

# Reset the TE USB FX2 module: "power-on reset" or "powered reset"

## Reset types

Two types of reset exist for TE USB FX2 module but four methods are possible: 2 (reset type) \* 2 ( with or without baseboard).


Reset types	Description	Derived methods
Power-on reset	The simpler way to achieve a power-on reset is to <b>manually detach and reconnect the power supply</b>	( <b>Method 1</b> ) for a TE USB FX2 module <b>without</b> baseboard, the power supply source is the <b>USB port: detach and reconnect the USB port</b>
		( <b>Method 2</b> ) for a TE USB FX2 module <b>with</b> baseboard, the power supply source is the <b>external power supply: detach and reconnect the external power supply</b>
Powered reset	A switch or a button is used to assert the reset pin of the Cypress USB FX2 microcontroller and FPGA chip.	( <b>Method 3</b> ) for a TE USB FX2 module <b>without</b> baseboard, <ul style="list-style-type: none"><li>• TE0300:<ul style="list-style-type: none"><li>◦ Substep 1:set S2 to OFF (reset)</li><li>◦ Substep 2:set S2 again to ON (work)</li></ul></li><li>• TE0320:<ul style="list-style-type: none"><li>◦ Substep 1:set S1D to ON (reset)</li><li>◦ Substep 2:set S1D again to OFF (work)</li></ul></li><li>• TE0630: not available</li></ul>
		( <b>Method 4</b> ) for a micromodule <b>with</b> baseboard, button S1 on its baseboard can be used to assert the reset: <b>push button S1.</b>

Reset types and the 4 derived methods

## Reset and USB FX2 microcontroller's firmware change

 The firmware actually changes (it is retrieved from EEPROM and runs on USB FX2 microcontroller's RAM) only when

- the user resets the TE USB FX2 module (Powered reset);
- the user power off and power on the TE USB FX2 module (Power-on reset).

 The user could also write the USB FX2 microcontroller's RAM (but the new firmware is lost if the TE USB FX2 module undergoes a reset or a power off/on cycle).

## Reset and FPGA's bitstream change



The Logic Architecture Layer (FPGA image contained in a FPGA bitstream) actually changes (the SPI Flash content (FPGA bitstream) programs /configures the FPGA) only when .

- the user resets the TE USB FX2 module (Powered reset);
- the user power off and power on the TE USB FX2 module (Power-on reset);
- the user use the [USB FX2 API Command \(FW API\)](#)'s [POWER](#) to realize a power cycle (off/on) that affect the FPGA only (not the entire TE-USB module).



The user could also directly write the FPGA bitstream (.bit file) on the FPGA but, if the user does not also write the SPI Flash memory, the new bitstream image is lost if the TE USB FX2 module undergoes a reset or a power off/on cycle.