Open AT® Software Suite v2.10
Release Note

Reference : **WM_DEV_OAT_CRN_020**
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Document Information

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1 Introduction

1.1 Related Documents

[1]	ADL User Guide for Open AT® OS v6.10	WM_ASW_OAT_UGD_080
[2]	Open AT® IP Connectivity Development Guide	WM_DEV_OAT_UGD_075-002
[3]	Open AT® FW R72 Release Note	WM_PGM_OASIS_CRN_003
[4]	AT Commands User Guide for Wavecom IP 5.01	WM_DEV_OAT_UGD_076-002
[5]	WIPSoft v5.01 Release Note	WM_DEV_WIP_CRN_001
[6]	eRide GPS Core Interface	WM_DEV_C-GPS_IFS_003
[7]	C-GPS Development Kit User Guide	WM_DEV_C-GPS_UGD_001
[8]	Technical Specification for Multiplexer protocol	3G TS 27010
[9]	Tools Manual for Open AT® IDE v1.07	WM_DEV_OAT_UGD_045
[10]	Jamming Detection Manual	WM_DEV_SEC_UGD_001
[11]	Migration document	WM_DEV_WUP_MEM_022
[12]	C-GPS OPUS III Development Kit User Guide	WM_DEV_CGPS3_UGD_001-002
[13]	Open AT® dynamic progamming with LUA reference manual	Included within the SDK

1.2 Delivered Version Definition

This definition lists all modifications since the **Open AT® Software Suite v2.02a Release.**

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1.3 Correction Severity Levels

The *Severity* values have the following meaning:

- 1: Critical
- 2: Major
- 3: Minor
- 4: Improvement

1.4 Open AT® Software Suite 2.10 SDK Content

- Open AT® IDE v1.07 built on Eclipse™
- Open AT® OS v6.10
- Open AT® FW R72
- Wavecom TCP/IP and Internet v5.00 Plug-Ins version
- Open AT® C-GPS v1.07 Plug-In
- Open AT® C-GPS v3.06 Plug-In
- Open AT® GR v2.03 Plug-In
- Open AT® LUA v1.00 Plug-In
- CMUX tool V2900

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2 Open AT® Software Suite 2.10 New Services and Modified Interfaces

2.1 Open AT® OS

2.1.1 New services and Interfaces break

For more information, please refer to Open AT® OS ADL Update

Please see the Open AT® OS restrictions.

2.2 Open AT® TCP/IP and Internet Plug-Ins

New feature WIP:

- IP route APIs
- IP tunnel interfaces
- Read and write raw IP datagrams
- Ability to control retries
- TCP/IP Gateway - Static Routing
- MMS support
- SNMP support

NB: All features need the “ip_full” commercial feature activation

For more information, please refer to Open AT® IP Connectivity Development Guide [2] and .AT Commands User Guide for Wavecom IP V5.00 [4]

2.3 Open AT® C-GPS OPUS III Plug-In

The release provides GPS feature on OPUS 3.

The source files for 3 samples are provided: Simple sample, QueryApp sample, QueryAppAiding sample.

This plug-in is multi OS and Multi hardware platforms.

NB: See restriction for Query App and QueryAppAiding

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2.4 Open AT® LUA Plug-In

Wavecom introduces support for dynamic language programming on embedded devices, with Open AT Lua. Check Open AT® dynamic progamming with LUA reference manual [13] for more details

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3 Open AT® Firmware R72

3.1 Delivery

The Open AT® Firmware R72 is delivered on the SDK for WMP100/Q2686/Q2687 Wireless CPU® in the Firmware delivery directory.

Be careful, if the original FW is not the R72, it is mandatory to follow the instructions of the document describing how to migrate to R72, before downloading the dwl files provided for the FW R72 [11]. Otherwise an error message occurs concerning a bad header format.

3.2 Corrections

Please refer to Open AT® Firmware R72 full Release Note (see document [3]) for more information about AT commands related to new features and corrections.

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4 Open AT® OS v6.10 Update

4.1 Open AT® OS ADL API Update

4.1.1 New Features

Id	Severity	Description (What/When)	Interface Change
NEW45751	4-enhancement	[ADL Samples] RDMS Provisioniong and Monitoring	yes
NEW46498	4-enhancement	[OAT] New API required to handle SIM PIN - step 1 and 2	yes
NEW47750	4-enhancement	[ADL][OASiS 2.10 - RQMT 730] new synchronization object: OS EVENT handling	yes
NEW47755	4-enhancement	[ADL][OASiS 2.10 - RQMT 703] Response time to interruption up to 20µs	yes
NEW47764	4-enhancement	[OASiS 2.10 - RQMT 637] Wireless CPU compatibility: BSP Audio adaptation	yes
NEW47801	4-enhancement	RVDS support for OS 6.10 libs	no
NEW47803	4-enhancement	[OASiS 2.10 - RQMT 630] RAM not cleared after a reset	yes
NEW47961	4-enhancement	[OS/ADL]Provide access to UARTs interface pattern in ADL	yes
NEW47962	4-enhancement	[OS sample] Provide access to UARTs interface pattern in ADL	no
NEW47968	4-enhancement	[OASiS 2.10 - RQMT 630] RAM not cleared after a reset	yes
NEW47969	4-enhancement	[OASiS 2.10 - RQMT 630] RAM not cleared after a reset	no
NEW48145	4-enhancement	RVDS support for OS 6.10 Samples	no
NEW48682	4-enhancement	Full GSM Spectrum Radio Information	yes
NEW49184	4-enhancement	[ADL] Secured ORBCOMM ID storage	yes

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4.1.2 Corrections

Id	Severity	Description (What/When)	Interface Change
ANO47297	1-high	"ADL_SIM_EVENT_PIN_NO_ATTEMPT" is only received for pin code sent with adl_simSubscribe() or adl_simEnterPIN() but not with pin code sent from external.	no

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5 Plug-Ins Update

5.1 Open AT® TCP/IP and Internet Plug-Ins

5.1.1 New Features

Id	Severity	Description (What/When)	Interface Change
NEW44595	4-enhancement	[WIP Samples] add sample for Fastrack IESM Ethernet board	no
NEW45714	4-enhancement	[Security Plug-in Step 1] RQMT_556 : HTTP on SSL	no
NEW45944	4-enhancement	[WIP] IP route APIs	yes
NEW45951	4-enhancement	[WIP] IP tunnel interfaces	yes
NEW47822	4-enhancement	[WIP] Read and write raw IP datagrams	no
NEW47827	4-enhancement	[WIP] Ability to control retries	no
NEW47828	4-enhancement	[WIP]: Router Feature - Static	no
NEW48126	4-enhancement	[WIP] TCP/IP Gateway - Static Routing	no
NEW49098	4-enhancement	[WIP] add MMS support	No
DEV48735	1-high	[WIP] add SNMP support	no

5.1.2 Corrections

Id	Severity	Description (What/When)	Interface Change
ANO46887	1-high	Application can't set the ethernet interface link configuration nor the promiscuous mode.	no
ANO48103	1-high	When a finalizer is specified for the HTTP SESSION channel, it is called prematuretly.	no

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6 Restrictions & Known Problems

6.1 Known Problems

The Open AT® OS v6.02, IDE v1.07, known problems are as follows:

Id	Description (What / When)
ANO36363	When an Open AT® application is running, after a reset (AT+CFUN=1), +WIND: 0/13/13/14 indications are returned to external application even if this application doesn't sent AT+WIND=<value>. These indications should not be returned (only internal to Open AT®).
CUS40027	Application is not able to subscribe to AT commands that are subscribed by ADL, ref : "Inner AT commands Configuration" paragraph in ADL Documentation.
ANO39333	The RTE mode is not working on Windows VISTA: the RTE application is frozen and does not respond anymore.
ANO36583/ ANO41818	User can't use adl_atCmdSubscribe to subscribe to a command beginning by "ATA", "ATD" or "ATH" when call service is used.
CUS36584 CUS36366 CUS41816	Commands such as ATA, ATH and ATD can not be filtered using the API adl_atCmdSubscribe (), when FCM, Call and/or SIM services are running.
ANO36586/ ANO41821	Wireless CPU® may reset, when a huge number of bad formatted AT commands (e.g. a lot of commands are sent with 2 \r at the end) are sent from an external application.
ANO36357/ ANO41811	A GPIO is firstly subscribed as an output, but requiring a polling process. If it is set as an input (using SetDirection), INPUT_CHANGED events are never generated. If it is firstly subscribed as an input, INPUT_CHANGED events are correctly generated, even after a direction change.
ANO35826	Open AT® project creation systematically fails if some special characters are used for project name (&,|) in the Wizard.
CUS36693 CUS36689 CUS41832	When AT+CREG? is sent from an external application after subscription to this AT command, +CREG response is received twice because the AT+CREG? is automatically subscribed internally by application. Hence, there are two different subscriptions for the same command. This is an ADL limitation which is specified in chapter 2.4 "ADL limitations" in the ADL user guide.
CUS39061/ CUS41844	RI behavior (configured through AT+WRIM command) is not the same when an Open AT® application is running or not. This behavior should be independent of the application execution.
CUS36708/ CUS41833	Unexpected unsolicited +CREG & +CGREG events are sent by the Wireless CPU® when an embedded application is running and the AT&W command is used.

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Id	Description (What / When)
CUS38906/ CUS38905/ CUS41843	Service SIM of ADL is not in a good state when the AT+CPIN=XXXX commands is sent by the external application too quickly. A workaround is to check the PIN status like ADL (AT+CPIN?), when +SIM PIN is received wait for 1 second in order to let ADL subscribe to SIM event and then verify the PIN code. The +CME ERROR: 811 will disappear.
ANO38485/ ANO41841	When using the CMUX feature, if an application tries to send unsolicited responses too early (e.g. in the adl_main function), these ones should not be displayed on DLC ports, since they are not opened yet. As a workaround, the application should wait for the CMUX ports to be opened (use adl_portIsAvailable).
CUS37359	On specific user system configurations, modifications performed during the Open AT® Software Suite installation (such as the JRE installation) are taken into account only after the computer restarts. The Setup engine is currently not able to detect such a restart need, and does not warn the user about it.
CUS36364/ CUS41815	An Open AT® application has no way to retrieve the current state of the ATE command on each external port.
ANO36593/ ANO41826	With the External_Storage sample, the chip writing process is not documented. Writing is limited to 32 data bytes, so only up to 32 data bytes can be written in a single AT command operation; all additional bytes will be ignored.
ANO43290	When a task is declared with a really too short value (e.g. 256), the Wireless CPU® resets immediately with a 190 exception.
ANO44244	Backtrace occurs when wm_sprintf( ) is using with a local or external variable in low level IRQ handler
CUS44263	If the customer tries to unsubscribe the osa service during SIM initialization, he gets the error message ADL_RET_ERR_BAD_STATE.
CUS37359	On specific user system configurations, modifications performed during the Open AT® Software Suite installation (such as the JRE installation) are taken into account only after the computer restarts. The Setup engine is currently not able to detect such a restart need, and does not warn the user about it.
CUS41433	When the application subscribes to SMS service, if the Wireless CPU® receives a "+CMTI" indication before "+WIND: 16" indication, then the SMS handler is not called and it's not notified for the other SMS received later.
CUS41819	Commands such as ATA, ATH and ATD can not be filtered using the API adl_atCmdSubscribe (), when FCM, Call and/or SIM services are running.
CUS41844	RI behaviour (configured through AT+WRIM command) is not the same when an Open AT® application is running or not. This behaviour should be independant of the application execution.
CUS42857	Sometimes, in RTE under Eclipse IDE, the linker crashes and the application is not completely built.

Open AT ® OS :

The OAT Link address is now 0x260000

Open AT® application built with a previous version than Open AT® Software Suite 2.10 will not work with the firmware R72.

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As a result it is mandatory to use firmware R72, with every Open AT® application based on the Open AT® Software Suite v2.10. (please refer to the document describing how to download R72 [11]).

6.2 Open AT® TCP/IP and Internet Plug-Ins Restrictions

Id	Description (What / When)
DEV36615	When 100 mails are stored in the maildrop, the getList() may result in a reset of the Wireless CPU®.
ANO36804	In some cases, writing on a socket already shut down doesn't cause any error.
ANO35171	When GSM bearer is used, ATH from external terminal stops the bearer link.
CUS39557	GSM data call not handled properly when a TCP data channel is already established.
CUS47469	Using WIP lib and using PPP bearer (e.g. over UART) it is not possible to switch to AT mode using +++ escaping sequence.
CUS41717	When AT+WIPCFG=0 is executed to stop the stack, the Wireless CPU® resets if the FTP/SMTP/POP3/HTTP session is active. Work Around: before closing stack using +WIPCFG=0, sockets/sessions should be closed first (using +WIPCLOSE AT command), then bearers should be stopped (using +WIPBR AT command), then bearers should be closed (using +WIPBR AT command) then IP stack can be closed (using +WIPCFG=0 AT command).
CUS43493	Users can't get the reason why a TCP socket crashed from wip_getOpts().
ANO43438	On 32 Mbits flash memories, DOTA2 operation (full FW download) is not possible when the application embeds the WIPSoft library.
ANO42797	Wireless CPU® will reset when WIP _CEV_READ event occurs while reading a file from POP3 Server over GPRS.
CUS46367	WIP_COPT_POP3_MAILSIZE option will return the value received by the 'LIST n' command and no the 'RETR n' command.
ANO46900	[WIP / CMUX] It is impossible to create a PPP connexion on MUX UART
ANO47516	[WIP/RTE] RESET when launching an WIP application by RTE using ECLIPSE

SNMP sample is not provided

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6.3 Open AT® C-GPS Plug-In OPUS III

Id	Description (What / When)
ANO47943	Sample QueryAppAiding - Module reset after AT+ERAID
ANO48517	When an application tries to switch on "pass-thru" mode, if it changes the UART baud to dot it, then the application tries to subscribe again to GPIOs and writes them. This action causes a WCPU reset with the chipset Opus III. A workaround to prevent from resetting is to changes the source code as described in the Annex §5
N/A	Samples documents such as readme.html, provided in the plug-in, are in preliminary format, and some responses return by AT commands are different from those indicated in the document.
N/A	On OASIS 2.01, with FW R7.1, the C-GPS plug-ins can only beused with Nanoride hardware. With the chipset Opus III, the plug-ins C-GPS will only work with version of Firmware superior or equal to R7.1a (OASIS 2.02).
N/A	with Nanoride hardware; the parameter“OPUS_III_CHIPSET_ePV36” must not be defined; In the QueryApp sample this define must be removed, to be used on Nanoride hardware.

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7 Memory Information

7.1 With ADS compiler

Details:

	WIP Library	WIPSoft Library
Size	599kbytes	110kbytes
Max RAM size used	7.65kbytes	4.55kbytes

WIPSoft binary

Binary size: 145kbytes

	WIP Library (KB)	WIPSoft Library (KB)	RAM size use by lib+ appli (KB)
RAM size	5.19	4.55	10.78

7.2 With GCC compiler

Details:

	WIP Library	WIPSoft Library
Size	6305 kbytes	790 kbytes
Max RAM size used	X	X

WIPSoft binary

Binary size: 192kbytes

	WIP Library (KB)	WIPSoft Library (KB)	RAM size use by lib+ appli (KB)
RAM size	5.19	4.55	12.9

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7.3 With RVDS compiler

Details:

	WIP Library	WIPSoft Library
Size	578 kbytes	95kbytes
Max RAM size used	7.64	4.55

WIPSoft binary

Binary size: 138kbytes

	WIP Library (KB)	WIPSoft Library (KB)	RAM size use by lib+ appli (KB)
RAM size	5.19	4.55	10.68

For more information about how to handle RAM and Flash with Open AT® applications, please refer to documentation [1]

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