NRC7292 Evaluation Kit User Guide (AT-CMD Test Tool)

Ultra-low power & Long-range Wi-Fi

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NEWRACOM, Inc.

NRC7292 Evaluation Kit User Guide (AT-CMD Test Tool)
Ultra-low power & Long-range Wi-Fi

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1 Introduction

NRC7292 AT-CMD Test Tool is a GUI program that allows users to easily test out NRC7292 AT-commands in graphical manner. All testable command sets supported by the program are based on the **NRC7292 Evaluation Kit User Guide (AT-Command)** document. Although the usage of the program should be mostly self-explanatory, this manual will nevertheless serve as a supplementary document that clarifies the usage of more advanced features of the program.

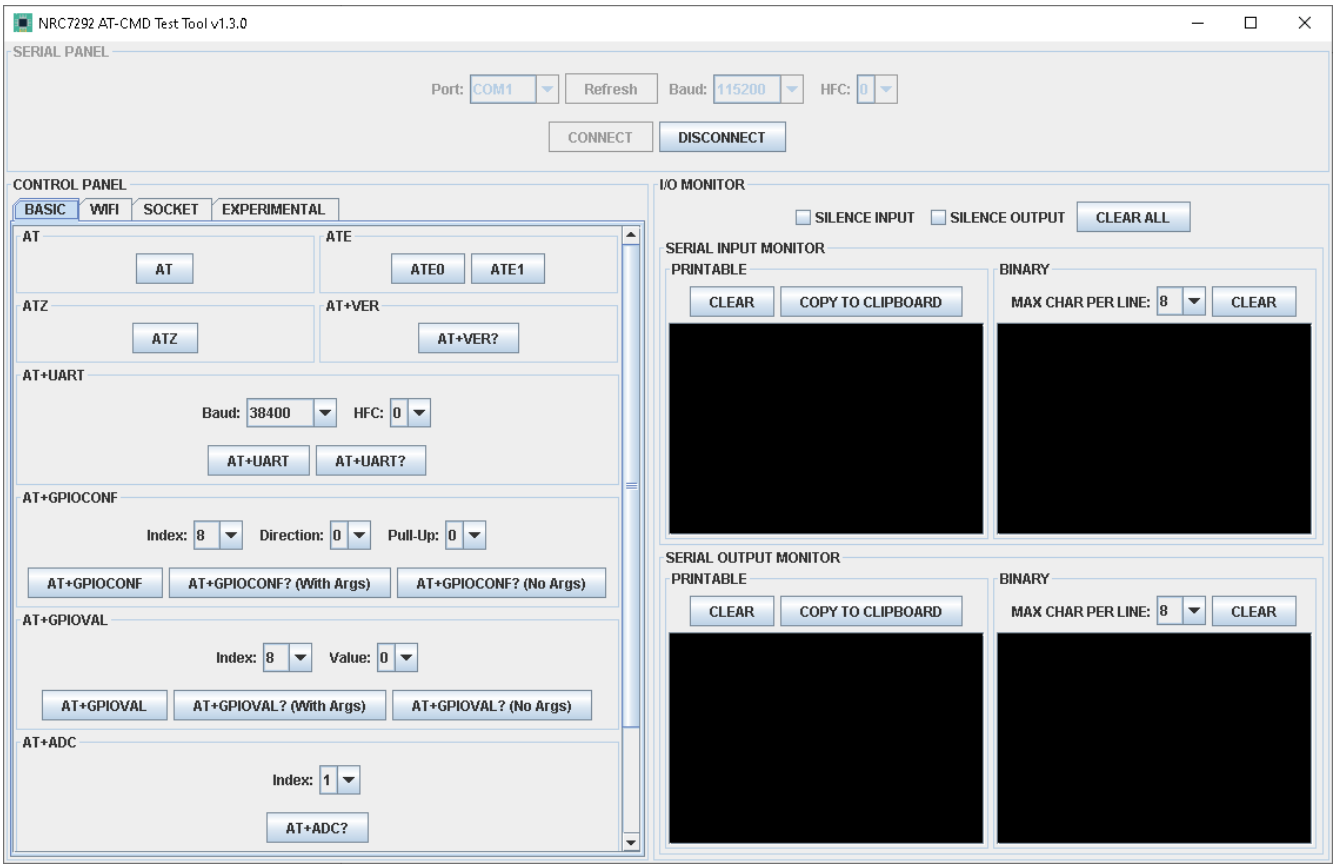

Figure 1.1 AT-CMD Test Tool

2 Usage

The program window is divided into the **Serial Panel**, **I/O Monitor** and **Control Panel**.

2.1 Serial Panel

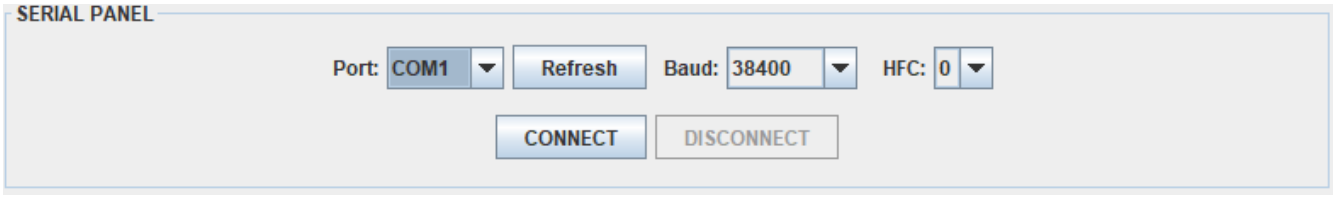

Figure 2.1 Serial Panel

The **Serial Panel** can be used to configure UART-serial parameters (serial port, baud rate, data bits, parity bits, stop bits and H/W flow control option) and connect the PC to, or disconnect it from, the NRC7292 module. The default parameter values in the program correspond to the default UART parameters used by the AT-firmware. Successful connection will enable the **Control Panel**.

2.2 I/O Monitor

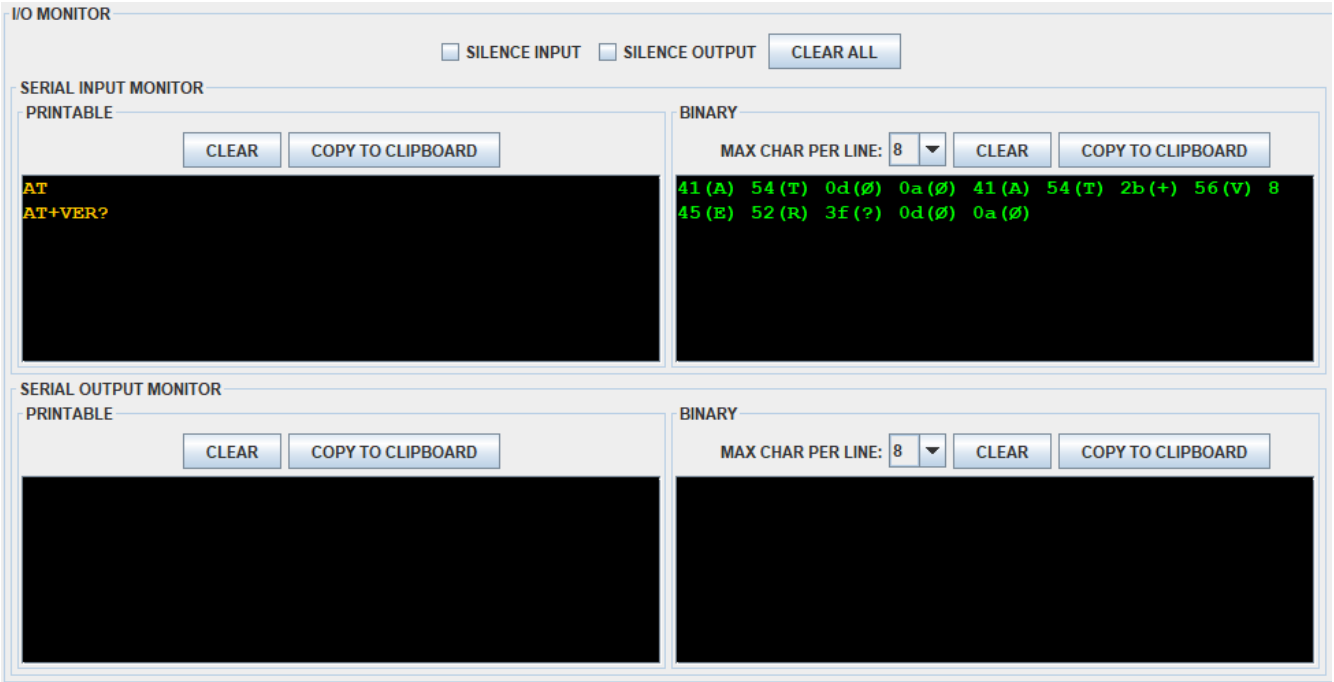

Figure 2.2 I/O Monitor

The **I/O MONITOR** can be used to monitor the input/output serial byte-streams between the PC and the NRC7292 module. Each of the two byte-streams is separately examined as both printable characters (0x9 (TAB), 0x10 (LF), 0x20~0x7E) and raw bytes (0x00~0xFF) simultaneously.

2.3 Control Panel

Figure 2.3 Control Panel

Following the command categorization scheme in the **NRC7292 Evaluation Kit User Guide (AT-Command)**, the **Control Panel** is divided into four tabs: **BASIC**, **WIFI**, **SOCKET** and **EXPERIMENTAL**. Each tab contains various boxes to test out the AT-commands listed in the **NRC7292 Evaluation Kit User Guide (AT-Command)**.

2.4 Synchronous / Passthrough Transmission

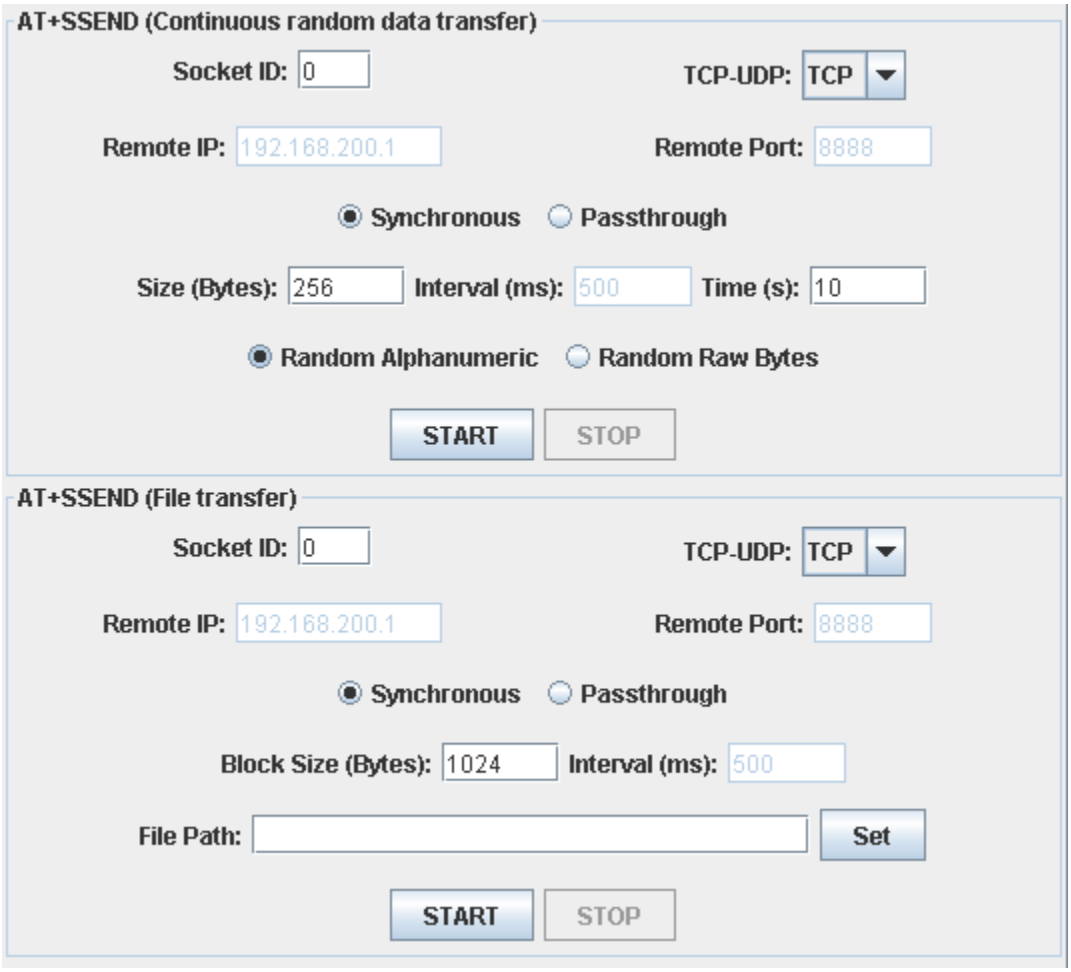

Figure 2.4 Continuous AT+SSEND transmission mode

Continuous transmission test modes including random data transfer and file transfer support synchronous and passthrough transmission types. See the **NRC7292 Evaluation Kit User Guide (AT-Command)** for a detailed explanation of how each mode operates.

2.5 Echo Integrity Test

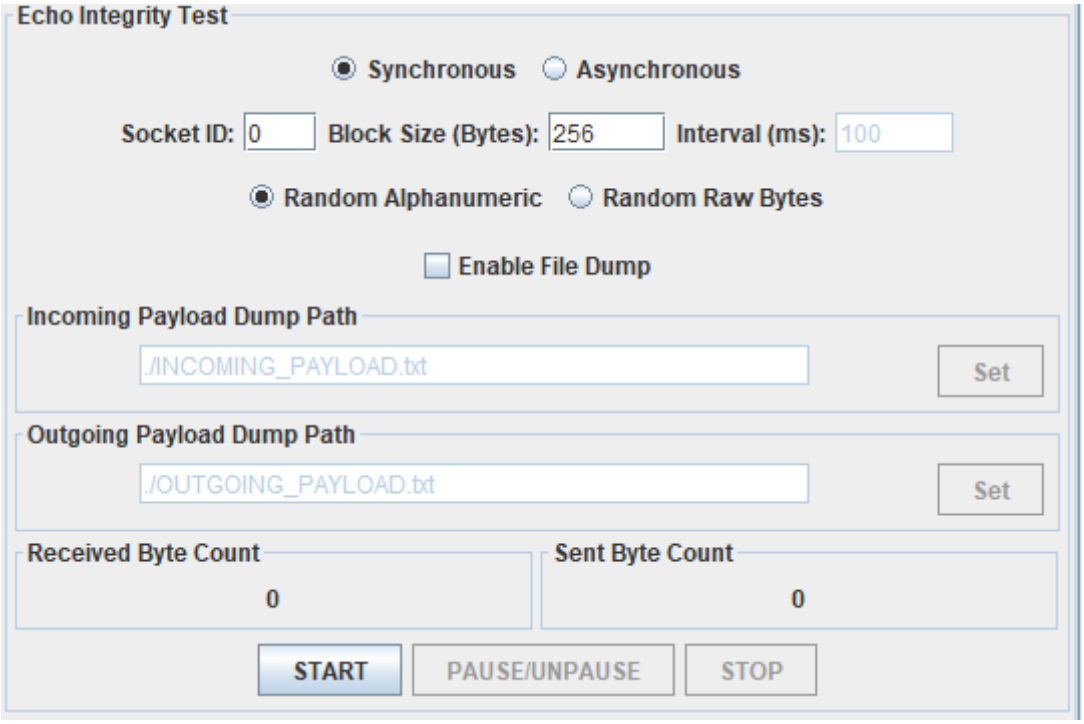

Figure 2.5 Echo Integrity Test Panel

The echo integrity test is used to perform a TRX integrity test by transmitting a random byte sequence which, upon reaching the destination, is echoed back to the source and compared against the original byte sequence for any possible mismatched bytes. The test will terminate with an error message if a mismatch is detected.

Before starting the echo integrity test on the test tool, the user must first run the echo-server Linux script in the 'experimental' subdirectory included in the program package. Executing the script will start an echo-server that runs on TCP/IP port 12345.

3 Revision History

Revision No	Date	Comments
Ver 1.0.1	9/27/2019	First version for external document release
Ver 1.1.3	1/31/2020	Updated texts and figures.
Ver 1.1.4	3/31/2020	Updated figures.
Ver 1.3.0	2/25/2021	Passthrough mode.