FTDI Product Portfolio

USB Silicon and Software Solutions

USB MADE EASY

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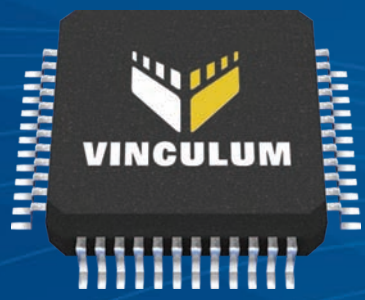
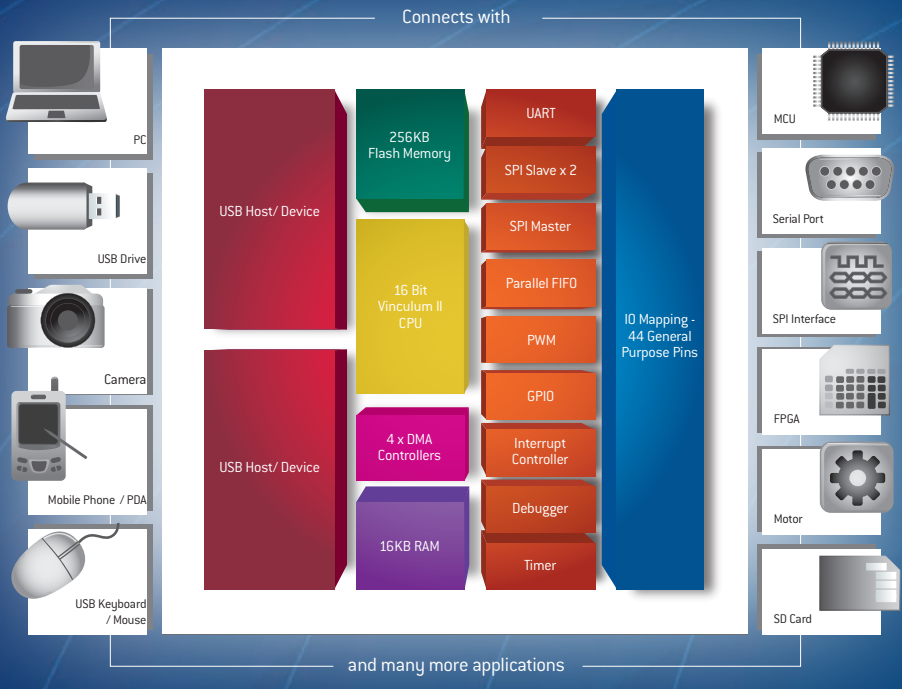
FTDI Chip

Vinculum-II USB Dual Host/Device Configurable Controller

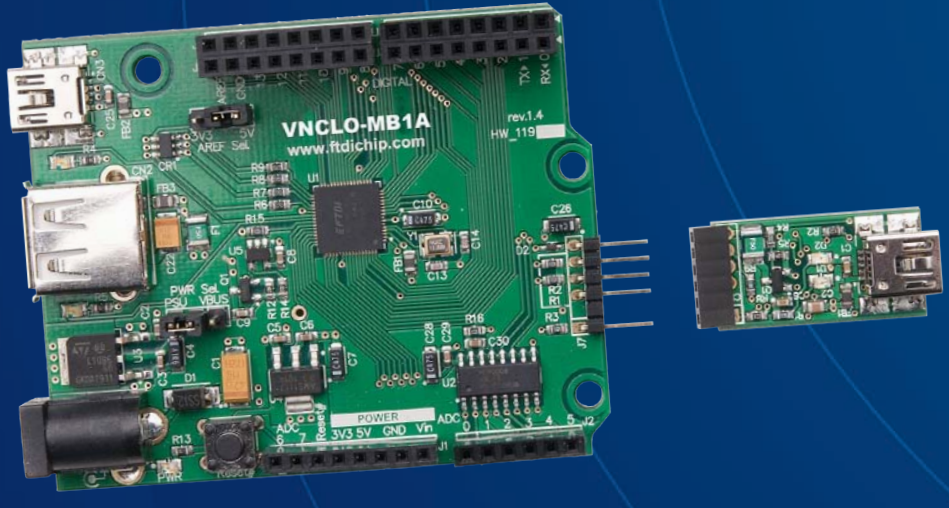




- Dual USB Host/Device Configurable Controller
- 16/32-bit width (instruction/data) MCU core with 256kB Flash & 16kB RAM
- Free of charge tool chain with C Compiler & RTOS
- UART/FIFO/SPI Master/SPI Slave/ PWM
- USB Host/Device Firmware Library included (FAT file system, HID, BOMS, CDC Classes)
- 32/48/64 pin LQFP & QFN packages

Vinco Vinculum-II Development Platform

Vinco- a cost effective, rapid prototyping development platform for Vinculum-II (VNC2)



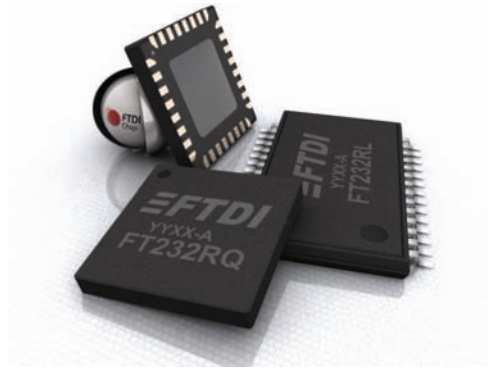
Features included:

- Vinculum-II (VNC2) Host/Device controller: 256kB Flash/ 16kB RAM, 38 I/Os, 2xUSB Ports, 8-channel ADC/ 10bit, Debug interface
- FTDI supported software development tools, device libraries and reference designs.
- H/W I/O - superset of Arduino Duemilanove / Uno Shields.
- VNC2 debugger/ programmer module is required to program the Vinco.

FTDI - USB Host/ Device Interface Controllers

FTDI provides a range of silicon solutions for adding flexible and easy-to-use USB connectivity to any application. The Vinculum family of USB Host / Device Controller ICs provide an easy implementation of USB host controller functionality within products, and utilise FTDI's IDE to develop the firmware. Additionally FTDI's popular USB to serial converters provide USB connectivity to legacy interfaces such as RS232 / RS422 / RS485. FTDI ICs offer support for a range of industry standard interfaces such as UART, FIFO, I²C and JTAG to quickly interface USB to an embedded MCU, PLD or FPGA.

All devices are supplied with FTDI's royalty-free USB drivers for Mircosoft Windows, Microsoft Windows CE, Apple Mac OSX, and Linux operating systems, offering a complete, ready-to-use USB solution which minimises time to market and development costs.
All products are RoHS compliant and lead-free.



	VINCULUM		FT SERIES					
Device	Vinculum-I	Vinculum-II	Hi- Speed			Full- Speed		
	VNC1L	VNC2	FT232H	FT2232H	FT4232H	FT2232D	FT232R	FT245R
								
Description	USB 2.0 Host/ Device Controller	Programmable[1] USB 2.0 Host / Device Controller	Hi-Speed USB 2.0 Device to Single UART/ FIFO IC	Hi-Speed USB 2.0 Device to Dual UART/ FIFO IC	Hi-Speed USB 2.0 Device to Quad UART IC	USB 2.0 Device to Dual UART / FIFO IC	USB 2.0 Device to UART IC	USB 2.0 Device to FIFO IC
USB Speed	Full /Low Speed[8]	Full/ Low Speed[8]	High / Full Speed [8]	High/ Full Speed [8]	High / Full Speed[8]	Full Speed[8]	Full Speed[8]	Full Speed[8]
USB Transfer Types	Bulk / Interrupt	Bulk / Interrupt / Isochronous	Bulk	Bulk	Bulk	Bulk	Bulk	Bulk
No. USB Ports	2	2	1	1	1	1	1	1
No. External Channels	Flexible[2]	Flexible[2]	1	2	4	2	1	1
Supported External Interfaces	ASYNC FIFO, UART, SPI slave, GPIO	ASYNC FIFO, SYNC FIFO, UART, 2x SPI slave, 1 x SPI master, GPIO, PWM, Debug Port	UART, ASYNC FIFO, SYNC FIFO, MPSSE[3], SPI/I2C/JTAG, Fast Serial, GPIO, FT1248[7]	UART, ASYNC FIFO, SYNC FIFO, 2 x MPSSE[3], Fast serial, 8051 MCU emulation, 16 GPIOs	UART, 2 x MPSSE[3] Controllers, 32 GPIOs	UART, ASYNC FIFO, MPSSE[3], Fast serial, 8051 MCU emulation, 8 GPIOs	UART with 4 GPIO pins	ASYNC FIFO
Core	8-bit Harvard MCU core	16/32-bit Harvard MCU Core	—	—	—	—	—	—
Internal Memory	4KB RAM 64KB Flash	16KB RAM 256KB Flash	1KB RX/TX buffer per channel	4KB RX/TX buffer per channel	2KB RX/TX buffer per channel	384Byte – RX 128Byte – TX per channel	256Byte – TX 128Byte – RX	256Byte – TX 128Byte – RX
Port Speed	Up to 1Mbaud	Up to 6Mbaud	Up to 40MByte/s (FIFO) / Up to 12Mbaud (UART)	Up to 40MByte/s (FIFO) / Up to 12Mbaud (UART)	Up to 12Mbaud	Up to 3Mbaud	Up to 3Mbaud	Up to 1MByte/s
Configuration Data Storage	Internal Flash	Internal Flash	External EEPROM	External EEPROM	External EEPROM	External EEPROM	Internal EEPROM	Internal EEPROM
Clocking	12MHz crystal	12MHz crystal	12MHz crystal	12MHz crystal	12MHz crystal	6MHz crystal	Internal[4]	Internal[4]
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Core Power Supply	+3V3	+1V8[5]	+1V8[5]	+3V3	+3V3	+5V	+3V3 to +5V25[4]	+3V3 to +5V25[4]
I/O Power Supply	+3V3	+3V3	+3V3[6]	+3V3	+3V3	+3V3 to +5V	+1V8V to +5V	+1V8 to +5V
Packages	48-pin LQFP	32/48/64-pin LQFP & QFN	48-pin LQFP & QFN	64-pin LQFP & QFN	64-pin LQFP & QFN	48-pin LQFP	32-pin QFN / 28-pin SSOP	32-pin QFN / 28-pin SSOP

[1] VNC2 supports ability to run user developed custom firmware. Firmware development supported via Vinculum-II Software toolchain.
[2] Vinculum devices support flexible IO configuration. VNC1L I/O configuration is set by available firmware image. VNC2 supports user configurable I/O settings through the on-chip I/O multiplexing feature.
[3] MPSSE - Multi-Protocol Synchronous Serial Engine, configurable serial controller for supporting SPI, I2C, JTAG & GPIO interfacing, supports speeds up to 30Mbps.
[4] Power supply range, using external crystal +3V3 to +5V25, using internal oscillator +4V to +5V25.
[5] Internally generated from +3V3 supply.
[6] Internal regulator.
[7] Serial/ Parallel synchronous interface.
[8] Low Speed (1.5 Mbit/s), Full Speed (12 Mbit/s) and Hi-speed (480 Mbit/s)

USB Development Modules based on FTDI's Vinculum ICs

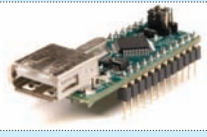
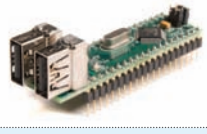
Vinculum-II Development Modules

Vinculum-II (VNC2) is FTDI's 2nd generation, user programmable dual USB 2.0 Host/ Device Controller. The device features a powerful 16/32-bit wide (instruction/data) MCU core with 256kB Flash & 16kB RAM. UART, FIFO, SPI Slave, SPI Master and a PWM interface are supported.

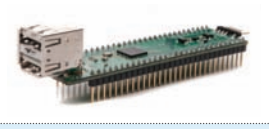
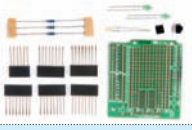
Part Number	V2DIP1-32	V2DIP1-48	V2DIP1-64	V2DIP2-32	V2DIP2-48
Description	VNC2 Module with single USB connector	VNC2 Module with single USB connector	VNC2 Module with single USB connector	VNC2 Module with two USB connectors	VNC2 Module with two USB connectors
					
FTDI Chip	VNC2-32L	VNC2-48L	VNC2-64L	VNC2-32L	VNC2-48L
Footprint	24 pin x 0.6" wide x 0.1" pitch DIP	24 pin x 0.6" wide x 0.1" pitch DIP	60 pin x 0.8" wide x 0.1" pitch DIP	24 pin x 0.6" wide x 0.1" pitch DIP	40 pin x 0.6" wide x 0.1" pitch DIP
Other connections	1 type A USB socket. 6 way key 0.1" SIL Debug connector	1 type A USB socket. 6 way key 0.1" SIL Debug connector	1 type A USB socket 6 way key 0.1" SIL Debug connector	2 type A USB socket 6 way key 0.1" SIL Debug connector	2 type A USB socket 6 way key 0.1" SIL Debug connector
USB speed	12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)
USB Host/Device	Host/ Device	Host/ Device	Host/ Device	Host/ Device	Host/ Device
Interfaces	as per VNC2	as per VNC2	as per VNC2	as per VNC2	as per VNC2
Supply voltages	5V	5V	5V	5V	5V
Temp range	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Notes	2nd VNC2 USB port available on DIP pins. Requires VNC2 Debug/ Programmer Module for IDE connection.	2nd VNC2 USB port available on DIP pins. Requires VNC2 Debug/ Programmer Module for IDE connection.	2nd VNC2 USB port available on DIP pins. Requires VNC2 Debug/ Programmer Module for IDE connection.	Requires VNC2 Debug/ Programmer Module for IDE connection.	Requires VNC2 Debug/ Programmer Module for IDE connection.

* Free Toolchain (IDE) for firmware development • Free VNC2 drivers provided with IDE • Free sample code tutorials provided with IDE • VNC2 Interfaces are defined by user firmware

Vinculum-I Development Modules

Part Number	VDIP1	VDIP2	VDRIVE2	VMUSIC2	VF2F2
Description	VNC1L Module with single USB connector	VNC1L Module with two USB connectors	VNC1L Flash Drive Module	VNC1L Audio Player Module	Disk to Disk Copier
					
FTDI Chip	VNC1L	VNC1L	VNC1L	VNC1L	VNC1L
Footprint	24 pin x 0.6" wide x 0.1" pitch DIP	40 pin x 0.6" wide x 0.1" pitch DIP	—	—	—
Other connections	1 Type A USB	2 Type A USB	1 Type A USB socket 8 way key 2mm SIL connector	1 Type A USB socket 3.5mm stereo audio jack 8 way key 2mm SIL connector	2 Type A USB socket
USB speed	12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)
Interfaces	UART, SPI Slave, ASYNC FIFO	UART, SPI Slave, ASYNC FIFO	UART, SPI Slave	UART, SPI Slave	
Supply voltages	5V	5V	5V	5V	5V
Temp range	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Notes	Supplied with VDAP firmware pre-installed.	Supplied with VDAP firmware pre-installed.	Supplied with VDAP firmware pre-installed.	Supplied with VMSC firmware pre-installed.	Supplied with VF2F firmware pre-installed.

VNC2 is a programmable USB Host controller with a royalty-free Integrated Development Environment for user firmware development. The Toolchain includes a 'C' compiler, linker, debugger and USB libraries (HID, BOMS, CDC, RTOS, FAT file system).

V2DIP2-64	VNC2 DEBUG MODULE	VNCLO-MB1A	VNCLO-SHLD-1A	V2-EVAL
VNC2 Module with two USB connectors	Vinculum-II Debug/ Programmer Module	Vinco Vinculum-II Development Platform	Prototyping shield PCB and components for VNCLO-MB1A	Complete VNC2 Evaluation & Development Kit
				
VNC2-64L	FT232R	VNC2-64L	—	Requires a daughtercard with VNC2.
60 pin x 0.8" wide x 0.1" pitch DIP	12.8x28mm	Arduino-enhanced	Arduino-enhanced	—
2 type A USB socket 6 way key 0.1" SIL Debug connector	1 type B Mini USB socket. 6 way key 0.1" SIL Debug connector	1 Mini-B USB socket 1 type A USB socket 46 0.1" pitch 10 pins 6 way key 0.1" SIL Debug connector	3 LEDs, 2 switches (one reset), 3 resistors, 6 socket strips and prototyping area for PTH & SMT	2 Type A USB sockets 1 Type B USB Socket All IO available on pin headers
12Mbit/s (FS)	12Mbit/s (FS)	12Mbit/s (FS)	—	12Mbit/s (FS)
Host/ Device	USB Device	Host/ Device	—	Host/ Device
as per VNC2	—	UART, SPI Master, SPI Slave, Parallel FIFO, ACD	—	UART, SPI Master, SPI Slave, Parallel FIFO
5V	5V (bus powered)	9V/bus powered option (PSU optional)	—	5V/bus powered option (PSU supplied)
-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	—	-40°C to +85°C
Requires VNC2 Debug/ Programmer Module for IDE connection.	Provides interface to V2DIP/Vinco modules for debug and programming.	Requires VNC2 Debug/ Programmer Module for IDE connection. Inspired by the Arduino form factor. Compatible with Arduino shields.	Inspired by the Arduino form factor and will mechanically fit to Arduino shields.	Fully integrated development module containing the debug port and prototyping area. Requires daughtercard: V2-EVAL-EXT32 , V2-EVAL-EXT48, V2-EVAL-EXT64.

V-EVAL (EU, JPN, UK, US)	VPROG- 1
Complete VNC1L evaluation & development kit	Kit for programming VNC1L/VNC2-48L devices
	
VNC1L	FT232R
—	—
2 Type A USB sockets 1 Type B USB Socket All I/O available on pin headers	1 Mini-B USB connector to PC
12Mbit/s (FS)	12Mbit/s (FS)
UART, SPI Slave, ASYNC FIFO	
5V/bus powered option PSU supplied	5V (bus powered)
-40°C to +85°C	-40°C to +85
Fully integrated development module containing prototyping area.	Program VNC1L / VNC2-48L IC's before assembly. Daughtercards for IC's DIP modules sold separately.

Vinculum-I (VNC1L) is the first generation device of the FTDI Vinculum family of USB Host / Device Controller ICs, which are designed to deliver USB Host level interfacing capabilities to embedded applications. VNC1L are programmed with FTDI's in-house developed firmware which supports a range of common USB device classes, providing a cost effective, complete, ready-to-use USB interfacing solution. There are no license fees for USB software stacks or develop USB drivers; indeed no knowledge of USB protocol is required to use these devices.

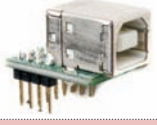
USB Converter Modules based on FTDI FT-Series ICs

FTDI's USB converter modules are a range of PCB boards and sub-assemblies, based around FTDI's FT-Series devices, to support various applications. The modules enable basic prototyping of USB based designs, which can be integrated to provide USB connectivity within finished product designs.

USB Converter Modules based on FTDI Hi-Speed ICs (480Mbit/s)

Part number	UM232H	FT2232H MINI MODULE	FT4232H MINI MODULE	FT-MOD-4232HUB	MORPH-IC-II
Description	Single Channel USB 2.0 Hi-Speed Module	Dual Channel USB 2.0 Hi-Speed Module	Quad Channel USB 2.0 Hi-Speed Module	USB Hi-Speed FT4232H Serial/ Hub Module	USB 2.0 based FPGA Development Platform
					
FTDI Chip	FT232H	FT2232H	FT4232H	FT4232H	FT2232H
Footprint	28 pin x 0.6" wide x 0.1" pitch DIP	2 double row 0.1" pitch male connectors	2 double row 0.1" pitch male connectors	36 pin x 0.8" wide x 0.1" pitch DIP	2 double row 0.1" pitch male connectors
Other connections	1 mini-B USB connector	1 mini-B USB connector	1 mini-B USB connector	2 Type A USB sockets, 1 Type A USB plug	Type B USB Socket, JTAG 10 pin 0.1" header
External ports	1	2	4	1	VHDL Configured
Interfaces	UART, FIFO, MPSSE, FT1248	UART, FIFO, MPSSE	UART, MPSSE	UART, MPSSE	VHDL Configured
I/O levels	3V3	3V3	3V3	3V3	1V5/ 1V8/ 2V5/3V3
Notes	Bus powered or self powered	Bus powered or self powered	Bus powered or self powered	3 downstream USB ports, 2 MPSSE, 2 UART ports. Bus powered.	Supplied with VHDL reference designs, software samples & utilities. Temp range 0°C to +85°C

USB Converter Modules based on FTDI Full Speed ICs (12MBit/s)

Part number	UM232R	UM245R	MM232R	UB232R	FTDI USB-KEY
Description	FT232R USB to UART DIP Module	FT245R USB to FIFO DIP Module	FT232R USB to UART Miniature Module	USB Mini-B to UART Module	USB Security Access Dongle
					
FTDI Chip	FT232R	FT245R	FT232R	FT232R	FT232R
Footprint	24 pin x 0.6" wide x 0.1" pitch DIP	24 pin x 0.6" wide x 0.1" pitch DIP	16 pin x 0.1" pitch	8 pin x 0.1" pitch DIP	—
Other connections	1 Type B USB socket	1 Type B USB socket	1 Type B USB socket	1 Mini-B USB connector	1 Type A USB Plug
No. of external ports	1	1	1	1	—
Interfaces	UART	FIFO	UART	UART	—
I/O levels	1V8 to 5V	1V8 to 5V	1V8 to 5V	1V8 to 5V	5V (bus powered)
Notes	Bus powered or self powered	Bus powered or self powered	Bus powered or self powered	Bus powered or self powered	Uses FTDI Chip-ID

Instant USB Application Modules

Part number	DB9-USB-X	USB-COMXXX-PLUS1	USB-COMXXX-PLUS2	USB-COMXXX-PLUS4	EVAL232R
Description	Instant USB Adapter Retrofit Connector Module with integrated RS232	Single port USB to RS232/ RS422/RS485 Module - defined by XXX	2 Port USB to RS232/ RS422/ RS485 Module - defined by XXX	4 Port USB to RS232/ RS422/ RS485 Module - defined by XXX	USB to RS232 module
					
FTDI Chip	FT232R	FT232R	FT2232H	FT4232H	FT232R
Serial Interfaces	RS232	RS232 / RS422/ RS485	RS232 / RS422/ RS485	RS232 / RS422 / RS485	RS232
Other connections	1 Mini-B USB	1 Type B USB Socket, 1 DB9M	1 Mini-B USB, 2 DB9M	1 Mini-B USB, 4 DB9M	1 Type B USB, 1 DB9M
USB speed	12Mbit/s (FS)	12Mbit/s (FS)	480Mbits/s (HS)	480Mbits/s (HS)	12Mbit/s (FS)
No. of external ports	1	1	2	4	1
Max Baud Rate	1 Mbaud	1 / 3 / 3 Mbaud	3 / 10 / 10 Mbaud	3 / 10 / 10 Mbaud	1 Mbaud
Power Supply	5V (bus powered)	5V (bus powered), 55mA	5V (bus powered),60mA	5V (bus powered), 70mA	5V (bus powered)
Notes	PC-AT standard footprints X = DB9F = Female X = DB9M = Male	LEDs indicate Power, RX/TX activity	LEDs indicate Power, RX/TX activity	LEDs indicate Power, RX/TX activity	LEDs indicate RX/ TX activity. CBUS I/O available on header pins

Instant USB Converter Cables with integrated FTDI FT-Series ICs

FTDI's instant USB converter cables provide connectivity options from USB to RS232, RS422, or RS48 and TTL based signaling interfaces. The cables feature integrated electronics assemblies by using FTDI's ICs, to provide an easy-to-use USB conversion.
Custom cable versions are available up on request.

USB to Legacy RS232 Converter Cables

	PART NUMBER	IO LEVELS	MAX BAUD RATE	RX/TX LED	CABLE LENGTH	CABLE TERMINATION	TEMPERATURE RANGE	NOTES
Premium USB to Legacy RS232 Converter 	US232R-10	RS232	1 Mbaud	RX/TX LED	10cm	DB9	-20°C to +80°C	Retaining nut on DB9 connector.
	US232R-100				1m			
	US232R-500				5m			
USB-Serial Converter	UT232R-200	RS232	1 Mbaud	—	2m	DB9	-20°C to +80°C	Retaining screw on DB9 connector.
	UT232R-500				5m			
Economy USB to Serial Converter 	UC232R-10	RS232	230 kBaud	—	10cm	DB9	-20°C to +80°C	With plastic enclosure.
	UC232R-10-NE				10cm			No plastic enclosure.

USB to Legacy RS232 or RS422 or RS485 Converter Cables

	PART NUMBER	IO LEVELS	POWER OUTPUT PIN	MAX BAUD RATE	RX/TX LED	CABLE LENGTH	CABLE TERMINATION	TEMPERATURE RANGE	NOTES
RS232 Converter	USB-RS232-WE-1800-BT_0.0	RS232	0V	1 Mbaud	RX/TX LED	1.8m	Wire ended	-40°C to +85°C	Option of transparent or black USB connector. LEDs for visual indication of traffic on the cable. Also available as PCB.
	USB-RS232-WE-1800-BT_3.3		3V3			1.8m			
	USB-RS232-WE-1800-BT_5.0		5V			1.8m			
	USB-RS232-WE-5000-BT_0.0		0V			5m			
	USB-RS232-WE-5000-BT_3.3		3V3			5m			
	USB-RS232-WE-5000-BT_5.0		5V			5m			
RS422 Converter	USB-RS422-WE-1800-BT	RS422	0V	3 Mbaud	RX/TX LED	1.8m	Wire ended	-40°C to +85°C	
	USB-RS422-WE-5000-BT					5m			
RS485 Converter	USB-RS485-WE-1800-BT	RS485	0V	3 Mbaud	RX/TX LED	1.8m	Wire ended	-40°C to +85°C	
	USB-RS485-WE-5000-BT					5m			

USB to TTL Serial Cables

	PART NUMBER	IO LEVELS	POWER OUTPUT PIN	MAX BAUD RATE	RX/TX LED	CABLE LENGTH	CABLE END	TEMPERATURE RANGE	NOTES
Type A USB to wire end TTL Serial 	TTL-232RG-VREG1V8-WE	1V8	1V8@100mA	3 Mbaud	RX/TX LED	1.8m	Wire ended	-40°C to +85°C	LEDs for visual indication of traffic on the cable. Transparent USB connector.
	TTL-232RG-VREG3V3-WE	3V3	3V3@250mA						
	TTL-232RG-VSW3V3-WE	3V3	3V3@50mA						
	TTL-232RG-VSW5V-WE	5V	5V@450mA						
	TTL-232RG-VIP-WE	1V8 to 5V25[1]	1V8 to 5V25 [1]						
	TTL-232R-3V3-WE	3V3	5V@75mA		—				Available as PCB.
	TTL-232R-5V-WE	5V	5V@75mA						
Type A USB to SIP Connector 	TTL-232R-5V	5V	5V@75mA	3 Mbaud	—	1.8m	Single in line socket	-40°C to +85°C	0.1" pitch
	TTL-232R-3V3	3V3	5V@75mA						2mm pitch, for VMUSIC2 & VDRIVE2
	TTL-232R-3V3-2MM	3V3	5V@75mA						
Type A USB to 3.5mm Audio Jack 	TTL-232R-5V-AJ	5V	—	3 Mbaud	—	1.8m	Audio Jack	-40°C to +85°C	Tip - Tx, Ring - Rx, Sleeve - Ground
	TTL-232R-3V3-AJ	3V3							

[1] adj.logic threshold level (from external supply)

* All cables are powered from the host USB port, except TTL-232RG-VIP-WE • All cables use FTDI royalty free drivers - available on Windows, MAC, Linux, and WinCE • All cables FCC/CE approved • Custom cable options on request subject to MOQ/NRE

About FTDI

Future Technology Devices International (FTDI) specialises in the design and supply of silicon and software solutions for the Universal Serial Bus (USB).
FTDI offers a simple route to USB migration by combining easy to implement IC devices with proven, ready to use and royalty-free USB firmware and driver software. The company's single and multi-channel USB peripheral devices come with an easy to use UART or FIFO interface. These devices can be used in USB to RS232/ RS422/RS485 converter applications or to quickly interface an MCU, PLD, or FPGA to USB. A wide range of evaluation kits, modules and cables are available to evaluate FTDI's silicon prior to design-in. FTDI cables and connector modules with embedded electronics offer instant USB capability for legacy retrofit or integration into new products.

Vinculum is FTDI's brand name for a range of USB Host / Device Controller ICs that provide easy implementation of USB host controller functionality within products, and utilise FTDI's IDE for firmware development to significantly reduce development costs and time to market.

FTDI products are supported by industry certified software drivers (WHQL/Microsoft Certified) for Windows, Mac and Linux. The Vinculum-II (VNC2) product family is supported by a free Software Development Toolchain, which includes an IDE with C compiler, linker and debugger. The Host/Device software stack for VNC2 includes: royalty-free pre-compiled libraries for HUB, HID, BOMS (with FAT file system) and CDC class are available on FTDI's website.

A global team of Application Engineers provide hands-on technical support to customers.

FTDI is a fabless semiconductor company with technical sales and support offices in Glasgow, UK, Portland Oregon, USA, Shanghai, China and Taipei, Taiwan. Research and development facilities are in UK and Singapore. More information is available at www.ftdichip.com or from your local FTDI office.

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FTDI are ISO9001:2008 certified

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