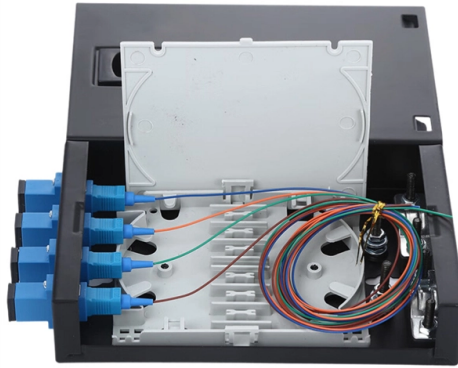


ST2 Interface Speed



AI Overview

ST-LINK interface speed depends on the version and interface type, with ST-LINK/V2 typically achieving SWD/JTAG speeds up to a few Mbps, while ST-LINK/V3 can reach higher throughput approaching USB full-speed limits.

ST-LINK/V2 Interface Speed
The ST-LINK/V2 communicates with STM8 and STM32 microcontrollers using SWD (Serial Wire Debug), JTAG, or SWIM interfaces. The practical data transfer speed over SWD or JTAG is limited by the ST-LINK/V2 hardware and the USB full-speed connection (12 Mbps) to the PC. Typical throughput for programming or debugging is in the range of hundreds of kbps to a few Mbps, depending on the target MCU and the software tool used (e.g., STM32CubeIDE or ST Visual Programmer).

ST-LINK/V3 Interface Speed
The ST-LINK/V3 series, including ST-LINK/V3SET and ST-LINK/V3MINI, supports higher-speed SWD and UART interfaces. Users have reported achieving data rates of 595 kbps over SWD at 24 MHz configuration, though this is below the theoretical USB full-speed limit of 12 Mbps. The ST-LINK/V3 also provides a virtual COM port (UART) interface, which can sometimes achieve higher throughput for streaming data from the MCU to the PC.

Factors Affecting Interface Speed
Target MCU clock and SWD/JTAG configuration – Higher MCU clock speeds allow faster SWD/JTAG communication.
USB connection type – ST-LINK/V2 uses USB full-speed (12 Mbps), while ST-LINK/V3 can better utilize USB bandwidth.
Software tool limitations – Tools like STM32CubeMonitor or STM32CubeIDE may limit the effective data rate due to polling intervals or buffer sizes.
Cable quality and length – Longer or low-quality cables can reduce reliable communication speed.

Practical Considerations
For ST-LINK/V2, expect programming and debugging speeds in the low Mbps range, sufficient for typical firmware development. For high-speed data streaming, ST-LINK/V3 with UART or SWD may be preferable, but real-world throughput may still be below USB full-speed due to protocol overhead and error handling. Using ST-LINK/V2-ISOL or voltage adapters m...

Article Content

Instagram

Key Highlights: SC / ST fiber interface Supports SM or MM fiber optic cable Speed up to 115.2 kbps Distance up to 2.5 km for MM & 20 km for SM TX/RX indication LEDs Fiber cable break alarm

SIMATIC S7-200 SMART System Manual

Purpose of the manual The S7-200 SMART series is a line of micro-programmable logic controllers (Micro PLCs) that can control a variety of automation applications. Compact design, low cost, and a

ST-LINK/V2 in-circuit debugger/programmer for STM8 and STM32

For STM32 developments, the ST-LINK/V2 needs to be connected to the application using the standard 20-pin JTAG flat ribbon provided. Table 3 summarizes the signals names, functions, and target

Overview of ST-LINK derivatives

Introduction In this document, ST-LINK is a generic name that refers to the different implementations of a debugger/programmer probe interface for STMicroelectronics microcontrollers. ST-LINK is also the

Differences between MII and RMI interfaces | Community

RMI: Reduced media-independent interface Both serve the same purpose, facilitating data transmission between the MAC and PHY, but they differ

Data brief

STM32 applications use the USB full-speed interface to communicate with the STM32CubeIDE software tool or with integrated development environments from third-parties.

ST-LINK/V2 in-circuit debugger/programmer for STM8 and STM32

The USB full-speed interface enables communication with a PC and: STM8 devices via ST Visual Develop (STVD) or ST Visual Program (STVP) software (available from STMicroelectronics)

List of interface bit rates

This is a list of interface bit rates, a measure of information transfer rates, or digital bandwidth capacity, at which digital interfaces in a computer or network can communicate over various kinds of buses

Yaesu G5500 Rotor Unit

Mount the ST2 to the top of the G5500 control box, connect the control cable to the rotor box, connect the USB cable to your computer, and you're off to the races. The ST2 web site has lots

J-Link Flash Download

J-Link comes with highly-optimized, built-in flash loaders that allow speedy application download into a target system's flash memory. Learn more at SEGGER.

Stromer ST2 e-bike review: too hot for Europe

The 2021 edition Stromer ST2 is a sophisticated and thrilling e-bike that's hamstrung by EU regulations, like all European

Foxdelta ST2 Interface for G5400/5500

ST2 -RS232 - 0220: ST2 is an advanced Satellite Antenna Tracking Interface for Yaesu (Or similar) Rotor Controllers. Project uses PIC16F876A, 28PIN DIP.

ST-LINK/V2 in-circuit debugger/programmer for STM8 and STM32

It also withstands voltages of up to 1000 VRMS. The USB full-speed interface allows communication with a PC and: STM8 devices via ST Visual Develop (STVD) or ST Visual Program (STVP) software

T2100 St2 Treadmill-cardiology-stress Ecg Systems

Treadmill for stress exercise ECG testing, interfaces to GE Healthcare Stress ECG devices. The Series 2100 ST2 is GE Healthcare's fifth generation treadmill and

ST-LINK/V2 in-circuit debugger/programmer for STM8 and STM32

The ST-LINK/V2 is an in-circuit debugger/programmer for the STM8 and STM32 microcontroller families. The single wire interface module (SWIM) and JTAG/serial wire debugging (SWD) interfaces, facilitate

Debug Adapter Configuration (OpenOCD User's Guide)

Debug Adapters/Interfaces/Dongles are normally configured through commands in an interface configuration file which is sourced by your openocd.cfg file, or through a command line -f

Stromer introduces ST2 speed pedelec with Pinion

Stromer has introduced a the new ST2 speed pedelec, which puts to use an ultra-low maintenance Pinion gearbox and Gates belt drive.

ST-LINK/V2 in-circuit debugger/programmer for STM8 and STM32

The single wire interface module (SWIM) and JTAG/serial wire debugging (SWD) interfaces are used to communicate with any STM8 or STM32 microcontroller located on an application board.

ST -LINK/V2 USER MANUAL Pdf Download | ManualsLib

(SWD) interfaces facilitate communication with any STM8 or STM32 microcontroller operating on an application board. In addition to providing the same functionalities of the ST-LINK/V2, the ST

ST-Link high speed interface to access data stream from PC

I'm receiving 32bit samples from an external ADC via SPI (DMA) on the STM32U5 (NUCLEO board with ST-Link v3-E) at a rate of 51200 samples/sec. I'm trying to use

ST2-0417/0426 USB:: PIC16F876A LCD Satellite

GOPNM Click picture to view GOPNM Station Satellite Tracking & Prediction Interface
ST2 0426 USB Last version ST2-0417-0323 webpage is here..... Click

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.sabineamsee.co.za>

Email: info@sabineamsee.co.za

Phone: +27 82 415 6793

Address: Unit 7, Innovation Park, 34 Electron Road, Kempton Park, 1620, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

