SOS electronic - distributor of
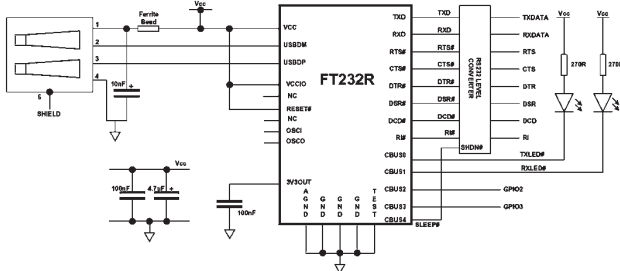

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FTDI Chips
FT232R Series - USB UART IC

The FT232R is a USB to serial UART interface with optional clock generator output, and the new FTDIChip-ID™ security dongle feature. In addition, asynchronous and synchronous bit bang interface modes are available. USB to serial designs using the FT232R have been further simplified by fully integrating the external EEPROM, clock circuit and USB resistors onto the device.

The FT232R adds two new functions compared with its predecessors, effectively making it a „3-in-1" chip for some application areas. The internally generated clock (6MHz, 12MHz, 24MHz, and 48MHz) can be brought out of the device and used to drive a microcontroller or external logic. A unique number (the FTDIChip-ID™) is burnt into the device during manufacture and is readable over USB, thus forming the basis of a security dongle which can be used to protect customer application software from being copied.

The FT232R is available in two different Pb-free (RoHS compliant) packages - the FT232RL comes in a compact 28-Lead SSOP package and the FT232RQ comes in a ultra-compact 5x5mm QFN-32 package.

Part No.	Description
FT 232 RL-R T&R	IC UART RS232 USB SSOP28
FT 232 RQ-R	IC UART RS232 USB QFN32
FT 232 BL-TR	IC UART RS232 USB LQFP32

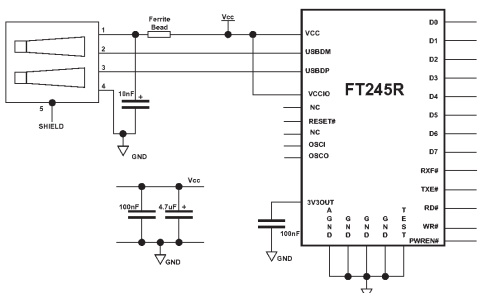|	Part No.	Ord. No.
S	FT 232 RL-R T&R	70931
S	FT 232 RQ-R	55231
S	FT 232 BL-TR	42415

FT245 Series - USB FIFO IC

The FT245R is the latest device to be added to FTDI's range of USB FIFO interface Integrated Circuit Devices. The FT245R is a USB to parallel FIFO interface, with the new FTDIChip-ID™ security dongle feature. In addition, asynchronous and synchronous bit bang interface modes are available. USB to parallel designs using the FT245R have been further simplified by fully integrating the external EEPROM, clock circuit and USB resistors onto the device.

The FT245R adds a new function compared with its predecessors, effectively making it a „2-in-1" chip for some application areas. A unique number (the FTDI-Chip-ID™) is burnt into the device during manufacture and is readable over USB, thus forming the basis of a security dongle which can be used to protect customer application software from being copied.

The FT245R is available in two different Pb-free (RoHS compliant) packages - the FT245RL comes in a compact 28-Lead SSOP package and the FT245RQ comes in a ultra-compact 5x5mm QFN-32 package.

Part No.	Description
FT 245 RL-R T&R	IO USB FIFO SSOP28
FT 245 RQ	USB/parallel port QFN32
FT 245 BL T&R	IC USB FIFO LQFP32

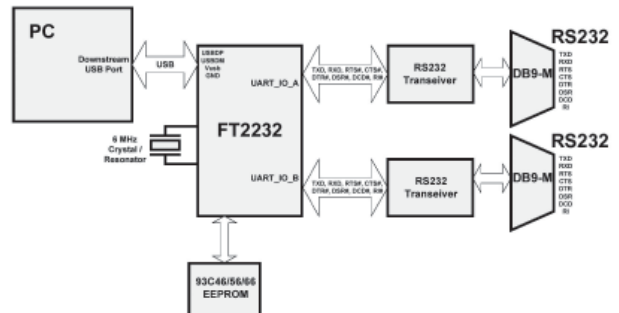|	Part No.	Ord. No.
S	FT 245 RL-R T&R	70390
S	FT 245 RQ	55232
S	FT 245 BL T&R	42416

FT2232 D Series
Dual USB UART/FIFO IC

The FT2232D is an updated version of FTDI's 3rd generation USB UART/FIFO I.C. family.This device features two Multi-Purpose UART/FIFO controllers which can be configured individually in several different modes. As well as a UART interface, FIFO interface and Bit-Bang IO modes of the 2nd generation FT232BM and FT245BM devices, the FT2232D offers a variety of additional new modes of operation, including a Multi-Protocol Synchronous Serial Engine interface which is designed specifically for synchronous serial protocols such as JTAG, I2C, and SPI bus.

Main Features:
- Single chip USB to dual channel serial/parallel ports with a variety of configurations
- Entire USB protocol handled on the chip: no USB-specific firmware programming required
- FT232BM-style UART interface option with full handshaking & modem interface signals
- UART interface supports 7/8 data bits, 1/2 stop bits and Odd / Even / Mark / Space / No Parity
- Data transfer rate of 300 Baud to 1M Baud (RS232)
- Data transfer rate of 300 Baud to 3M Baud (TTL and RS422/RS485)
- Auto transmit enable control for RS485 serial applications using TXDEN pin
- FT245BM-style FIFO interface option with bi-directional data bus and simple 4-wire handshaking interface
- Data transfer rate up to 1M Byte/second

The FT2232D is fully pin to pin compatible with the previous FT2232C and FT2232L devices. In addition to supporting all of the FT2232C / FT2232L functionallity, the FT2232D has an additional interface mode, CPU FIFO mode, and is specified for -40 to +85 degrees C operating temperature range.

The FT2232D is available in Pb-free (RoHS compliant) compact 48-Lead LQFP package.

Part No.	Description
FT2232 D	IO USB/2xUART/FIFO LQFP48

	Part No.	Ord. No.
S	FT2232D	69375

FT2232 H Series -
Hi-Speed Dual USB UART/FIFO IC

The FT2232H is FTDI's 5th generation of USB devices. The FT2232H is a USB 2.0 High Speed (480Mb/s) to UART/FIFO IC. It has the capability of being configured in a variety of industry standard serial or parallel interfaces.

Main Features:
- Single chip USB to dual serial / parallel ports with a variety of configurations.
- Entire USB protocol handled on the chip. No USB specific firmware programming required.
- USB 2.0 High Speed (480Mbits/Second) and Full Speed (12Mbits/Second) compatible.
- Dual Multi-Protocol Synchronous Serial Engine (MPSSE) to simplify synchronous serial protocol (USB to JTAG, I2C, SPI or bit-bang) design.
- Dual independent UART or FIFO ports configurable using MPSSEs.
- Independent Baud rate generators.
- RS232/RS422/RS485 UART Transfer Data Rate up to 12Mbaud. (RS232 Data Rate limited by external level shifter.)
- USB to parallel FIFO transfer data rate up to 8 Mbyte/Sec.
- Single channel synchronous FIFO mode for transfers > 25 Mbytes/Sec.
- CPU-style FIFO interface mode simplifies CPU interface design.
- MCU host bus emulation mode configuration option.
- Fast Opto-Isolated serial interface option.
- FTDI's royalty-free Virtual Com Port (VCP) and Direct (D2XX) drivers eliminate the requirement for USB driver development in most cases.

S - in-stock product   o - on order product