

# TE0320 Getting Started

## Preloaded FPGA Bitstream (FPGA image, SPI Flash)

TE0320 comes with SPI Flash [preloaded](#) with a [reference design](#).

Those preloaded image is just for getting started demo, for real designs:

- it is expected that these image could be replaced by the customer;
- it is expected that these image could be used by the customer as starting point.

## Preloaded USB Firmware (FX2 USB microcontroller, EEPROM)

TE0320 comes with FX2 USB microcontroller's [firmware](#).

To change the firmware of EEPROM from Generation 2 to Generation 3 you must follow this [procedure](#). You may also watch this [video play list](#).

Those preloaded firmware is used with [TE API](#).

## TE USB FX2 modules: common stack description

TE0300, TE0320 and TE0630 common stack is described [here](#).

## SW tools to be used with TE USB FX2 modules

They can be found [here](#).

## Custom FPGA design: programmable logic

We recommend to download and install the standard [Xilinx development tool](#) to develop and debug a custom programmable logic design. License fees may apply when designing with larger devices or debugging with advanced tools. Same conditions apply when modifying the programmable logic of the [reference design](#).

## Custom FPGA design: embedded processing system

We recommend to download and install the standard [Xilinx development tool](#) to develop and debug a custom embedded processing system. License fees may apply. Same conditions apply when modifying the embedded processing system of the [reference design](#).

## Custom USB design

You can download the Firmware code from [GitHub](#) and use this code as a start point. If you do not realize a [compatible firmware](#), the [TE API](#) will be no longer available.

## Generating bitstreams

- [BIT](#)
- [MCS](#)

## Loading FPGA Bitstream through JTAG

[Xilinx Impact](#) can be used to load bitstreams.

## Loading FPGA Bitstream through USB

[OpenFutNet](#) (recommended) and [other software tools](#) can be used to load bitstreams.

## Loading USB Firmware through USB

Trenz Electronic Tools (recommended C# [OpenFutNet](#) or Python [Open\\_FUT](#)) or [Cypress tools](#) (CyConsole or CyControl) can be used to load FX2 USB microcontroller's [firmware](#).