ST-TSLINK programming dongle
for STM8T14x devices and STM8T14X-SB socket boards

Introduction

The ST-TSLINK dongle has been designed to program the STM8T14x devices in the easiest way possible. The devices can be programmed while they are either:

■ on an STM8T14X-SB socket board (recommended method)

■ on a socket where the customer must make the connection between the device and the ST-TSLINK.

This manual describes how to connect the ST-TSLINK dongle programmer to an STM8T141 and an STM8T143 device in either of the above configurations.

Features

The ST-TSLINK programs the STM8T family using ST Visual Programmer (STVP) software (included in the ST Toolset).

The ST-TSLINK features:

■ a USB connection for the PC link

■ a 20-pin connector to interface between the ST-TSLINK dongle and the STM8T14x device (on the user connection or on the STM8T14x socket board).
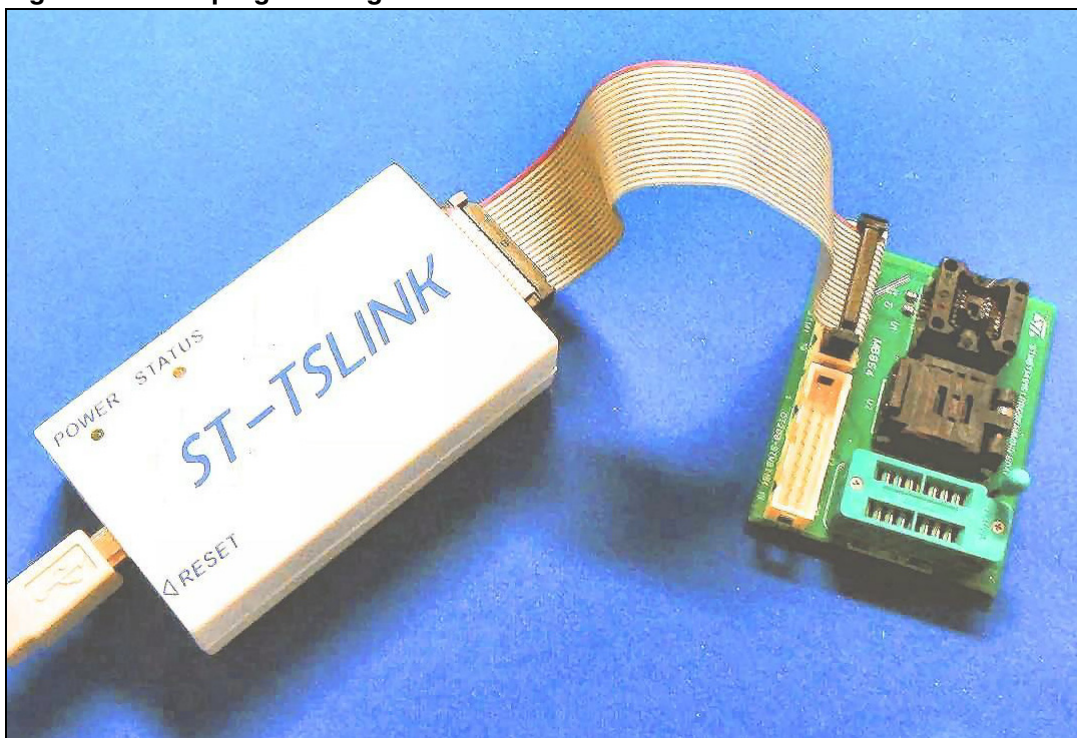
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1 Overview

The ST-TSLINK dongle facilitates STM8T14x device programming. The devices can be programmed while they are either on an STM8T14X-SB socket board (recommended method) or on a user socket.

Whichever method is used, the ST-TSLINK simply plugs into a 20-pin HE10 connector on one side and a PC (and ST Visual Programmer (STVP) software) on the other side.

As shown in *Figure 1*:

● A USB cable connects the ST-TSLINK programming dongle to the PC.

● A cable connects the STM8T socket board (or STM8T14x device) to the ST-TSLINK.

Figure 1. The programming hardware connected to the socket board

2 Connect ST-TSLINK to an STM8T14X-SB (recommended)

2.1 STM8T14X-SB socket board

The STM8T14X-SB socket board provides a platform for on-socket programming of STM8T14x devices. Each STM8T socket board furnishes all the sockets that may be required to program STM8T14x devices in all package types.
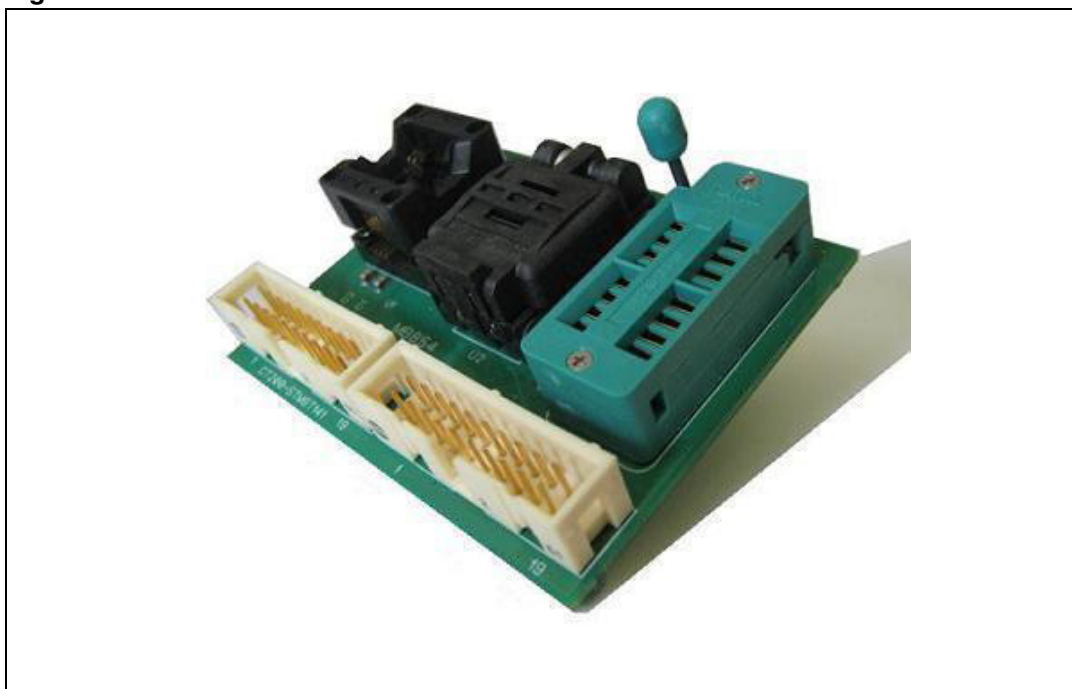
The STM8T socket board is used with an ST-TSLINK programming dongle and STVP programming software.

The programming sockets feature:

- 20-pin connectors to interface with the ST-TSLINK dongle.
- SO8 and DFN8 sockets for the devices.
- DIL16 ZIF socket for a 14-pin module which is plugged into a position specific to the device being programmed (at the top or bottom of the DIL16 socket).

Figure 2 shows one example of an STM8T socket board. However, programming sockets vary for the different models of socket boards, depending on package types for the STM8T family that they support.

Figure 2.   An STM8T socket board

2.2 STM8T14X-SB socket board connections

After connecting the STM8T14x device to the STM8T socket board as described below, you can program your STM8T.

2.2.1 STM8T141 devices

1. Connect the ST-TSLINK dongle to the ST-TSLINK-STM8T141 J1-HE20 connector of the STM8T socket board.
2. Insert the device in the dedicated socket.

You are now ready to program your STM8T141 from the STVP interface on your host PC.

2.2.2 STM8T141AM-MOD module

1. Connect the ST-TSLINK dongle to the ST-TSLINK-STM8T141 J1-HE20 connector of the STM8T socket board.
2. Insert the STM8T141 module on the top of the DIL16 ZIF socket.

You are now ready to program your STM8T141AM-MOD from the STVP interface on your host PC.

Table 1.   Socket board configuration

Device	Sockets	20-pin connector	14-pin module
STM8T141	SO8, DFN8	ST-TSLINK-STM8T141	STM8T141AM-MOD (top of DIL16 ZIF socket)

2.2.3 STM8T143 devices

1. Connect the ST-TSLINK dongle to the ST-TSLINK-STM8T143 J2-HE20 connector of the STM8T socket board.
2. Insert the device in the dedicated socket.

You are now ready to program your STM8T143 from the STVP interface on your host PC.
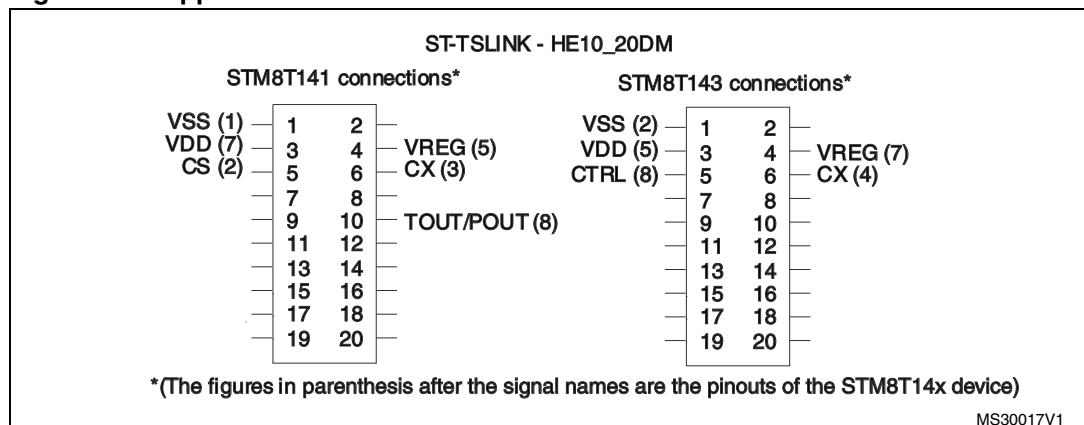
3 Connect ST-TSLINK to an STM8T14x device

The ST-TSLINK cable can be connected directly to an STM8T141 or STM8T143 device.

● The ST-TSLINK connector footprint is a 20-pin HE10.

● The cable used to program the STM8T14x device must not be longer than 30 cm.

● The manner in which the cable is connected depends on the device being used. Figure 3 details the pinouts of the STM8T14x connections, and the pinouts of the STM8T14x device are shown in parenthesis after the signal name.

Note: *Only the pins named in Figure 3 should be connected.*

Figure 3. Application connections

4 Ordering information

The STM8T socket boards and ST-TSLINKs are available from STMicroelectronics' sales offices and distributors. For more information and complete documentation please visit the STMicroelectronics microcontroller support site *www.st.com*.

The microcontroller support site on *www.st.com* provides a number of free tool and microcontroller support features including software downloads, on-line product selector, user groups and complete documentation.

The following documents with information relating to this product are available for free download:

● *STVP Visual Programmer online help* - Information to help you program your application to your STM8T using this Windows-based programming software.

● *STM8T14x datasheet* - Complete information about the features of your target STM8T microcontroller.

Table 2.   Order codes

Order code	Description
ST-TSLINK	Programming dongle
STM8T14X-SB	Socket board for STM8T14x devices.

5 Revision history

Table 3.   Document revision history

Date	Revision	Changes
25-Sep-2009	1	Initial release.
23-Oct-2009	2	Enhanced *Chapter 2*. Other minor updates.
08-Oct-2010	3	Removed references to STM8T142 devices and STM8T142AM-MODs.
06-Jan-2012	4	Update for STM8T143 devices.

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