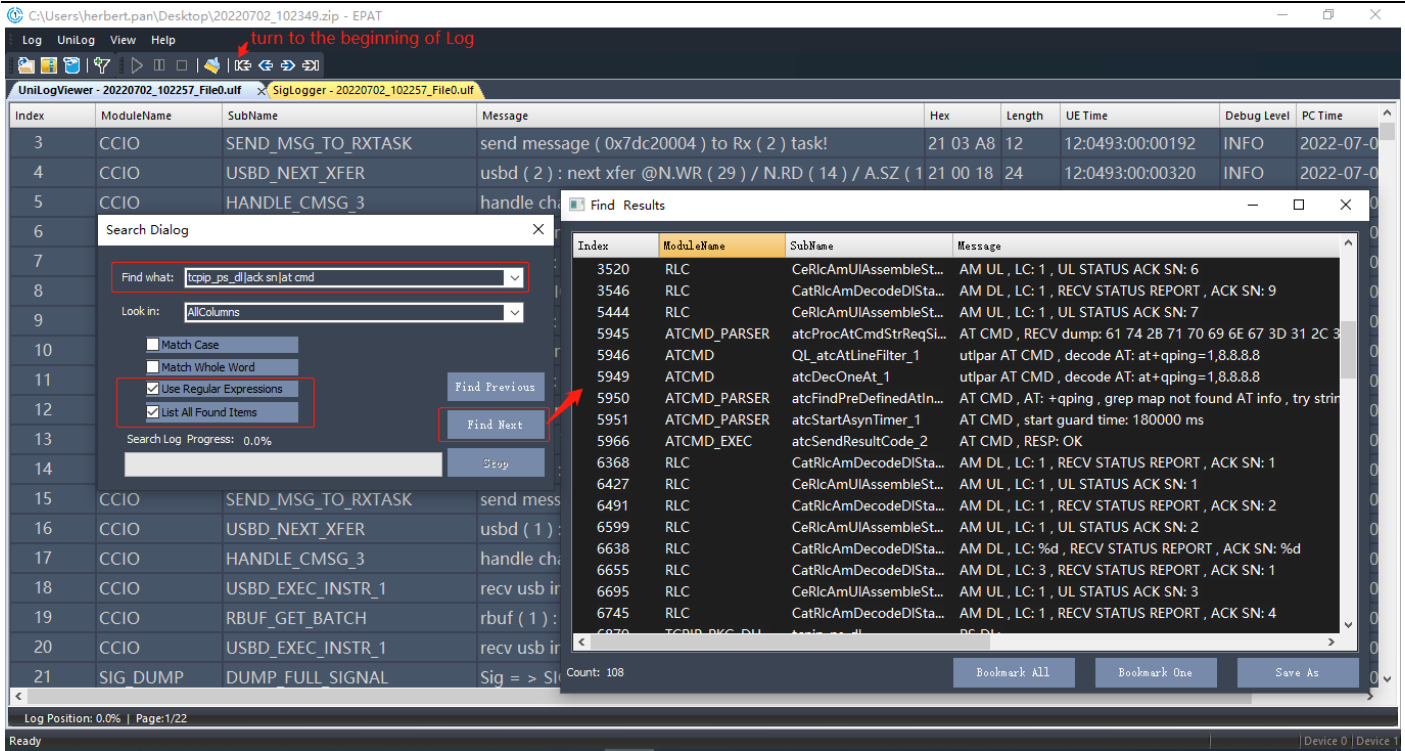


5.2 搜索/过滤(Search/Filter Log)

通过快捷方式 "Ctrl+F" 打开搜索/过滤窗口, 如下图; 勾选下图选项, 可以通过单竖线 "|" 正则式过滤多个关键字;

Open the search/filter window by shortcut "Ctrl+F", as shown below. to select the below options, through single vertical bar

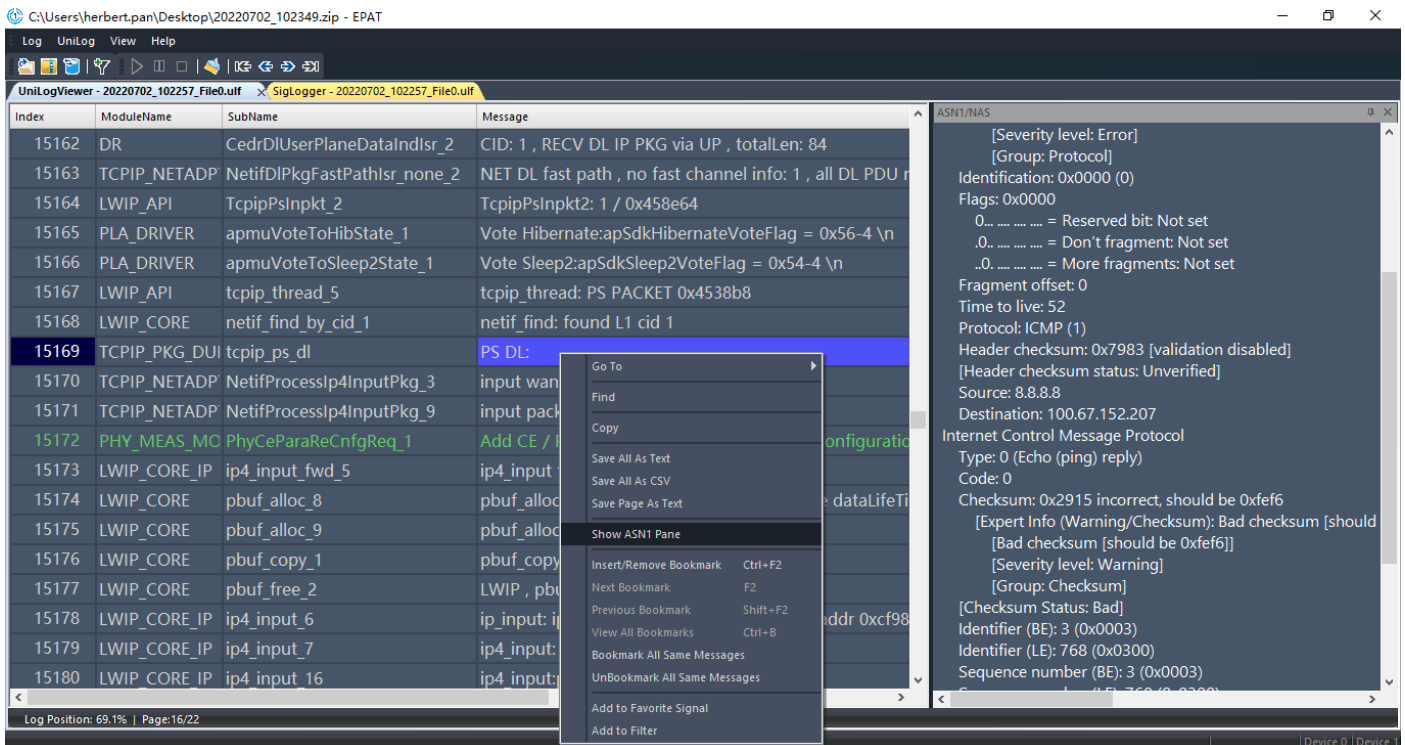
"|" regular filter multiple keywords;



5.3 数据解析(Data Analysis)

在 UniLogViewer 窗口，选择 ASN1/NAS 类型 message 消息，右击选择 “Show ASN1 Pane”，如下图；可以对 message 消息中的 ASN1/NAS 消息进行解析，可以更加深入地进行数据分析；

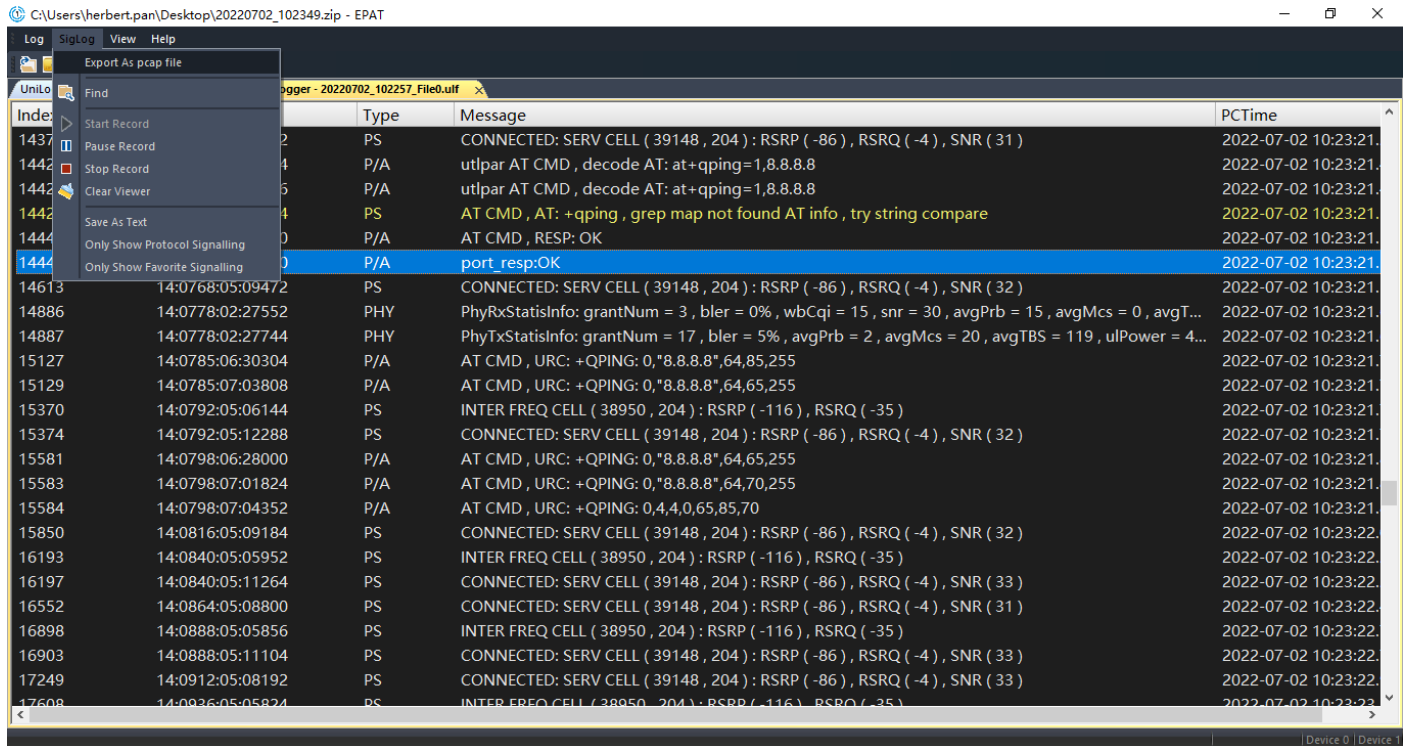
In the UniLogViewer window, select the ASN1/NAS type message, right click and choose "Show ASN1 Pane", as shown below;
ASN1/NAS message in messages can be parsed to further analyze data.



5.4 导出 Pcap(Output Pcap)

选择 SigLogger 窗口，通过选项栏 “SigLog→Export As pcap file”，如下图；可以导出 Pcap 文件，可以用于 Wireshark 分析；

To select SigLogger window and click the option bar "SigLog→Export As PCAP File", As shown below. You can export Pcap files for Wireshark analysis.



5.5 输出 Dump(Output Dump)

通过 EPAT 获取 dump 日志，需要执行以下指令，使能 dump 日志输出，获取后，dump 日志默认保存在 EPAT_Vxxx\Bin\RamDump 路径下；建议获取 dump 日志后，关闭 dump 输出。

To obtain dump logs by EPAT, you need to run the following AT command to enable dump log output. After obtaining dump logs, dump logs are saved in the EPAT_Vxxx\Bin\RamDump path by default. You are advised to disable the dump output after obtaining dump logs.

EC600E/EC800E/EC801E/EC800Z

执行下面指令，打开 Debug 输出：

```
AT+ECPCFG="faultAction",0 //Enable USB DIAG output dump
```

建议抓取 Dump Log 任务结束后，关闭 Debug 输出：

```
AT+ECPCFG="faultAction",4 //Disable USB DIAG output dump
```

EG800Q/EG915Q/EG916Q

执行下面指令，打开 Debug 输出：

```
AT+QCPCFG="faultAction",0           //Enable USB DIAG output dump
```

建议抓取 Dump Log 任务结束后，关闭 Debug 输出：

```
AT+QCPCFG="faultAction",4           //Disable USB DIAG output dump
```

手动触发 dump 测试指令：

The AT command for Test to trigger module dump:

EC600E/EC800E/EC801E/EC800Z

```
AT+ECSYSTEST=assert
```

Or

```
AT+QDBGCFG= "system/abort"
```

EG800Q/EG915Q/EG916Q

```
AT+QCSYSTEST=assert
```

Or

```
AT+QDBGCFG= "system/abort"
```

六、注意事项 (Notes)

如果当前调试或分析的问题可能由于注册网络原因导致，请在连接 EPAT 后，需执行 AT+CFUN=0 / AT+CFUN=1 或连接后重启模组/终端，抓取完整的注册网络过程，以此判断当前注册网络可能的原因。

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