



AT COMMAND TOOL FOR CALYPSO WI-FI MODULE

REFERENCE MANUAL

VERSION 1.2

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Revision history

Manual version	SW version	Notes	Date
1.0	1.1.0	First release	April 2019
1.1	1.2.0	Updated software history	July 2019
1.2	1.3.0	Updated software history and images	January 2022

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1 Overview

The AT command tool is a simple PC software that enables complete control of the Calypso Wi-Fi module via the AT Command interface. This tool offers an intuitive graphical user interface that enables the user to interact with the Calypso and understand the syntax and semantics of the AT command interface.

The AT command tool works out-of-the-box with the Calypso evaluation board. This tool along with the Calypso evaluation board allows quick prototyping and testing of various features of the Calypso Wi-Fi module.



AT command tool is an evaluation tool that is intended for development purposes only.

1.1 Supported devices

The AT command tool establishes communication with the Calypso Wi-Fi module by opening a virtual COM port. The Calypso Evaluation board has a serial-to-USB converter on-board that enables such a connection via USB port to the PC. The AT command tool has been developed and tested for the Calypso evaluation board. Further, the tool implements the complete set of commands supported by the Calypso Wi-Fi module.

1.2 System requirements

This tool is intended to run on a PC with the following requirements:

1.2.1 Supported operating systems

The following operating systems are supported:

- Windows 10, 32/64 bit
- Windows 8, 32/64 bit
- Windows 7, 32/64 bit

1.2.2 .NET Framework

Version 4.5.2 or later of the Microsoft .NET framework is required to use AT command tool. Install this package if you receive a corresponding error message when starting the program.

1.2.3 Internet connection

The tool itself works completely offline without the need for any sort of internet connection. However, based on the use case, the corresponding Wi-Fi infrastructure has to be made available in order to test the functions of Calypso Wi-Fi module.

1.3 Installation

The AT command tool itself is an executable and does not require installation. However, the serial-to-USB FTDI converter chip (**FT232RL**) on the Calypso evaluation board requires special drivers to be installed for proper operation.

Detailed install instructions can be found online in the FTDI knowledge base.

To use the AT command tool, the Virtual COM Port (VCP) drivers has to be installed by following the installation guides of FTDI found under: <https://www.ftdichip.com/Drivers/VCP.htm>



It is recommended to restart the PC after installation of drivers.

1.4 Connecting the Calypso evaluation board to the computer

The Calypso evaluation board has to be connected to the PC using the USB cable provided with the kit. On successful installation of the drivers (see section 1.3), the evaluation board appears as a USB serial port in the device manager as shown in the figure 1.

It is not recommended to use USB extension cords in the connection towards the Calypso EV board.



Figure 1: Virtual COM port.

2 Operation

This chapter provides operational instructions for the AT command tool.

2.1 Starting the program

Double-click "AT_Commander.exe" to start the program.

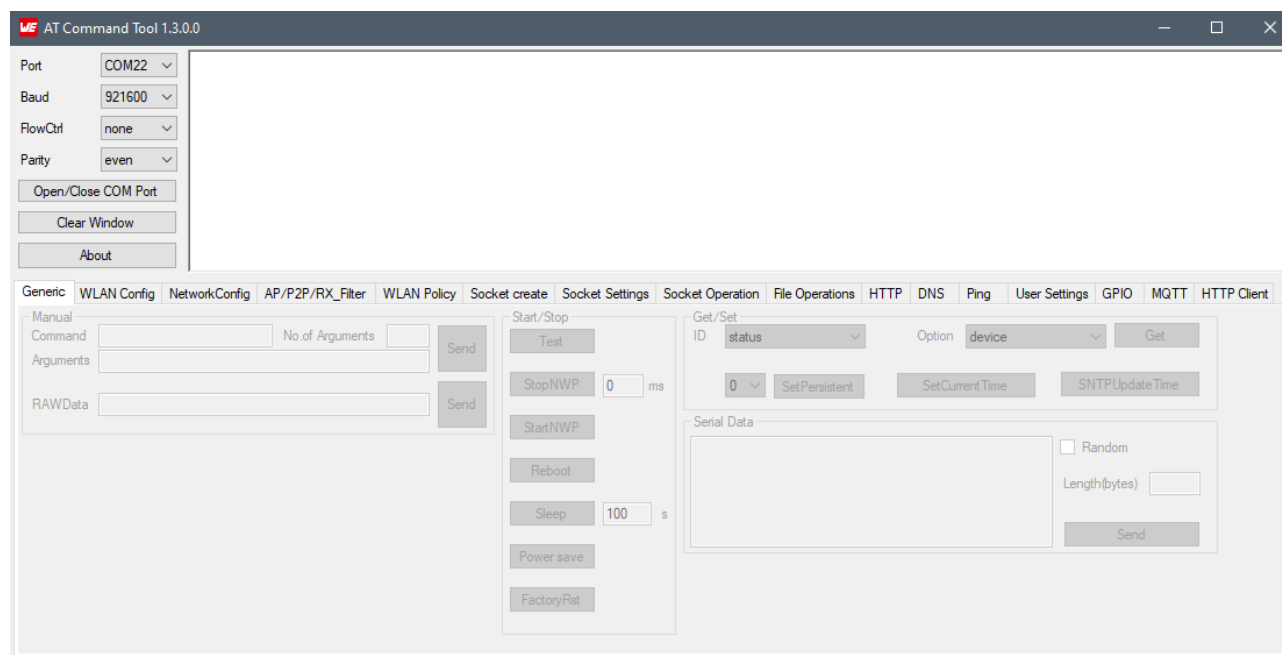


Figure 2: AT command tool start-up

2.2 COM Interface

On connecting the Calypso evaluation board to the PC, the device appears as a USB serial COM port. All the COM ports on the PC are made available for connection under the "Port" drop-down menu. The drop-down menu is automatically updated with connection/disconnection of devices. Select the COM port corresponding to the Calypso by scrolling through the menu. Additional drop-down menus allow selection of serial parameters like baudrate, flow control and parity. The values are set to default configuration of the Calypso and can be used unaltered. Click on Open/Close button to connect/disconnect from the device. Logs in the message window appear indicating connect/disconnect event or errors.



Before connecting a module or device via USB for the first time, the correct driver must be installed and a (virtual) COM port must be available (see section 1.3)

2.3 Function tabs

In order to better organize the AT command set, the commands are organized into logical groups placed under separate tabs. Functions under each category can be seen by pressing on the corresponding tab (figure 4).

Serial Port
Settings

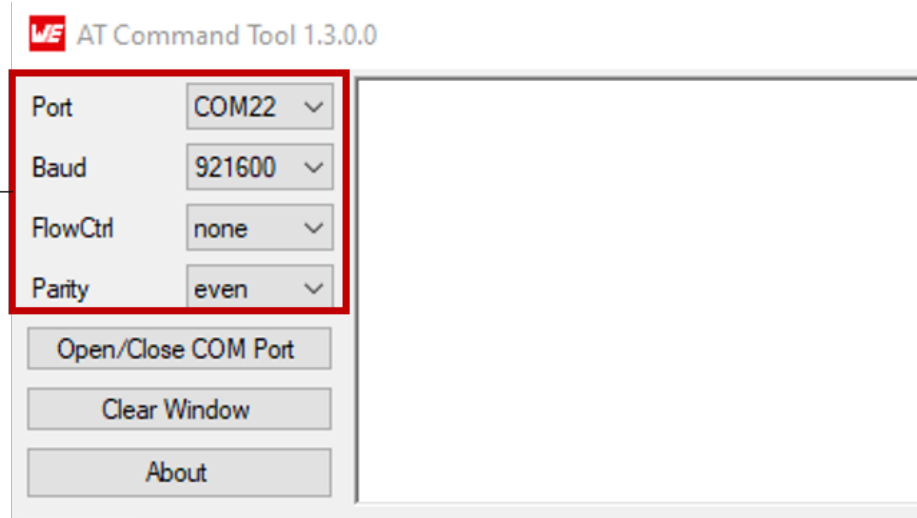


Figure 3: Open COM port

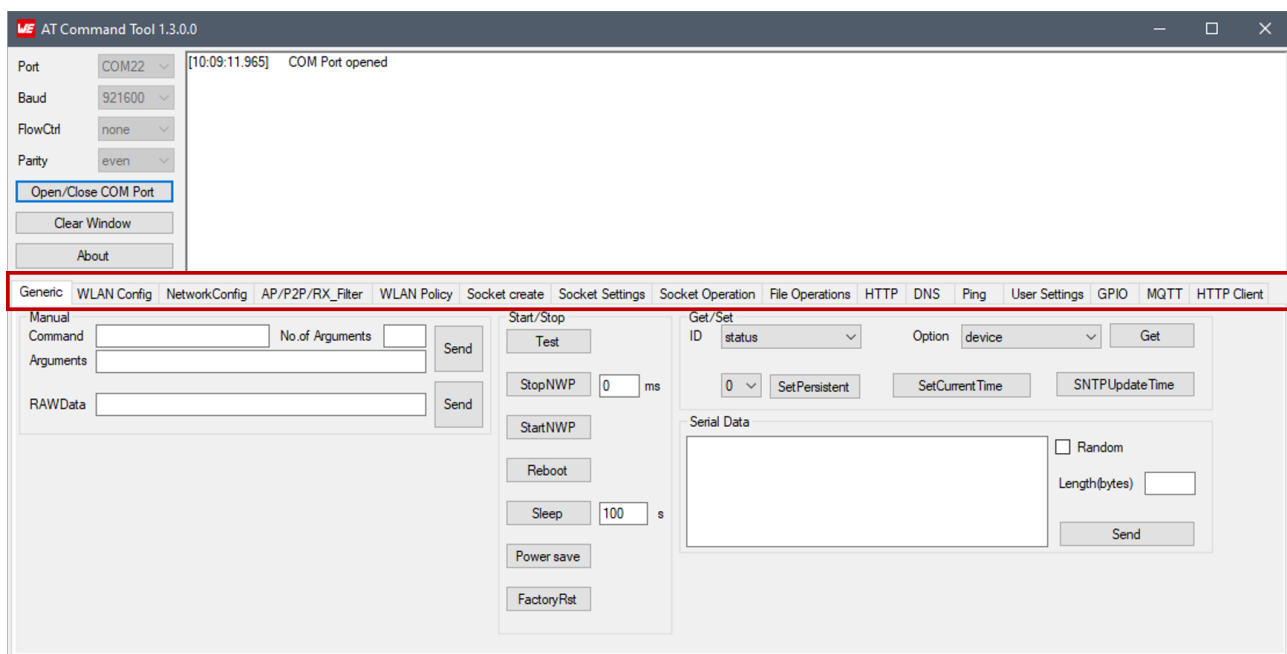


Figure 4: Function tabs

2.4 Message Window

AT command tool has a message window that provides a text based interface to the Calypso. All the communication to and from the Calypso are printed in this window. Each message is preceded with a time stamp. Arrow marks indicate the direction of communication ("=> To Calypso" and "<= from Calypso"). Additional options for logging are available with a right click on the message window. The user can select specific lines from the message box and either copy them to the standard clipboard or save it directly to a file. The message box can be cleared using the clear window button. Figure 5 illustrates all the available options.

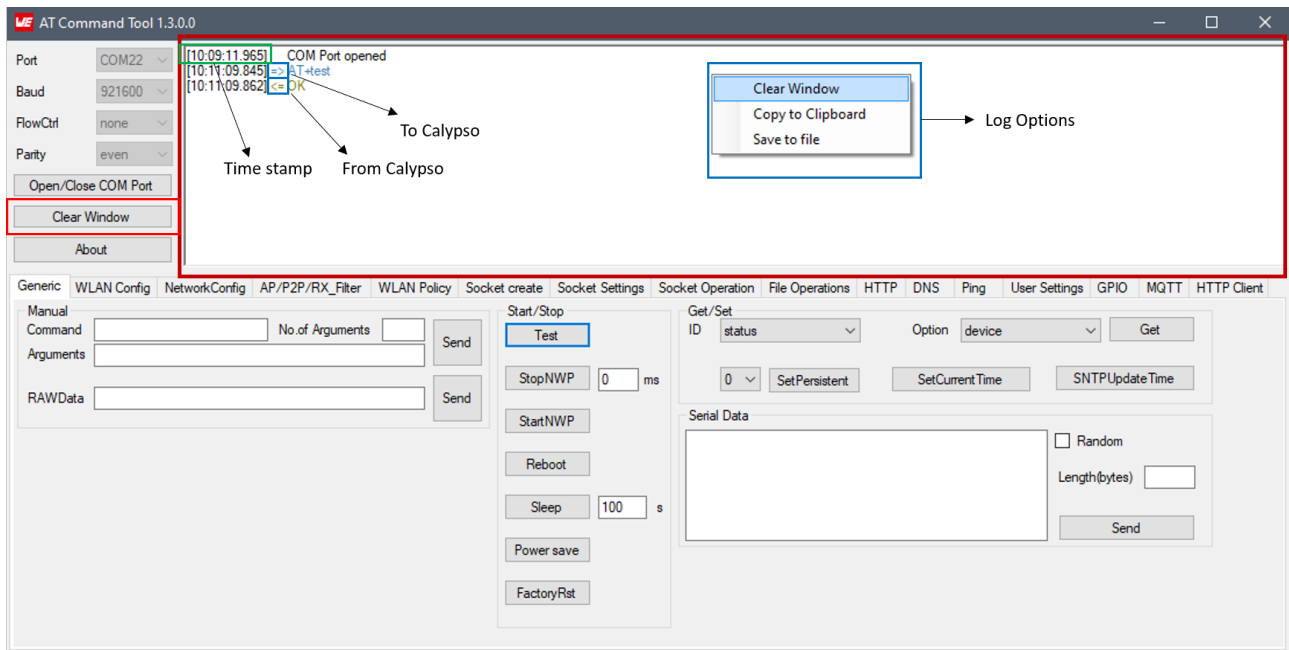


Figure 5: Message window and logging options

2.5 AT command buttons

The main task of the AT command tool is to create and send AT commands to the Calypso module. In order to achieve this, each AT command has a dedicated button within the corresponding tab. The user has to input the parameters of the AT command by either by typing in the value in the corresponding text field or by selecting it from a dropdown menu/radio button/check-box. On pressing the command button, the tool reads the user parameters, creates a command string and sends it out on the serial port. The responses from the Calypso are then displayed on the message window.



The user is required to input only valid values / options to ensure proper behavior of Calypso. Please refer to the Calypso manual for valid parameters and options.

Figure 6 shows an example by sending a sleep command to the Calypso module. Here, the parameter of time to remain in sleep mode in seconds is entered in the text box. On press of the sleep button, the Calypso responds with an "OK" before going to sleep.

For detailed description of individual AT commands, please refer to the user manual of the Calypso Wi-Fi module.

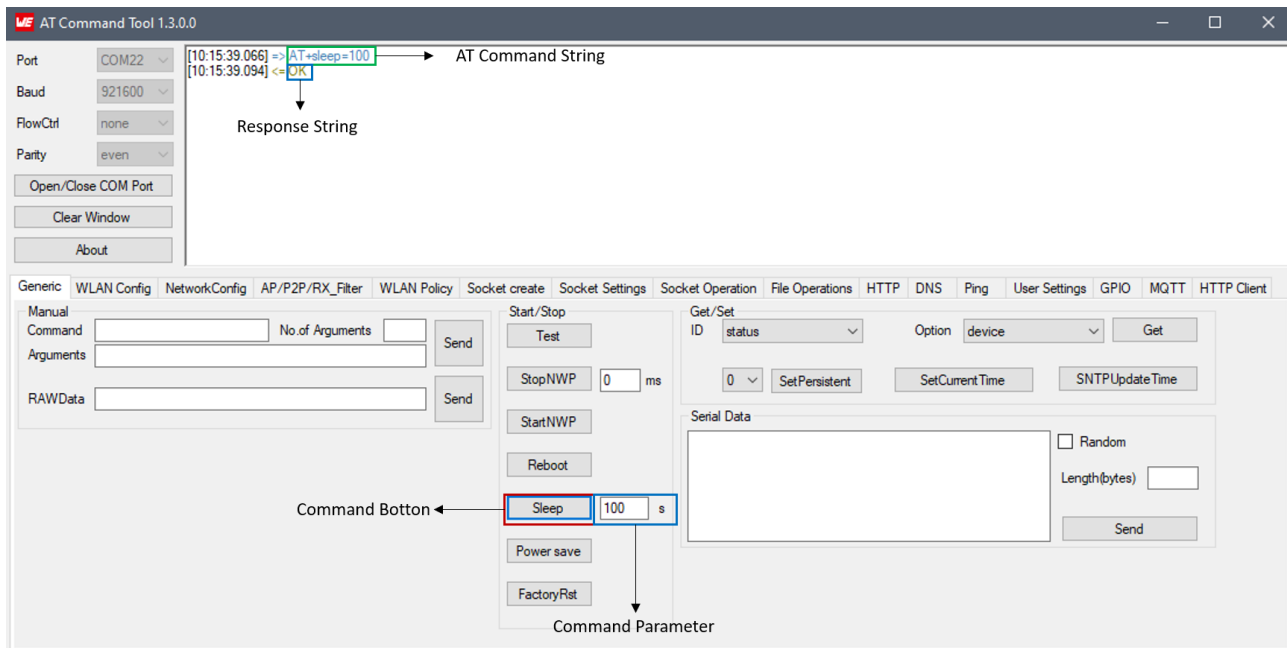


Figure 6: Sending AT command to Calypso

2.6 Sending Manual commands

The tool also supports sending commands by typing in manually. The buttons to send commands manually can be found under the "Generic" tab. Figure 7 shows the two options available to send commands manually with sleep command as an example.

- Option1: Type in the command, number of arguments and the parameters. The tool generates the AT command string. In case of multiple parameters each parameter must be separated by a comma character (,) and without the use of whitespace around that comma.
- Option2: Type in the entire AT command string as described in the Calypso manual.

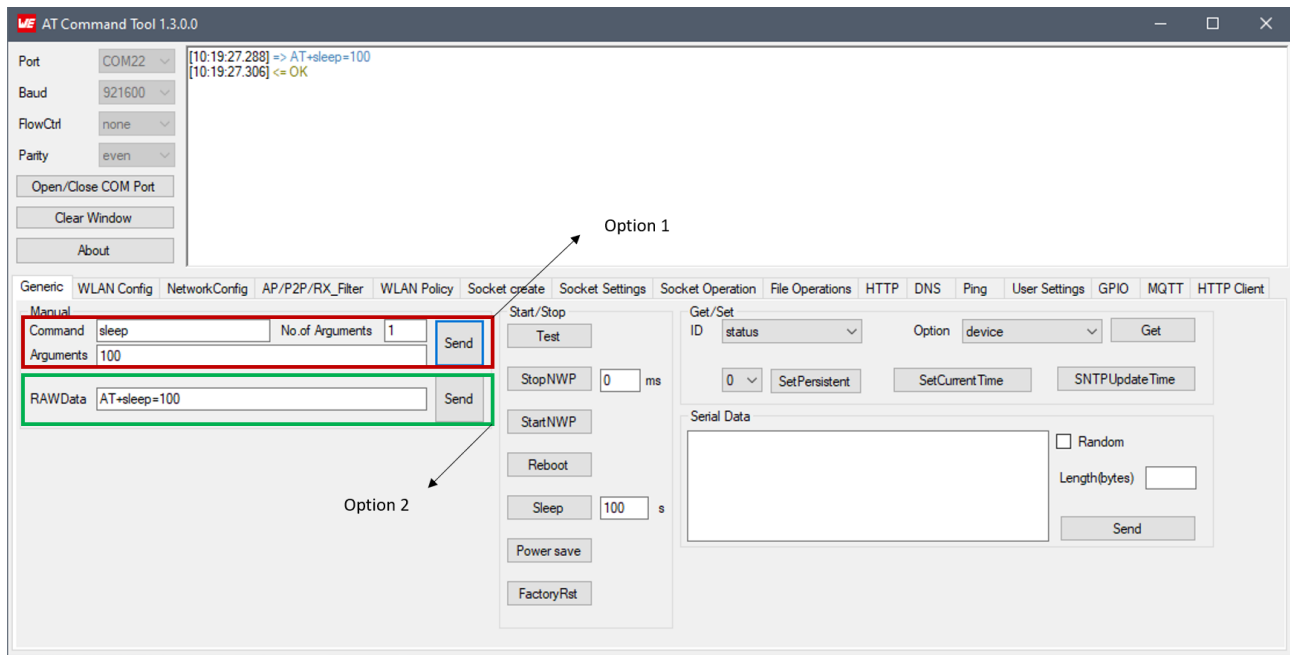


Figure 7: Sending Manual commands to Calypso

3 Software history

Version 1.1.0 "Release"

- First released version of the AT commander tool.

Version 1.2.0 "Release"

- Minor bug fixes for MQTT commands.

Version 1.3.0 "Release"

- New features to support firmware version 2.0.0.
- Performance improvements and bug fixes.

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