

About this release note

This release note contains information about the latest version of the ST-LINK server application for ST-LINK/V2, ST-LINK/V2-1, and STLINK-V3 boards.

ST-LINK-SERVER is the part number of this application.

Table 1. ST-LINK server 2.0.2 release summary

Type	Summary
Major release	Improvements for robustness, low frequencies, and error messages

Customer support

For more information or help concerning ST-LINK/V2, ST-LINK/V2-1, and STLINK-V3 boards, contact the nearest STMicroelectronics sales office. For the complete list of STMicroelectronics offices and distributors, refer to the www.st.com webpage.

Software updates

Software updates and all the latest documentation can be downloaded from the STMicroelectronics support webpage at www.st.com/en/development-tools/st-link-server.

1 General information

1.1 Overview

The ST-LINK server is an application to share the debug interface of a single ST-LINK board among several host applications, typically a debugging tool and a monitoring tool. Of course, two debugging tools cannot simultaneously control the same target, but both may have access to it if appropriate connection settings are chosen.

The ST-LINK server also has access to several boards with one single tool to launch and control the debug of these boards.

The host application must be able to connect to the ST-LINK server instead of connecting directly to the ST-LINK USB interface.

Other ST-LINK interfaces (such as Virtual COM port and mass storage, if provided) are not managed through the ST-LINK server, but may be used simultaneously.

ST-LINK-SERVER interfaces with ST-LINK probes which run on dedicated STM32 microcontrollers based on the Arm® Cortex®-M processor.

Note: Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.



1.2 Host PC system requirements

PC and compatibles running with:

- Windows® 7, 8 32-bit operating systems
- Windows® 7, 8, 10, Linux® and macOS® 64-bit operating systems

On Windows® operating systems, the ST-LINK board requires the installation of a dedicated USB driver. In case the driver is not installed by the used toolset, it can be found at the [STSW-LINK009](#) webpage.

Note: The ST-LINK server is not validated on Windows® 7 and Windows® 8 because those systems are no longer officially maintained by Microsoft.

On Linux®, the application relies on `libusb-1.0`, which must be installed separately. For instance, on Ubuntu®, this is done through the command `sudo apt-get install libusb-1.0`.

On Linux®, users must be granted rights for accessing the ST-LINK USB devices. If not already done, it might be necessary to install one of the packages (depending on the Linux® version) provided by the ST-LINK, ST-LINK/V2, ST-LINK/V2-1, and STLINK-V3 boards firmware upgrade package ([STSW-LINK007](#)) in its folder `AllP1atforms/StlinkRulesFilesForLinux`.

Note: macOS® is a trademark of Apple Inc. registered in the U.S. and other countries.

Ubuntu® is a registered trademark of Canonical Ltd.

All other trademarks are the property of their respective owners.

1.3 Licensing

ST-LINK-SERVER is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* software license agreement (SLA0048).

1.4 Toolset first versions

Toolset first versions supporting the ST-LINK server

- [STM32CubeIDE 1.0.0](#)
- [STM32CubeProgrammer \(STM32CubeProg\) 1.3.0](#)
- Keil® MDK v5.27
- IAR Systems® EWARM 8.30
- [SW4STM32 2.2.0](#)

2 ST-LINK server 2.0.2

Software package content

The zip file contains 5 packages:

1. For Windows® `st-stlink-server.2.0.2-1.msi`
2. For macOS® X `st-stlink-server.2.0.2-1.pkg`
3. For Linux® Debian® `st-stlink-server-2.0.2-1-linux-amd64.deb`
4. For Linux® Red Hat® `st-stlink-server-2.0.2-1-linux-amd64.rpm`
5. For other Linux® OS `st-stlink-server-2.0.2-1-linux-amd64.install.sh`

The zip file also contains the raw binary for Linux® (out of any installation package): `stlink-server.2.0.2-1`, and a `readme.txt` file.

Note:

Red Hat® is a registered trademark of Red Hat, Inc.

Debian is a registered trademark of Software in the Public Interest, Inc.

What is new

- Update from `libusb 1.0.22` to `libusb 1.0.23` to fix ST-LINK detection issue in some USB context
- Modified error messages, especially in case of several running instances
- Allowed commands with a payload greater than 1428 bytes (and up to 6144 bytes) after segmentation
- Partial fix of timeout issue at SWD frequency less than 1 MHz (50/200/500 kHz).
`libSTLinkUSBDriver 6.0.0.0` at least is necessary for a full fix. The issue may remain at 5 kHz.
- Enhanced robustness against ST-LINK disconnection

3 Known problems and limitations

1. The ST-LINK server provides simultaneous communication channels to a single ST-LINK board (and target microcontroller behind), but does not manage priorities between client applications. As a consequence, a new connection attempt might disturb or kill a previously established connection if, for instance, the second client application drives the reset of the target or stops the core.

The typical use case for sharing target accesses is one application controlling the target (a debugger for instance), and one application monitoring the target (and connecting without impacting the target state).

2. The SWV (Serial Wire Viewer) feature can not be shared between applications. Only one application is allowed to control it. The behavior in the case of conflicting applications is not predictable.
In case of instabilities with SWV in shared mode, firstly try the same SWV configuration out of the shared mode.
3. When connecting to an STM32 target, the protocol (SWD or JTAG) is selected by the first client application connecting. In further connections, the protocol must be the same (if a JTAG connection is attempted while an SWD is already set, the new connection fails).
Conversely, the protocol frequency is enforced by the last caller. Any attempt modifying the frequency of one protocol has no impact on the other.
4. The default connection setting is localhost port 7184. The server only accepts sockets from the localhost. The port may be modified (implementation dependent), however, for correct behavior, all clients must use the same port. Only one instance of the server must run.
5. On Windows® and Linux®, it is necessary to uninstall a previous version, if present, before installing the new one.
6. Long commands may result in timeout when done on a target at a very low SWD frequency (5 kHz). Either increase the SWD frequency or connect to the target in the direct (not shared) mode.
7. ST-LINK/V1 boards (now obsolete) are not supported by the ST-LINK server.

4 Release information for previous releases

4.1 ST-LINK server 1.3.0

Software package content

The zip file contains 5 packages:

1. For Windows® `st-stlink-server.1.3.0-4.msi`
2. For macOS® `st-stlink-server.1.3.0-4.pkg`
3. For Linux® Debian® `st-stlink-server-1.3.0-4-linux-amd64.deb`
4. For Linux® Red Hat® `st-stlink-server-1.3.0-4-linux-amd64.rpm`
5. For other Linux® OS `st-stlink-server-1.3.0-4-linux-amd64.install.sh`

The zip file also contains the raw binary for Linux® (out of any installation package): `stlink-server.1.3.0-4`, and a `readme.txt` file.

What is new

- Improved robustness in case of intensive client connection/disconnection sequences
- Fixed issue preventing installation on macOS® Catalina
- Added license information into Linux® package

4.2 ST-LINK server 1.1.1

Software package content

The zip file contains 5 packages:

1. For Windows® `st-stlink-server.1.1.1-3.msi`
2. For macOS® `st-stlink-server.1.1.1-3.pkg`
3. For Linux® Debian® `st-stlink-server-1.1.1-3-linux-amd64.deb`
4. For Linux® Red Hat® `st-stlink-server-1.1.1-3-linux-amd64.rpm`
5. For other Linux® OS `st-stlink-server-1.1.1-3-linux-amd64.rpm`

What is new

- Added support for [STLINK-V3SET](#)

4.3 ST-LINK server 1.0

- Fix SWO trace issue
- Normalized error log
- Add JTAG support

Revision history

Table 2. Document revision history

Date	Document revision	Changes
13-Sep-2017	1	Initial version.
28-Nov-2017	2	Updated: <ul style="list-style-type: none"> Chapter 2.2: Software package content Added: <ul style="list-style-type: none"> Chapter 2.3: What's new
22-Feb-2019	3	Updated: <ul style="list-style-type: none"> Section 2 ST-LINK server latest version Section 3 on the configuration in shared mode Added: <ul style="list-style-type: none"> STLINK-V3 support in <i>Introduction</i>, <i>Customer support</i>, and <i>General information</i> Section 4: Release information for previous releases
10-Feb-2020	4	Updated: <ul style="list-style-type: none"> Section 3 Known problems and limitations ST-LINK server 1.1.1 moved to Section 4 Release information for previous releases Added: <ul style="list-style-type: none"> Release information in ST-LINK server 1.3.0
27-Nov-2020	5	Updated: <ul style="list-style-type: none"> Table 1 switch to the new major release Section 3 Known problems and limitations ST-LINK server 1.3.0 moved to Section 4 Release information for previous releases Added: <ul style="list-style-type: none"> Release information in ST-LINK server 2.0.2

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