



# ST7 Programmings and Evaluation Boards

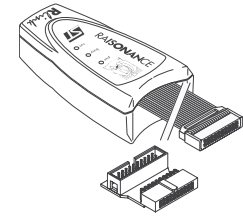
## STX-RLINK Programmer

The RLink is Raisonance's versatile, low-cost, in-circuit debugger/programmer for ST7, uPSD, and STR7 microcontrollers. It connects to application or evaluation boards for programming and debugging via a JTAG standard connection for ARM core-based and uPSD microcontrollers, or via STMicroelectronics' In-Circuit Communication (ICC) connection for ST7 microcontrollers.

The RLink can be driven by Raisonance's RIDE integrated development environment for in-circuit debugging and programming of applications for ST7 and uPSD, and in-circuit programming of STR7 microcontroller applications. In combination with Raisonance's free RFlasher programming software, RLink can be used as a very-low cost, dedicated in-circuit programmer for ST7 and STR7.

ST7 application developers can also drive RLink using the STVD7 (version 3.3 or later) integrated development environment for in-circuit debugging/programming and STVP7 (version 2.0 or later) for in-circuit programming. Both are available for free download in the ST7 Toolset.

**Note:** RLinks included with REva starter kits for STR7 (ST part number: STRxxx-SK/RAIS) and Professional Kits for STR7 (Raisonance part number: RKITPSTRxxx) provide debugging of STR7 devices.



497-5046-ND (STX-RLINK) ..... 45.38

## ST7 Programmings

The ST7 EPB series of programming boards is able to program all ST7 microcontrollers with OTP, EPROM, EEPROM or FLASH memories, regardless of the socket type. Certain programming boards also support In-Situ Programming (ISP) or In-Circuit Programming (ICP). These boards are driven by ST programming software: ST7 Visual Programmer (STVP7), which includes all useful functions such as Verify, Blank Check, Read Master and others.

**FEATURES:** • ISP/ICP Programming • Handled Formats: Intel HEX • Host Interface: Parallel Port (LPT) • Power Supply: Delivered inside the package • User Manual Software: • STVP7 (Free, available on ST CD-ROM and web site)

Devices Supported*	Digi-Key Part No.	Price Each	STMicroelectronics Part No.
ST7262x	497-2901-ND	537.24	ST7MDTU2-EPB/US
ST7263B	497-2902-ND	464.64	ST7MDTU3-EPB/US

\*Socket: All packages except TQFP64 10\*10

## ST7 Evaluation Boards

### ST7OPTIONS-EVAL:

The Safe ST7 Evaluation Board is intended for starting with the ST72F264 microcontroller and evaluating the features of the ST7 Flash family. The ST72F264 sample installed on-board is programmed with an example software application.

**FEATURES: Evaluate ST72F264:** • Integrated Low Voltage Detector/Auxiliary Voltage Detector (LVD/AVD) • Safe backup clock (CSS: Clock Nested Interrupts) **Develop your own application using:** • I/O port connectors • Wire-wrap area • LEDs, 7-segment displays, buzzer • EEPROMs (SPI, I<sup>2</sup>C) • Trimmers and buttons for reset and interrupts **Standalone Board:** • A 9V battery is provided • Input connector for external power

**Devices Supported:** ST72F26x

**Contents:** • Safe ST7 Evaluation Board • 9V Battery • One ST72F264 MCU programmed with the example software application code • CD-ROMs • User Manual • Selection Guide • Documentation

### ST7MDTULS-EVAL:

**FEATURES:** • Low-speed USB Evaluation Board • Can be used to develop USB Class applications: In-Application Programming (IAP) hardware support Device Firmware Upgrade (DFU) and Human Interface Device (HID) application demonstrator (LEDs, buttons, trimmer) • ST72F61/62/63B MCU Family support • Wrapping area • Windows 98 applet, as well as USB firmware libraries for running the peripheral device

**Devices Supported:** ST72611, ST7262, ST263B

**Contents:** • Two ST7 Low-speed USB microcontroller devices: ST72F62 in SDIP42 package and ST72F63B in SDIP32 package • One USB evaluation board • CD-ROMs

### ST7MDT20-EVC/US:

This board has been designed to help people begin working with ST7 devices or perform some tests and peripheral evaluation (SPI, I<sup>2</sup>C, ADC...). It can be used with a device, the emulator or development kit.

**FEATURES:** • LEDs • Trimmer • ISP connector for Flash devices programming • Reset button • External Interrupt Management • Buzzer • SPI, I<sup>2</sup>C, EEPROM • CAN communication

**Devices Supported:** ST72124, ST72311, ST72311Rx, ST72314, ST72321, ST72324, ST72331, ST72334, ST7251x, ST72521 in QFP64

**Contents:** • MDT20 board • Power Supply • ISP/ICP Connector for Flash devices programming • Exercise manual (with detailed description of the board)

### STEVAL-CBL001V1:

This demonstration board is used to program EEPROM data and to test ST7LNBx (0/1) microcontrollers on sockets or remotely using a coaxial cable (75Ω), via DiSEqC commands.

**FEATURES:** • Ready-to-use programming and test board with user friendly graphical user interface or windows hyper terminal • EEPROM data programming on-socket or via coaxial cable • DiSEqC commands testing controlled by pre-programmed microcontroller and dedicated voltage regulator

Description	Digi-Key Part No.	Price Each	STMicroelectronics Part No.
Evaluation Board for ST7 Series	497-2895-ND	229.60	ST7OPTIONS-EVAL
Low-Speed USB Evaluation Board	497-2903-ND	116.16	ST7MDTULS-EVAL
Evaluation Board for Training	497-2897-ND	1238.74	ST7MDT20-EVC/US
Evaluation Board Based on ST7LNBX	497-6453-ND◆	91.73	STEVAL-CBL001V1

◆ RoHS Compliant

## ST7 Emulators

STMicroelectronics continuously invests in efforts to offer a high-end emulator to support ST7 microcontrollers. The ST7-EMU3 series of emulators is the third generation of high-end emulators for ST7. EMU3 series emulators are designed to speed up the development of complex software applications for ST7 microcontrollers by providing a complete range of advanced emulator debugging features, as well as In-Circuit Debugging (ICD) and In-Circuit Programming (ICP) capability.

### Features:

- A common hardware development system mainframe supports the entire ST7 family of microcontrollers.
- 64Kbytes of user modifiable and configurable emulation RAM, allows memory mapping of all ST7 family devices as well as modeling hypothetical memory configurations.
- Logic analyzer events may trigger a breakpoint or simply define data capture parameters, in accordance to user preferences.
- Simple connection of the emulator system to the host PC via RS-232 serial channel or parallel port.
- Log files allow storage and subsequent re-display of any display screen for subsequent analysis.
- Real-time source level emulation allows viewing and breakpoint setting on high level source code rather than on disassembled target code for optimum user friendliness.
- Unlimited breakpoints may be set for any op-code fetch or any address access, and conditions may be defined for the generation of 2 external synchronization signals
- 1K by 32-bit wide trace memory for logic analyzer allows complex and sequential events to be defined on any combination of address and data, as well as 3 internal and 5 external logic signals
- Emulation system may be driven by a Windows-based GNU debugger software or DOS software running on host PC, allowing full control and monitoring of hardware resources.
- Multiple windows allow concurrent real-time display of source code, microcontroller resources, internal registers, trace data, etc.
- Command files can be used to execute a set of debugger commands in batch mode.
- Editable configuration files ensure tailoring of working environment to user preferences.

Supported Devices	Digi-Key Part No.	Price Each	STMicroelectronics Part No.
ST72260G1, ST72262G1, ST72262G2, ST72264G1, ST72264G2, ST7FLITE05, ST7FLITE09, ST7FLITE20, ST7FLITE25, ST7FLITE29, and ST7FDALI	497-4872-ND	2648.45	ST7MDT10-EMU3
ST72F321J9, ST72F321J7, ST72F324J6, ST72F324J4, ST72324J2, ST72F324K6, ST72F324K4, ST72324K2, ST72F344J4, ST72344J2, ST72F344K4, and ST72344K2	497-4879-ND	2648.45	ST7MDT20J-EMU3
ST72321M9, ST72F321M9, ST72321M7, ST72F321M7, ST72521M9, ST72F521M9, ST72521M7, and ST72F521M7	497-4880-ND	3136.32	ST7MDT20M-EMU3
ST72621J4, ST72621J2, ST72621L4, ST72622L2, ST72621K4, ST72622K2, ST72623F2, ST72611F1, ST72611F1, and ST72P611F4	497-4881-ND	2299.97	ST7MDTU2-EMU2B

## ST7 Development Kit



Supported Device	Digi-Key Part No.	Price Each	STMicroelectronics Part No.
ST72521M9	497-4878-ND	319.44	ST7MDT20-T80/DVP

**Free shipping on orders over £50! All prices are in British pound sterling and include duties.**

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(UK091) 669