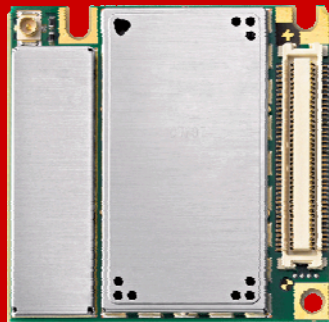




CINTERION
WIRELESS MODULES

TC65i

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Release Notes

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1 Preamble

This Release Note introduces the Cinterion Wireless Module
TC65i 01.100.

The TC65i is designed as a next-generation product of the TC65 module. TC65i is one module of a scalable platform comprising three members: TC65i with Java, MC75i with EDGE and TC63i as a basic module. All three modules share the same size and mounting scheme and are based on the same AT command set. The platform design gives you the flexibility to quickly respond to changing demands by switching to another platform member.

The major benefits of TC65i over TC65 are:

- Optimization of size and performance (miniaturization and ARM9)
- Dedicated Java APIs for direct access to the module's interfaces I²C, SPI, DAC and ADC
- Incremental Java userware update
- Extremely low current consumption in all SLEEP modes and significantly reduced current consumption in transfer modes
- Extended temperature range down to -40°C (for restricted operation)
- Indication of board temperature in degrees Celsius
- Improved quadband selection for GSM 850, 900, 1800 1900 MHz
- Internal TTY/CTM modem
- Option to start Remote SAT in Automatic or Explicit mode
- Local bit rates of up to 921.600 bps, autobauding up to 460.800 bps
- Driver package update – latest drivers for Microsoft Windows Mobile™ 6.0 and Windows Vista™ and Windows XP™

A detailed description of all differences between TC65i and TC65 can be found in [17].

1.1 Related Documents

- [1] AT Command Set, v01.100
- [2] TC65i Hardware Interface Description, v01.100
- [3] DSB75 Support Board Hardware Interface Description, v012
- [4] Multiplexer User's Guide, v12
- [5] Multiplexer Driver Developer's Guide, v11
- [6] Multiplexer Driver Installation Guide, v10
- [7] Remote SAT User's Guide, v02
- [8] Application Note 02: Audio Interface Design for GSM Applications, v06
- [9] Application Note 07: Rechargeable Lithium Batteries in GSM Applications, v05
- [10] Application Note 16: Updating Firmware, v08
- [11] Application Note 22: Using TTY / CTM Equipment, v01
- [12] Application Note 24: Application Developer's Guide, v07
- [13] Application Note 26: Power Supply Design for GSM Applications, v04
- [14] Application Note 32: Integrating USB into Applications, v04
- [15] Application Note 45: Jamming Detection – Radio Link Stability Monitor, v02
- [16] Application Note 46: Incremental Java Application Update for TC65i, v01
- [17] Migrating from TC65 to TC65i, v01
- [18] Java User's Guide, v14
- [19] Java doc \wtk\doc\html\index.html

The latest product information and technical documents are ready for download on the Cinterion Wireless Modules Website or may be obtained from your local dealer or the Sales department of Cinterion Wireless Modules GmbH. To visit the website you can use the following link:

<http://www.cinterion.com>

2 Improved Features

The LeMans based Cinterion Wireless Module TC65i is currently being introduced on the market with Release 01.000. We recovered within this release two issues in the application part of the module software (TCP/IP Configuration and serial interface). For this reason we are providing a Release 01.100 for TC65i.

The changes are limited to the application part of the software and solve the two issues (for details please see below). The changes are not relevant for approval (GCF, PTCRB).

2.1 TCP/IP Configuration Patch

Problem description TC65i Release 01.000:

Transferring large data packages at high data rates can lead to an IP frame buffer overflow that results in the termination of an FTP connection and in rare cases in a module blocking due to a lack of buffers.

Solution description TC65i Release 01.100:

This issue is solved by implementing a TCP/IP configuration patch for the FTP client application.

The "TCP/IP Configuration Patch" is related to the TCP/IP lib. A configuration value was changed in order to achieve a faster (or "more efficient") IP-frame buffer handling.

2.2 Serial Interface Patch

Problem description TC65i Release 01.000:

At high data rates the serial interface might block sporadically the module communication. This might happen while reading the RX hardware buffers when small data packages are transferred.

Solution description TC65i Release 01.100:

The "serial interface patch" is limited to the low level serial driver itself. The handshake mechanism has been adjusted for small data packages.

3 Known Issues

AT command / feature	Brief description
Java System.out	Each time when Java is started or stopped the USB interface is reset. A possibly opened USB COM port under Windows becomes unusable until the port is closed and the USB interface is reset again e.g. by unplugging and replugging the cable. This has to be especially considered when using System.out via the USB interface. Make sure that the USB COM port is closed when starting or stopping Java. On-device Java debugging over USB is not affected.
Fax	Proper functioning of fax transmission cannot be guaranteed under all circumstances.
AT^SIND, "+CIEV: lsta" indicator	In some cases a "+CIEV: lsta" indicator sequence may contain a URC without valid channel information, i.e. with all "lsta" parameters set to "0". Usually, this URC will be preceded and followed by valid "+CIEV: lsta" URCs and should therefore be ignored. Example: <pre> ... +CIEV: lsta,0,1,70 +CIEV: lsta,0,0,70 +CIEV: lsta,1,9,68,69,69,0 +CIEV: lsta,1,0,0,0,0,0 +CIEV: lsta,1,40,68,68,68,0 ... </pre> <p style="text-align: right;"># To be ignored.</p>
AT^SIND, "+CIEV: band" indicator, AT^SCFG, "Radio"Band feature	The "Radio"Band" parameter <rbcb> of the AT^SCFG command and the "+CIEV: band" indicator of the AT^SIND command are specified to output the same value. However, if <rbcb> equals the maximum value 15 (quadband) the "band" URC and the AT^SIND read command show a lower value.
AT+CALA, AT+IPR=0	Wakeup into Airplane mode (AT+CALA alarm followed by module switch-off) cannot be used if autobauding (AT+IPR=0) is enabled. Before setting the function Wakeup into Airplane mode ensure that the module is configured for a fixed bit rate (AT+IPR≠0). Reminder messages (AT+CALA alarm set without switching off the module) are not concerned and will work properly.

AT command / feature	Brief description
Airplane mode	<p>When running a loop test which involves enabling/disabling the “MEopMode/Airplane/OnStart” feature and resetting the module in a quick succession module may sometimes fail to register to the network although Airplane has been disabled.</p> <p>Workaround: Simply enter twice the AT^SCFG command to enable or disable the “MEopMode/Airplane/OnStart” feature. Example: AT^SCFG=MEopMode/Airplane/Onstart,on ^SCFG: "MEopMode/Airplane/OnStart","on" OK AT^SCFG=MEopMode/Airplane/Onstart,on ^SCFG: "MEopMode/Airplane/OnStart","on" OK</p>
ATZ / AT+CSCB	ATZ resets all user defined cell broadcast message indication settings specified with AT+CSCB to their factory defaults.
AT^SCTM	<p>The temperature control is not fully effective immediately after reboot. The following errors may occur:</p> <ul style="list-style-type: none"> • For 2s after reboot the AT^SCTM read command may return the default value 25°C instead of the actual board temperature. • “^SCTM:_B: {-1/1}” URCs may be delayed by up to 15s. • If the module temperature threshold is exceeded during the first 120s the module sends a URC “^SCTM:_B: {-2/2}”, but does not shut down automatically. <p>Note: If the battery temperature threshold is exceeded the module will correctly send a “^SCTM:_A: {-2/2}” URC and switch off automatically.</p>
AT^SPBS	If the maximum number of 255 phonebook entries are stored on a SIM card, the browse command AT^SPBS sometimes does not step through all of these phonebook entries.
AT^SNFS	<p>In rare cases, the module is no longer responding after hanging up a call with ATH and changing another audio mode with AT^SNFS in quick succession.</p> <p>Workaround: After terminating a call with ATH please wait 1 second before changing the audio mode with AT^SNFS.</p>