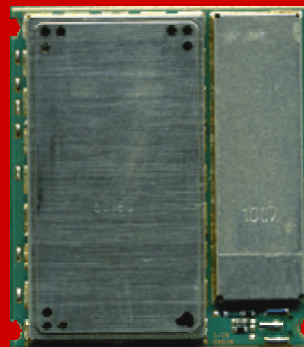




CINTERION
a Gemalto company

EGS5

Version: 02.004
DocID: EGS5_rn_v02.004



Release Notes

Document Name: **EGS5 Release Notes**

Version: **02.004**

Date: **March 01, 2012**

DocId: **EGS5_rn_v02.004**

Status: **Confidential / Released**

GENERAL NOTES

THE PRODUCT INCLUDING THE SOFTWARE PROVIDED BY CINTERION WIRELESS MODULES GMBH ("CINTERION") WITH THE PRODUCT ("PRODUCT") IS DEEMED ACCEPTED BY RECIPIENT AND IS PROVIDED WITHOUT INTERFACE TO RECIPIENT'S PRODUCTS. THE DOCUMENTATION AND/OR PRODUCT ARE PROVIDED FOR TESTING, EVALUATION, INTEGRATION AND INFORMATION PURPOSES.

COPYRIGHTS

THE SOFTWARE OBTAINED FROM CINTERION TOGETHER WITH THE PRODUCT ("SOFTWARE") IS THE INTELLECTUAL PROPERTY OF CINTERION AND/OR ITS LICENSORS.

LIMITED LICENCE GRANT

SUBJECT TO THE TERMS AND CONDITIONS IN THIS AGREEMENT, THE RECIPIENT, ITS CUSTOMERS AND END-CUSTOMERS OF THE PRODUCT SHALL HAVE A NON-EXCLUSIVE RIGHT TO USE THE PRODUCT OBTAINED FROM CINTERION. THE RECIPIENT SHALL NOT AND SHALL CONTRACTUALLY BIND ITS CUSTOMERS AND THE END-CUSTOMERS NOT TO TRANSFER, COPY, MODIFY, TRANSLATE, REVERSE ENGINEER, CREATE DERIVATIVE WORKS, DISASSEMBLE OR DECOMPILE THE SOFTWARE OR OTHERWISE USE THE SOFTWARE EXCEPT AS SPECIFICALLY AUTHORIZED BY THE PURPOSE OF THIS AGREEMENT OR BY MANDATORY LAW. CINTERION SHALL BE A THIRD PARTY BENEFICIARY IN THE AGREEMENTS WITH CUSTOMERS AND END-CUSTOMERS REGARDING THE SOFTWARE.

ANY RIGHT, TITLE AND INTEREST IN AND TO THE PRODUCT, OTHER THAN THOSE EXPRESSLY GRANTED TO THE RECIPIENT UNDER THIS AGREEMENT, SHALL REMAIN VESTED WITH CINTERION OR ITS THIRD PARTY LICENSORS.

CINTERION IS NOT OBLIGED TO MAKE THE SOURCE CODE OF THE SOFTWARE AVAILABLE TO THE RECIPIENT.

DISCLAIMER OF WARRANTY

THE DOCUMENTATION AND/OR PRODUCT ARE PROVIDED ON AN "AS IS" BASIS ONLY AND MAY CONTAIN DEFICIENCIES OR INADEQUACIES. THE DOCUMENTATION AND/OR PRODUCT ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CINTERION FURTHER DISCLAIMS ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, COMPLETENESS, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF THIRD-PARTY RIGHTS. THIS PRODUCT IS NOT INTENDED FOR USE IN LIFE SUPPORT APPLIANCES, DEVICES OR SYSTEMS WHERE A MALFUNCTION OF THE PRODUCT CAN REASONABLY BE EXPECTED TO RESULT IN PERSONAL INJURY. APPLICATIONS INCORPORATING THE DESCRIBED PRODUCT MUST BE DESIGNED TO BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS PROVIDED IN THESE GUIDELINES. FAILURE TO COMPLY WITH ANY OF THE REQUIRED PROCEDURES CAN RESULT IN MALFUNCTIONS OR SERIOUS DISCREPANCIES IN RESULTS. FURTHERMORE, ALL SAFETY INSTRUCTIONS REGARDING THE USE OF MOBILE TECHNICAL SYSTEMS, INCLUDING GSM AND GPS PRODUCTS, WHICH ALSO APPLY TO CELLULAR PHONES MUST BE FOLLOWED. CINTERION CUSTOMERS USING THIS PRODUCT FOR USE IN ANY APPLICATIONS DO SO AT THEIR OWN RISK AND AGREE TO FULLY INDEMNIFY CINTERION FOR ANY DAMAGES RESULTING FROM ILLEGAL USE.

EXCLUSION OF LIABILITY

CINTERION, ITS LEGAL REPRESENTATIVES AND VICARIOUS AGENTS SHALL – IRRESPECTIVE OF THE LEGAL GROUND – ONLY BE LIABLE FOR DAMAGES IF THE DAMAGE WAS CAUSED THROUGH CULPABLE BREACH OF A MAJOR CONTRACTUAL OBLIGATION (CARDINAL DUTY), I.E. A DUTY THE FULFILMENT OF WHICH ALLOWS THE PROPER EXECUTION OF THE RESPECTIVE AGREEMENT IN THE FIRST PLACE OR THE BREACH OF WHICH PUTS THE ACHIEVEMENT OF THE PURPOSE OF THE AGREEMENT AT STAKE, RESPECTIVELY, AND ON THE FULFILMENT OF WHICH THE RECIPIENT THEREFORE MAY RELY ON OR WAS CAUSED BY GROSS NEGLIGENCE OR INTENTIONALLY. ANY FURTHER LIABILITY FOR DAMAGES SHALL – IRRESPECTIVE OF THE LEGAL GROUND – BE EXCLUDED. IN THE EVENT THAT CINTERION IS LIABLE FOR THE VIOLATION OF A MAJOR CONTRACTUAL OBLIGATION IN THE ABSENCE OF GROSS NEGLIGENCE OR WILFUL CONDUCT, SUCH LIABILITY FOR DAMAGE SHALL BE LIMITED TO AN EXTENT WHICH, AT THE TIME WHEN THE RESPECTIVE AGREEMENT IS CONCLUDED, CINTERION SHOULD NORMALLY EXPECT TO ARISE DUE TO CIRCUMSTANCES THAT THE PARTIES HAD KNOWLEDGE OF AT SUCH POINT IN TIME. CINTERION SHALL IN NO EVENT BE LIABLE FOR INDIRECT AND CONSEQUENTIAL DAMAGES OR LOSS OF PROFIT. CINTERION SHALL IN NO EVENT BE LIABLE FOR AN AMOUNT EXCEEDING €20,000.00 PER EVENT OF DAMAGE. WITHIN THE BUSINESS RELATIONSHIP THE OVERALL LIABILITY SHALL BE LIMITED TO A TOTAL OF €100,000.00. CLAIMS FOR DAMAGES SHALL BECOME TIME-BARRED AFTER ONE YEAR AS OF THE BEGINNING OF THE STATUTORY LIMITATION PERIOD. IRRESPECTIVE OF THE RECIPIENT'S KNOWLEDGE OR GROSS NEGLIGENT LACK OF KNOWLEDGE OF THE CIRCUMSTANCES GIVING RISE FOR A LIABILITY ANY CLAIMS SHALL BECOME TIME-BARRED AFTER FIVE YEARS AS OF THE LIABILITY AROSE. THE AFOREMENTIONED LIMITATION OR EXCLUSION OF LIABILITY SHALL NOT APPLY IN THE CASE OF CULPABLE INJURY TO LIFE, BODY OR HEALTH, IN CASE OF INTENTIONAL ACTS, UNDER THE LIABILITY PROVISIONS OF THE GERMAN PRODUCT LIABILITY ACT (*PRODUKTHAFTUNGSGESETZ*) OR IN CASE OF A CONTRACTUALLY AGREED OBLIGATION TO ASSUME LIABILITY IRRESPECTIVE OF ANY FAULT (GUARANTEE).

SECRECY

THE RECIPIENT UNDERTAKES FOR AN UNLIMITED PERIOD OF TIME TO OBSERVE SECRECY REGARDING ANY INFORMATION AND DATA PROVIDED TO HIM IN THE CONTEXT OF THE CONTRACTUAL RELATIONSHIP AND CLASSIFIED AS CONFIDENTIAL OR OTHERWISE RECOGNISABLE AS CONFIDENTIAL, IN PARTICULAR AS TRADE OR COMPANY SECRET AND – AS FAR AS NOT NECESSARY FOR THE ACHIEVEMENT OF THE PURPOSE OF THE CONTRACT – TO NEITHER RECORD NOR FORWARD TO THIRD PARTIES NOR USE IN ANY WAY. EMPLOYEES AND THIRD PARTIES INVOLVED SHALL BE BOUND TO OBSERVE THE ABOVE PROVISIONS.

MISCELLANEOUS

THE INTERPRETATION OF THIS GENERAL NOTE SHALL BE GOVERNED AND CONSTRUED ACCORDING TO GERMAN LAW WITHOUT REFERENCE TO ANY OTHER SUBSTANTIVE LAW. LEGAL VENUE FOR ALL DISPUTES ARISING FROM THIS AGREEMENT SHALL BE MUNICH, GERMANY. IN THE EVENT OF A CONFLICT BETWEEN THE PROVISIONS OF THIS AGREEMENT AND ANOTHER AGREEMENT REGARDING THE PRODUCT (EXCEPT THE GENERAL TERMS AND CONDITIONS OF CINTERION) THE OTHER AGREEMENT SHALL PREVAIL.

Copyright

Transmittal, reproduction, dissemination and/or editing of this document as well as utilization of its contents and communication thereof to others without express authorization are prohibited. Offenders will be held liable for payment of damages. All rights created by patent grant or registration of a utility model or design patent are reserved.

Copyright © Cinterion Wireless Modules GmbH 2012

Trademark Notice

Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks mentioned in this document are property of their respective owners

Contents

- 1 Preamble5**
 - 1.1 Related Documents5

- 2 New Features6**

- 3 Known Issues10**

1 Preamble

This Release Note refers to the Cinterion GSM/GPRS module
EGS5 02.004

1.1 Related Documents

- [1] EGS5 AT Command Set, v02.004
- [2] EGS5 Hardware Interface Description, v02.004
- [3] DSB75 Development Support Board Hardware Interface Description, v13
- [4] Multiplexer User's Guide, v013
- [5] Multiplex Driver Developer's Guide, v17
- [6] Multiplex Driver Installation Guide, v15
- [7] Java User's Guide for Cinterion Wireless Modules, v19
- [8] Java doc \wtk\doc\html\index.html
- [9] Application Note 02: Audio Interface Design for GSM Applications, v08
- [10] Application Note 07: Rechargeable Lithium Batteries, v06
- [11] Application Note 16: Updating Firmware, v10
- [12] Application Note 17: Over-the-Air Firmware Update, v04
- [13] Application Note 22: Using TTY/CTM Equipment, v03
- [14] Application Note 26: Power Supply Design for GSM Applications, v05
- [15] Application Note 32: Integrating USB into Applications, v05
- [16] Application Note 45: Jamming Detection – Radio Link Stability Monitor, v04
- [17] Application Note 48: SMT Module Integration, v09

To visit the Cinterion Wireless Modules website you can use the following link:
<http://www.cinterion.com>

2 New Features

The purpose of this section is to give an overview of features added or improved since release EGS5 01.000.

Feature	Brief description
Java Virtual Machine	<p>The Java development environment has been updated to seamlessly integrate into Java IDEs such as Eclipse (as of version 3.6.0–Helios SR2) including Mobile Toolkit or Netbeans (as of version 6.5-6.9.1) including Mobility Plugin.</p> <p>Supported operating systems:</p> <ul style="list-style-type: none"> • Microsoft® Windows™ XP 32-bit edition • Microsoft® Windows Vista™ 32/64-bit edition • Microsoft® Windows 7 32/64-bit edition.
Java Location API	<p>The package com.cinterion.location includes a Location API to support external GPS applications:</p> <ul style="list-style-type: none"> • Coordinates Class • Landmark Class • LandmarkStore Class • QualifiedCoordinates Class • AddressInfo Class
AT+CHLD	<p>The AT+CHLD command has been enhanced to support Explicit Call Transfer (AT+CHLD=4).</p>
ATD	<p>EGS5 supports the optional dial string modifier “p” that allows sending DTMF directly after dialing a number.</p>
AT+VTS	<p>The AT+VTS command allows sending DTMF signals while a voice call is in “alerting” or “connected” state.</p>
AT^SNFS	<p>Audio mode AT^SNFS=6 is now designed as Tip and Ring interface with echo canceller. The mode is especially recommended for DTMF end-to-end transmission and router applications.</p> <p>This implies that TTY/CTM functionality is no longer available in audio mode 6, but can still be used in audio mode 5.</p>

Feature	Brief description
<p>Transparent TCP Service</p>	<p>The embedded TCP/IP stack of EGS5 comes with a new service referred to as “Transparent TCP Client”.</p> <p>The “Transparent TCP Client” provides a specific mode for data exchange that eliminates the need for the AT[^]SISW and AT[^]SISR cycles used for all other embedded TCP/IP services.</p> <p>In particular, the AT[^]SISS command has been enhanced to provide the additional configuration parameter “Transparent”. The new AT[^]SIST command can be used to change from AT command mode to transparent access mode. After entering this mode, the CONNECT response indicates that the module is ready to transparently send and receive TCP payload data through the serial interface.</p>
<p>Secure Connectivity for client IP services TLS/SSL (Transport Layer Security / Secure Socket Layer)</p>	<p>The embedded TCP/IP stack of EGS5 now supports TLS/SSL for the services “TCP Socket Client”, “Transparent TCP Client”, “HTTP Client”.</p> <p>10 server certificates can be employed. The EGS5 02.004 software package includes a Java Application referred to as “cmd_ipCertMgr.jar” which handles all functions required for writing, reading and loading certificates.</p> <p>The new parameter “secOpt” of the AT[^]SISS command can be used to create secure connection profiles. The new "+CIEV: is_cert" indicator of AT[^]SIND reports TLS/SSL server certificate details. The AT[^]SBNW command can be used to write certificates to the module’s NVRAM. AT[^]SBNR reads the stored certificates.</p> <p>The certificate store is secured by a client certificate.</p>
<p>SMS commands, parameter <alpha></p>	<p>EGS5 supports the <alpha> parameter to show an alphanumeric string of the destination address <da> or originating address <oa> if matching entries are found in “MT” phonebooks.</p> <p><alpha> is part of the “+CMT” URCs and responses of the commands AT+CMGL, AT[^]SMGL, AT[^]SCMR, AT[^]SCML, AT+CMGR.</p>

Feature	Brief description
<p>Tunneling Mode</p> <p>AT^SCFG, subcommand "Serial/lfc"</p>	<p>The AT^SCFG command includes the new subcommand AT^SCFG="Serial/lfc"[,<ifcMode>] designed to configure Tunneling Mode.</p> <p>The mode allows to set up a transparent communication link between different module interfaces which otherwise are not connected. This transparent communication link provides a direct tunnel between the customer application (TE) and a device attached to the physical interface thus connected. Input data will be transparently transmitted between the TE and this device without being interpreted by the module. A tunnel may be established, for example, between a Multiplex Channel and ASC0 or ASC1, between ASC0 and ASC1, or between USB and ASC0 or ASC1.</p>
<p>AT^SRPN</p>	<p>AT^SRPN can be used to add or modify entries of the operator list employed for commands like AT^SPLM, AT+COPN, AT+COPS, AT^SOPS or AT^SIND (EONS).</p>
<p>AT^SPCL</p>	<p>AT^SPCL can be used to specify a list of cells the module shall preferably register to. The "^SPCL:" URC shows whether or not the module is registered to one of the listed cells.</p>
<p>AT^SNMON</p>	<p>AT^SNMON scans the supported radio bands to query detailed network information, such as Radio Access Technology (RAT), Cell ID, Location Area Code, PLMN Code, ARFCN, signal strength of BCCH carrier.</p>
<p>AT^SCFG, parameter "MEopMode/CregRoam"</p>	<p>The "MEopMode/CregRoam" parameter enables EGS5 to show the status "+CREG: 1" (registered to Home PLMN) instead of "+CREG: 5" (registered, roaming), if the Registered PLMN and the Home PLMN set in the SIM Elementary File EF_{IMSI} are mapped to the same network name in the module's operator list.</p>
<p>AT^SIND, "steerroam"</p>	<p>Designed according to 3GPP TS 24.008 the "+CIEV: "steerroam" indicator notifies a roaming subscriber when a VPLMN has rejected a manual attempt to register to the network. The URC appears after the VPLMN has sent the reject cause 17 (network failure) four times.</p> <p>The automatic network selection for steering of roaming was enhanced in accordance with latest requirements.</p>
<p>AT^SIND, "simdata"</p>	<p>If EGS5 is in Automatic Response (AR) Mode (AT^SSTA=0), the "CIEV: simdata" indicator notifies the application when the SIM has sent a SIM REFRESH command after one or more SIM Elementary Files were changed.</p>

Feature	Brief description
AT^SIND, "pacsp"	Designed according to the "Common PCN Handset Specification (CPHS)" the "+CIEV: pacsp" indicator shows the PLMN Mode Bit value of SIM Elementary File EFCSP.
AT^SIND, "simtray"	The AT^SIND? Response parameter "simtray" shows the SIM tray status signaled by the CCIN line. It indicates whether or not the SIM tray is plugged. A URC is not implemented.
AT^SCKS	The new value "3" of the AT^SCKS parameter <simstatus> indicates that the SIM interface hardware has been deactivated. The value will be output if, during power-up, the SIM returns the status words 6F00h (technical problem, no precise diagnosis) to three consecutive APDUs sent by the EGS5.
Handling of SMS parameter <stat> after sending short message	The handling of the <stat> parameter has been improved to be in line with the specification provided in [1], section AT+CMSS: If the optional parameter <da> is given with AT+CMSS, the old status <stat> of a short message at <index> shall remain unchanged in responses to SMS listing and reading commands. With earlier EGS5 releases the old status was always changed, no matter whether or not <da> was given.
AT+CRSM	The AT+CRSM command has been enhanced by the optional <pathID> parameter specifying the directory path of an Elementary File on the SIM in hexadecimal format. AT+CRSM is no longer PIN protected.
DARP/SAIC	EGS5 supports DARP (Downlink Advanced Receiver Performance according to 3GPP TS 45.015.
A5/3	EGS5 supports A5/3 Ciphering.

3 Known Issues

Feature	Brief description
<p>Java: Changing the bit rate of the Java CommConnection interface</p>	<p>Before using the setBaudRate method ensure that there is no ongoing data transmission. Also, it is necessary to wait at least 10s between closing and reopening the CommConnection.</p> <p>Please note that System.out also counts as data output when used on the same serial interface as the CommConnection.</p>
<p>AT^SJOTAP</p>	<p>AT^SJOTAP parameters are interpreted as ASCII characters. Please refer to [1]: Section 1.6 "Supported character sets of AT Command Set", if using OTAP SMS characters that are coded differently in ASCII and GSM.</p>
<p>Unsolicited result codes "^SISR: x,2", "^SISW: x,2"</p>	<p>At the end of an Internet session, a download job may sometimes return the "SISW: x,2" URC instead of the expected "^SISR: x,2" URC, or vice versa, an upload job may return "^SISR: x,2" instead of "^SISW: x,2". Both URCs are correct in either case – they notify that data transfer has completed and that the service can be closed with AT^SISC.</p> <p>Example: The FTP put service ("ftpput://...") returns the URC "^SISR: x,2" instead of "^SISW: x,2" if used with mode="d" to delete a given element name on the FTP server.</p> <p>For greater flexibility, to cover all cases, we recommend that the host application shall be parsing for the URC "^SIS*: x,2" rather than for the full URC text.</p> <p>(x = <srvProfileId>, i.e. ID of the Internet service profile).</p>
<p>Result codes for CSD connections</p>	<p>If configured to use the numeric result code format (ATV0), EGS5 will show wrong result codes when answering an incoming CSD connection: Value "1" (= CONNECT in verbose format) will be sent instead of values "49" and "50" (= CONNECT 9600/RLP and CONNECT 14400/RLP in verbose format).</p> <p>Verbose result codes (default setting ATV1) are always correct.</p>

Feature	Brief description
GPRS PPP connection setup	<p>In rare cases, GPRS connection setup may fail due to not having received the GPRS network response to the Activate PDP context Request in time, i.e. within the first three IPCP-Configure-Requests sent by the PPP client. In this case, the module transmits an IPCP-Configure-Reject by default.</p> <p>The problem can be circumvented by extending the retransmission timeout between IPCP-Configure-Requests or to request additional IPCP parameters to avoid DNS address reject.</p>
AT^SIND, "band"	<p>If the band configuration is restricted to a specific band or band combination the module may in rare case fail to register to the network after changing another band or band combination. Therefore, if possible, it is recommended to use always the quad band configuration AT^SCFG="Radio/Band",15,15.</p>
AT^SIND, "simstatus"	<p>When the module starts up while a SIM is inserted and the SIM PIN is enabled, the status "SIM PIN required" will not be reported by the URC "+CIEV: simstatus, 3" or the read command AT^SIND=simstatus,2. To get the SIM status please use the AT+CPIN? read command which returns the expected result code "+CPIN: SIM PIN".</p> <p>In other scenarios, e.g. after changing the SIM card the status "SIM PIN required" will correctly be shown by the URC "+CIEV: simstatus, 3" and the read command AT^SIND=simstatus,2.</p>
AT^SIND, "eons" indicator	<p>After loss and subsequent recovering of network registration it may happen that the Service Provider Name (parameter <servProvider>) within the "eons" indicator becomes undefined (e.g. "\00\00\00\00\00\00" in GSM alphabet).</p> <p>Workaround: The application should be designed to store the SPN each time when the name changes. This way the name can be restored if lost when returning to network coverage.</p>
Secure Connectivity for client IP services TLS/SSL	<p>If employing secure connections with certificate check the following issues exist in handling certificates:</p> <ul style="list-style-type: none"> • When a chain of certificates is verified during a connection, the +CIEV: is_cert URC is only generated once for the server certificate only and not for other certificates in the chain. <p>Please also note that the validity of the certificates has to be handled by the application.</p>
AT^SNMON and Radio band change	<p>In rare cases an informal network scan will not provide the expected results because an automatic switch of preferred and allowed radio bands was not correctly taken into account.</p>

Feature	Brief description
CHARGE ONLY mode	If connected to a battery and charger, the module will in rare cases fail to start into CHARGE ONLY mode.
ADC lines	<p>After module startup the ADC1_IN and ADC2_IN lines are in a “short circuit” state until the AT^SRADC write command is invoked.</p> <p>It is therefore strongly recommended to ensure that during this period the ADC1_IN and ADC2_IN input lines are not connected to low impedance signals and/or to implement an RC circuit as described in [2].</p> <p>If updating from previous releases, please check your application design with regard to this issue.</p>