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## Overview

This xChip forms part of the interface programmer modules.

The FT232R is a USB to serial UART interface device which is equipped to power and program other modules via a USB A connector. The IP01 is required for programming the range of CPU Core xChip over the USB-serial bridge provided by the FT232R.

The IP01 is unable to program the CC03, whereas the IP02 is able to do so.

### Product Highlights

- Based on FT232R From FTDI Limited
- USB (<https://en.wikipedia.org/wiki/USB>) A connector for simple connectivity without the need of a cable
- Programming interface for core xCHIPS such as CW01, CR01 and CC01
- Equipped with switches that allow the user to switch serial and programming configurations
- RGB LED for programming indicators

## Applications

- Serial Programming of xCHIPS
- Serial Interface for debugging
- Serial Data Monitoring
- USB-Serial Internet Link for IoT Devices

## Specifications

- Single chip USB to asynchronous serial data transfer interface.
- Entire USB protocol handled on the chip. No USB specific firmware programming required.
- Fully integrated 1024 bit EEPROM for storing device descriptors.
- Data transfer rates from 300 baud to 3 Mbaud.
- 128 byte receive buffer and 256 byte transmit buffer utilizing buffer smoothing technology to allow for high data throughput.
- Unique USB FTDIChip-ID™ feature.
- Transmit and receive LED signals.
- UART interface support for 7 or 8 data bits, 1 or 2 stop bits and odd / even / mark / space / no parity.
- FIFO receives and transmits buffers for high data throughput.
- Device supplied pre-programmed with unique USB serial number.
- UART signal inversion option.
- Low operating and USB suspend current.
- Low USB bandwidth consumption.
- UHCI/OHCI/EHCI host controller compatible.
- USB 2.0 Full Speed compatible.
- -40°C to 85°C extended operating temperature range.

## External Links

### Datasheets

- FT232 From FTDI Chip ([http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS\\_FT232R.pdf](http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_FT232R.pdf))

### Shop

- Buy IP01 (<https://xinabox.cc/products/IP01>)

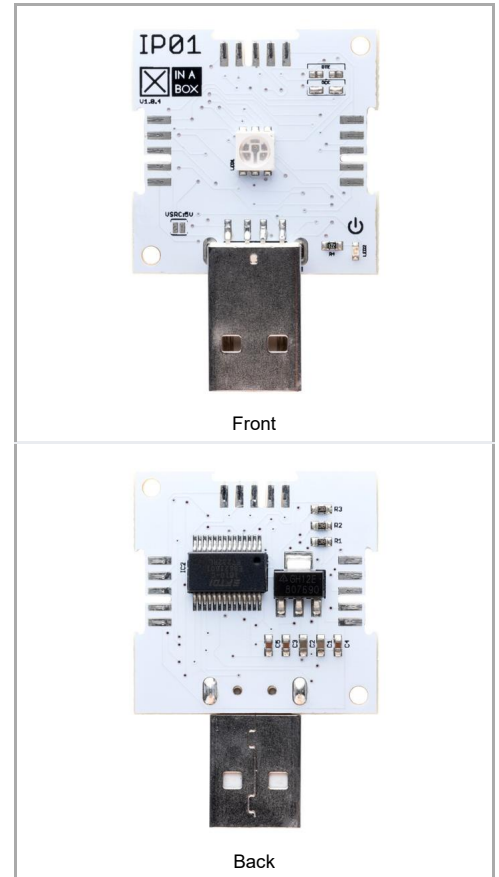
### GitHub

- IP01 on GitHub (<https://github.com/xinabox/IP01>)

### Drivers

- FTDI Drivers (<http://www.ftdichip.com/Drivers/VCP.htm>)

## IP01 - USB Programming Interface (FT232R)



<b>Main Category</b>	Interface
<b>Sub Category</b>	Programmer
<b>Introduced</b>	1 January 2017
<b>Current version</b>	1.0.4
<b>Current version date</b>	1 January 2017
<b>Weight</b>	5.4 g
<b>Height</b>	5.9/5.4/1.6 mm
<b>Non-xBUS Connections</b>	
<b>South</b>	USB A
<b>Main Chip Set</b>	
<b>Main Chip</b>	FT232R
<b>EEPROM Memory Size</b>	1024 bit
<b>Serial Configuration</b>	
<b>Default Setting</b>	DCE/DTE and A/B
<b>Change Setting</b>	Switch