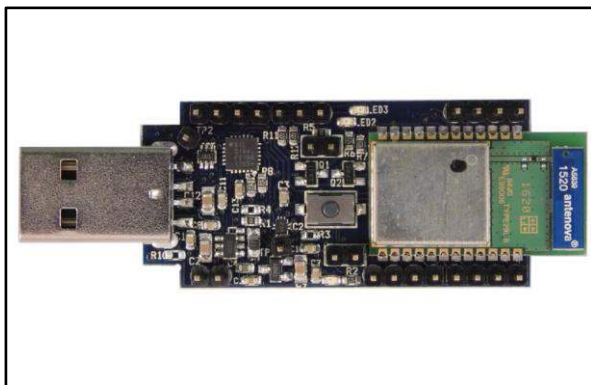


## USB dongle for the Bluetooth® class 1 SPBT3.0DP1 module

Data brief



### Description

The STEVAL-BTDP1 dongle demonstration tool is exclusively designed for quick and easy SPBT3.0DP1 module evaluation.

The dongle includes an RF antenna and a USB connector to allow PC communication with the Bluetooth® module and power the dongle.

The STEVAL-BTDP1 includes downloaded firmware so you can create a Bluetooth® link using simple AT commands (see user manual UM2077 on [www.st.com](http://www.st.com) for the complete list of AT commands).

### Features

- Based on the V3.0 Bluetooth® class 1 module SPBT3.0DP1
- USB interface and power supply
- Reprogramming support via USB interface
- Reset button
- On-board Antenna
- RoHS compliant

# 1 Recommended operating conditions

Table 1: Operating conditions

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V <sub>DD</sub>	Board supply voltage	-40 °C < T < 85 °C	4.5	5	5.5	V
T <sub>OP</sub>	Operating case temperature range		-40		+85	°C

## 2 I/O connections

### 2.1 PAD description

PAD1 to PAD21 also allow user access to the SPBT3.0DP1 module.

Figure 1: Dongle component layout

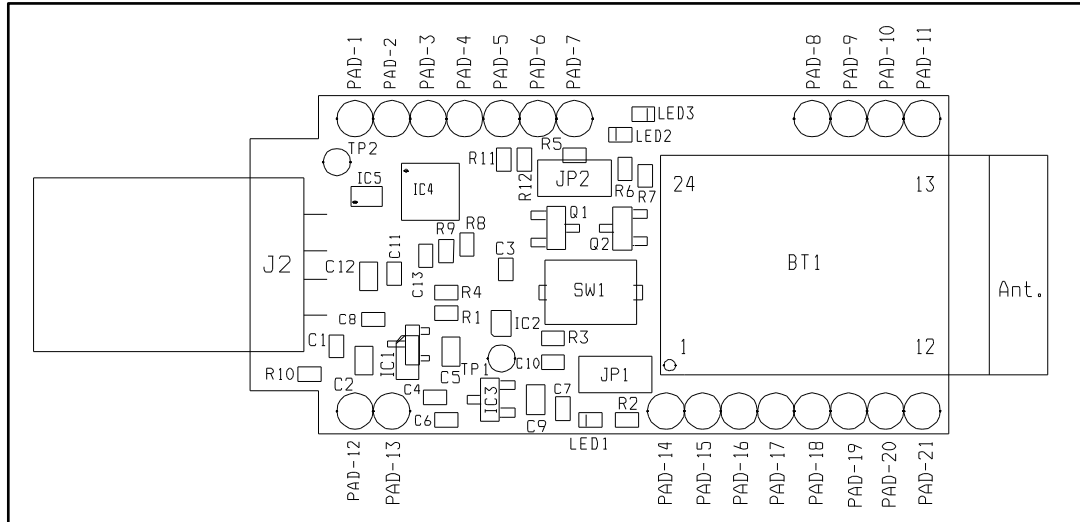


Table 2: Pad connections

PAD n°	Name	Description
1	GPIO05	General purpose I/O
2	LDOUT	1.8 V LDO output, max 10 mA
3	GPIO06	General purpose I/O
4	GPIO02	General purpose I/O
5	GPIO04	General purpose I/O LED2 is connected to this GPIO, LED2 is ON when SPBT3.0DP1 is in Active State
6	GPIO01	LED3 is connected to this GPIO, LED3 is ON when Bluetooth link is up
7	+3.3 V	LED1 is connected to module power
8	LPO	32.768 kHz
9	GPIO13	General purpose I/O
10	GPIO14	General purpose I/O
11	GPIO07	General purpose I/O
12	GND	
13	+5 V	USB VCC
14	GPIO03	
15	BOOT0	Boot pin used for firmware downloading
16	RESETN	Connected in parallel to onboard reset switch
17	GPIO08	General purpose I/O

PAD n°	Name	Description
18	GPIO10	General purpose I/O
19	GPIO09	General purpose I/O
20	GPIO11	General purpose I/O
21	GPIO12	General purpose I/O



Factory configuration - different configurations can be chosen (see the SPBT3.0DP1 datasheet).

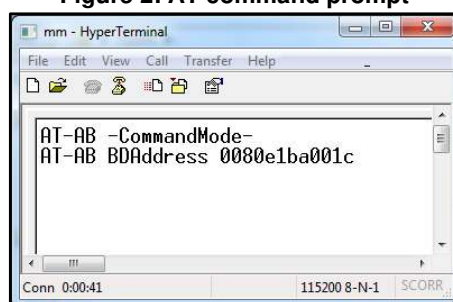
## 2.2 Reset switch

Reset switch SW1 on the dongle forces the SPBT3.0DP1 module to reset and the information figured below is shown on the PC.



The actual BDAAddress number may be different on your machine.

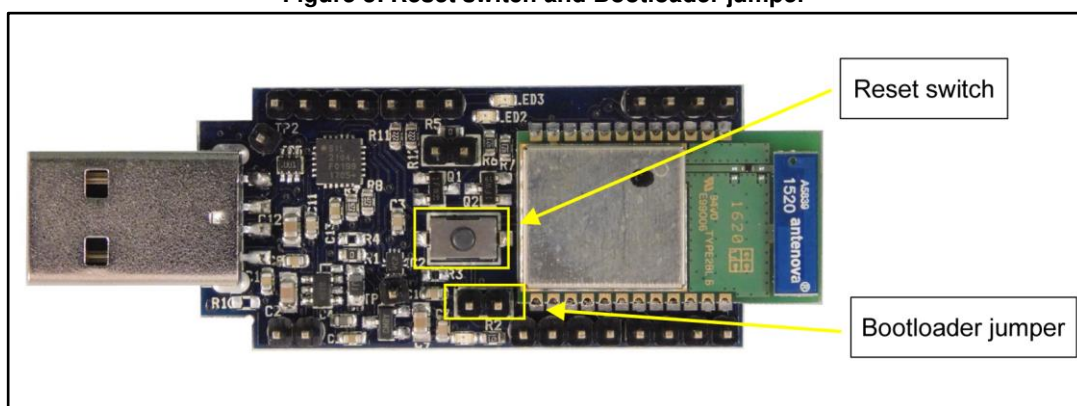
Figure 2: AT command prompt



## 2.3 Bootloader jumper

When Bootloader jumper (JP1) is closed, the SPBT3.0DP1 enters Bootloader mode after reset.

Figure 3: Reset switch and Bootloader jumper



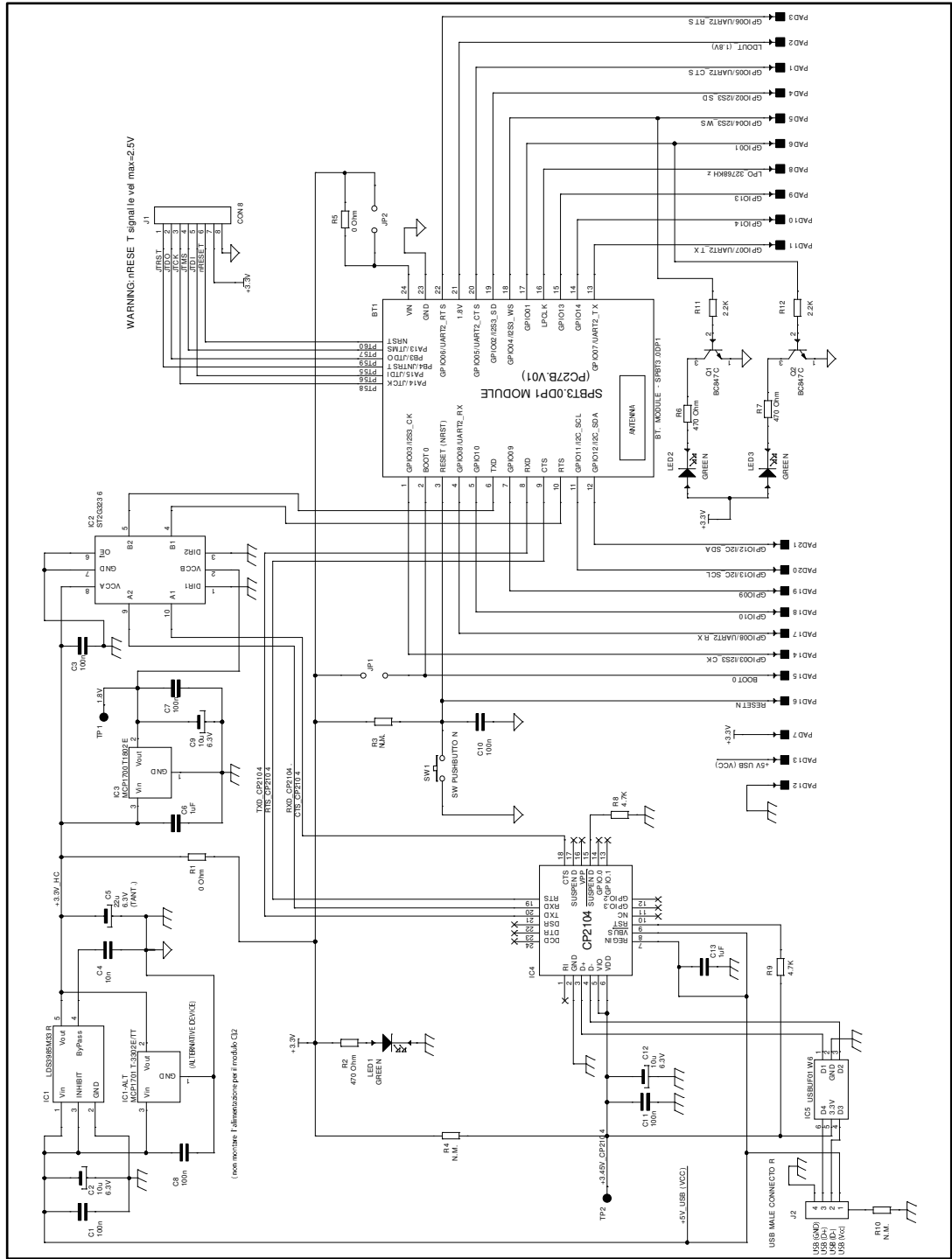
Bootloader mode is used to update the module firmware.

The STM32 Flash loader demonstrator GUI (see user manual UM0462 on [www.st.com](http://www.st.com)) can be used to update the SPBT3.0DP1 module.

A detailed description of the firmware update procedure can be found in user manual UM2077 on [www.st.com](http://www.st.com).

### 3 Dongle schematic

Figure 4: STEVAL-BTDP1 schematic



## 4 Revision history

Table 3: Document revision history

Date	Version	Changes
31-May-2017	1	Initial release.

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