Manuale

EX-1344HMV

USB 2.0 a
4x RS-232/422/485

Vers. 1.0 / 14.10.15

Manual

INDICE

INDEX

1. Descrizione

L'EX-1344HMV è un modulo per la conversione da USB 2.0 in quattro interfacce RS-232/422/485 con porte FIFO 16C550 per il collegamento di dispositivi periferici seriali ad alta velocità (ad esempio modem, plotter, ecc.). Il modulo USB è compatibile con Hot Plug & Play. Non sono necessari ponticelli o impostazioni per impostare gli indirizzi I/O e gli interrupt, poiché le impostazioni vengono effettuate automaticamente dal sistema (BIOS) e durante l'installazione del sistema operativo. L'EX-1344HMV è dotato di una connessione USB avvitabile e di una connessione di alimentazione avvitabile. Nella fornitura è compreso un kit DIN-RAIL per l'installazione su una guida portante. I diversi tipi di trasmissione sulle porte possono essere impostati utilizzando i Dip Switch interni al dispositivo.

Caratteristiche:

- 4 RS-232/422/485 tramite USB 2.0
- Connettore SUB-D a 9 pin
- Supporta RS-232, RS-422, 2 Fili RS-485 e 4 Fili RS-485
- Sportello a parete per una facile installazione
- Supporta Windows 9.x ME/ 2000/ XP/ Vista/ 7/ 8.x/ 10/ Server 20xx/ Linux/ MAC
- Certificati per CE / FCC / RoHS

2. Contenuto nella Confezione

Prima di collegare l'EX-1344HMV al PC, controllare innanzitutto il contenuto della confezione che ci sia:

- EX-1344HMV
- Driver CD
- Manuale
- Cavo USB (Avvitabile)
- Kit DIN-RAIL

3. Struttura e Attacchi

3.1 Struttura

S1-S4:
4 x 9 Pin Seriale RS-232/422/485

LED Funzionamento

Presa USB Type-B Connessione PC (avvitabile)

Presa 12V per alimentazione esterna (avvitabile)

LED per visualizzare la modalità

Nome LED	Colore	Funzione LED
RX	Verde	**Lampeggiante:** Ricezione dati
TX	Verde	**Lampeggiante:** Trasferimento dati

3. Struttura e Attacchi

3.2 Attacchi

Presa 12 Volt :

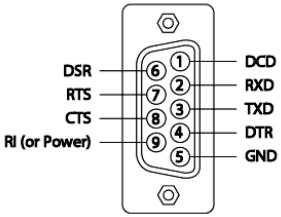
ATTENZIONE !!!
Da utilizzare solo con alimentatore opzionale!

USB Type-B:

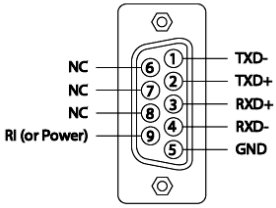
USB 2.0 Type-B			
Pin	**Segnale**	**Pin**	**Segnale**
1	VCC	3	DATA+
2	DATA-	4	GND

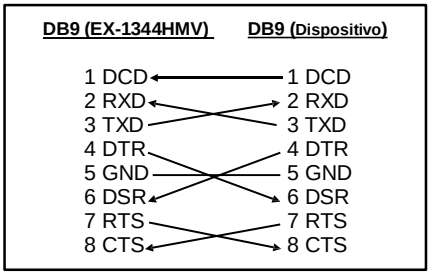
DB 9M:

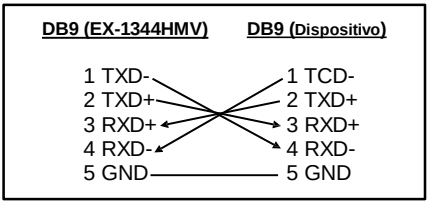
RS232 Pin Assignment



RS422 and RS485-4wire Pin Assignment



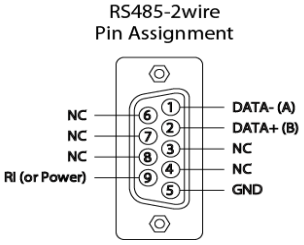




3. Struttura e Attacchi

3.2 Attacchi

DB 9M:

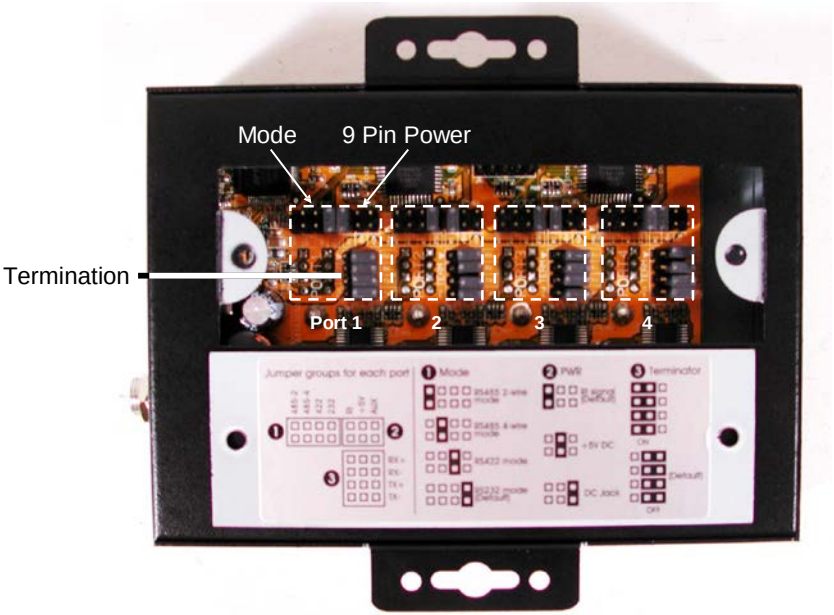


DB9 (EX-1344HMV)		DB9 (Dispositivo)
1 DATA-	⟷	1 DATA-
2 DATA+	⟷	2 DATA+
3 NC	⟷	3 NC
4 NC	⟷	4 NC
5 GND	⟷	5 GND

4. Settaggio Jumper

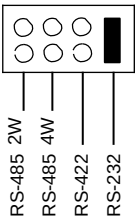
All'interno dell'EX-1344HMV sono presenti 12 ponticelli. Di questi, 4 jumper sono per la modalità (**JP5-JP8**), 4 jumper (**JP1-JP4**) servono per impostare l'alimentazione sul pin 9 del connettore DB9 e i restanti 4 jumper sono per la terminazione (**JP9-JP12**) (vedi immagine sotto). Per apportare modifiche al ponticello, è necessario allentare il coperchio sul fondo dell'EX-1344HMV con 2 viti. I ponticelli sono numerati per assegnare le porte. Dalle seguenti tabelle alle pagine 8 e 9 è possibile trovare l'impostazione del ponticello di modalità, del ponticello di terminazione e del ponticello di accensione a 9 pin o all'interno del coperchio svitato.

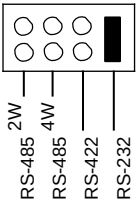
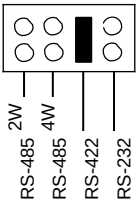
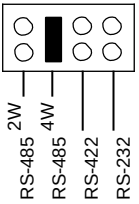
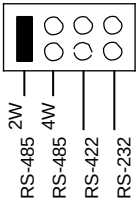
Fondo:



4. Settaggio Jumper

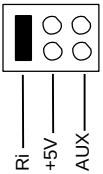
Modalità Jumper (JP5-JP8)

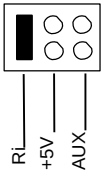
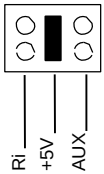
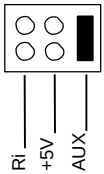


Jumper	Descrizione
	RS-232 **(Impostazione di fabbrica)**
	RS-422 Mode
	RS-485 Modalità a 4 fili
	RS-485 Modalità a 2 fili

4. Settaggio Jumper

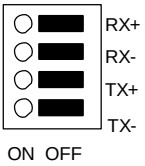
Alimentazione su Pin 9 Jumper (JP1-JP4)

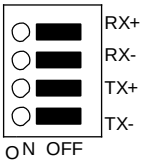
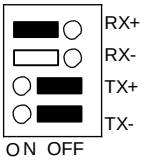
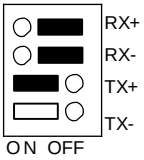
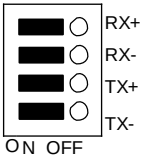


Jumper	Descrizione
	Nessuna alimentazione sul pin 9 (impostazione di fabbrica)
	+5 V DC sul pin 9
	Alimentazione esterna sul pin 9

4. Settaggio Jumper

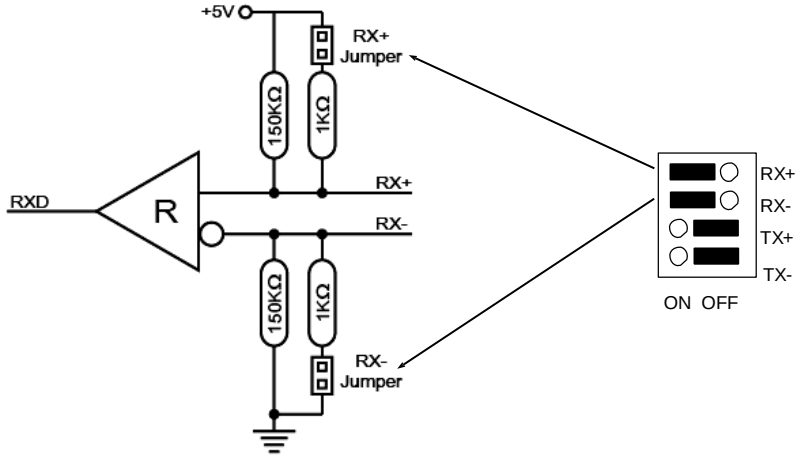
Jumper di terminazione (JP9-JP12)

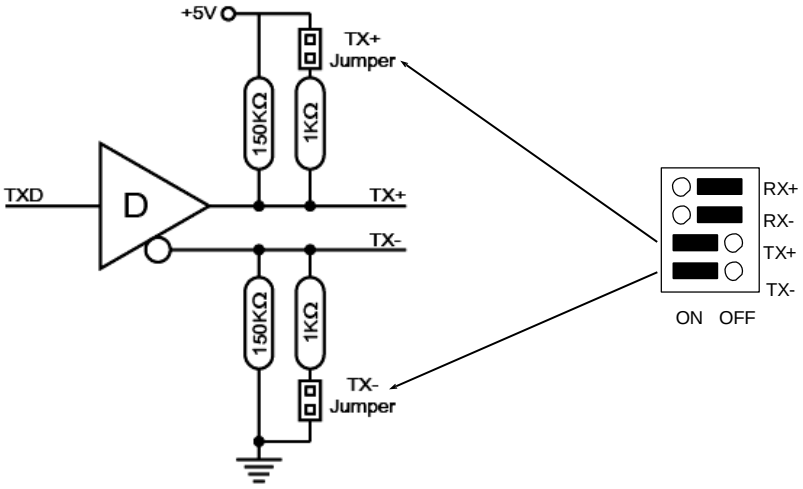


Jumper	Descrizione
	Entrambi i terminatori per RX+/RX- e TX+/TX- sono inattivi (**impostazione di fabbrica**)
	Il terminatore RX+/RX- è attivo
	Il terminatore TX+/TX- è attivo (terminatori per DATA+/DATA– per la modalità RS-485 a 2 fili)
	Entrambi i terminatori per RX+/RX- e TX+/TX- sono attivi

4. Settaggio Jumper

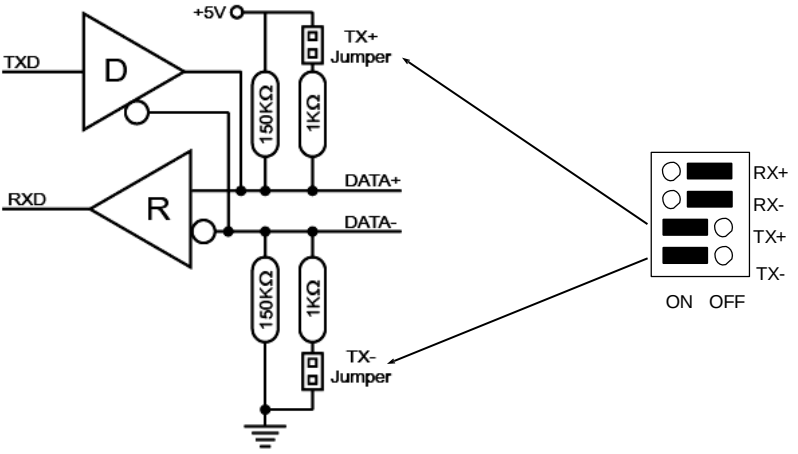
Terminatore per modalità RS-422 e RS-485 a 4 fili





4. Settaggio Jumper

Terminatore per modalità RS-485 a 2 fili



5. Installazione Hardware

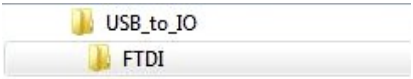
Si prega di osservare le seguenti istruzioni d'installazione. Poiché ci sono grandi differenze tra i PC, possiamo darti solo delle istruzioni in generali per l'installazione. Se qualcosa non è chiaro, fare riferimento alle istruzioni per d'uso del proprio computer.

1. Collegare il cavo USB in dotazione alla presa USB Type-B del modulo.
2. Collegare ora il connettore dell'alimentatore opzionale alla presa da 12 V del modulo e inserire la spina dell'alimentatore in una presa.
3. Ora collega l'altra estremità del cavo USB (Type-A) alla presa Type-A del tuo PC.
4. Ora imposta i ponticelli sulle impostazioni desiderate. (vedi figura impostazioni jumper)
5. Ora puoi avviare il PC e continuare con l'installazione dei driver.

6. Installazione Driver

Windows 9.x/ ME/ 2000/ XP/ Vista/ 7/ 8.x/ 10/ Server 20xx

Windows rileva automaticamente un nuovo "FT232R USB UART". Inserire il CD dei driver nell'unità CD-ROM (ad es. unità D:). Non lasciare che cerchi automaticamente il driver. Seleziona invece manualmente i driver per il tuo sistema operativo nella cartella seguente (vedi illustrazione).



VERIFICA INSTALLAZIONE DRIVER

Aprire >**Gestione dispositivi**<. Lì dovreste inserire alcune nuove voci sotto "**Porte (COM e LPT)**", ad esempio "Porta seriale USB (COM3)" e sotto "**Universal Serial Bus Controller**" vedrai la voce "**USB Serial Converter**".
Se vedi queste o voci simili, il modulo USB è installato correttamente.

CAMBIARE L'INDIRIZZO COM (NON UNDER 98 & ME)

Aprire la >**Gestione Dispositivi**< e cliccare ad esempio su >**COM3**< >**Impostazioni porta**< e >**Avanzate**<. Puoi quindi scegliere tra COM3 e COM256!

LINUX

I driver Linux si trovano nella directory "**D:\USB_to_IO\FTDI\Linux x86_64**" sul CD dei driver. Sono supportati sulla maggior parte delle versioni Linux. Poiché le singole distribuzioni e le versioni del kernel differiscono notevolmente tra loro, purtroppo non possiamo fornirvi istruzioni per l'installazione. Segui le istruzioni d'installazione per le porte USB della tua versione Linux.

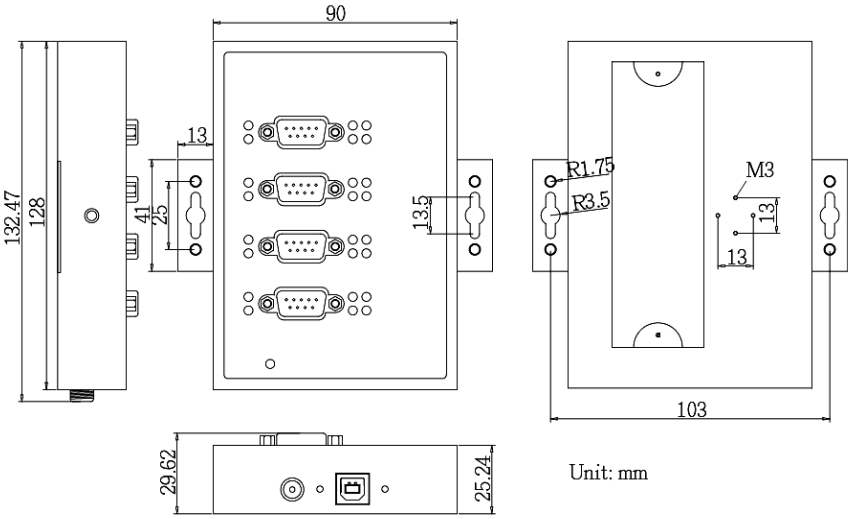
MAC

I driver MAC si trovano nella directory "**D:\USB_to_IO\FTDI\MAC OSX o Mac_OS_9_8**" sul CD dei driver. Sono supportati dalla maggior parte delle versioni del sistema operativo MAC. Poiché le singole versioni differiscono tra loro, purtroppo non possiamo fornirvi istruzioni per l'installazione. Seguire le istruzioni di installazione per le porte USB della versione del sistema operativo MAC in uso.

7. Dati Tecnici

Consumo di energia:	5V/0.35A (USB) oppure 12V/0.15A (Alimentatore)
Temperatura d'esercizio:	Da 0° a 55°C (da 32°F a 132°F)
Temperatura di conservazione :	Da -20° a 85°C (da -4°F a 185°F)
Umidità Relativa:	Dal 5 al 95% RH
Velocità di Trasmissione :	110bps fino a 921.6Kbps
Data Bits:	5, 6, 7, 8, 9
Stop Bits:	1, 1.5, 2
Parità :	None, Even, Odd, 1, 0
Segnale RS-232 :	TXD, RXD, RTS, CTS, DTR, DSR, DCD, RI, GND
Segnale RS-485 2-Fili :	DATA+(B), DATA-(A), GND
Segnale RS-485 4-Fili e RS-422:	TX+, TX-, RX+, RX-, GND

8. Disegno Tecnico



1. Description

The EX-1344HMV are plug & play high-speed USB 2.0 to Serial module. It converts USB 2.0 to four RS-232/422/485 ports. It is the optimal solution for connection with different devices (e.g. Modem, Plotter etc.). The USB to Serial module design utilizes the Chip-Set FTDI with 16C550 UART. The EX-1344HMV is Hot Plug & Play compatible. It is not possible to change the address or IRQ settings manually, they will be obtained automatically by the operating system. The EX-1344HMV is additionally equipped with screw lock USB 2.0 port and screw lock power connector. The various types of transmission to the serial ports can be set by using the dip-switches inside the unit.

Features:

- 4x RS-232/422/485 via USB 2.0
- 9 Pin D-SUB Connector
- Support RS-232, RS-422, 2 Draht RS-485 und 4 Draht RS-485
- Wall mounted flap for easy installation
- Support Windows 9.x ME/ 2000/ XP/ Vista/ 7/ 8.x/ 10/ Server 20xx/ Linux/ MAC
- **Certificates for CE / FCC / RoHS / WEEE DE97424562**

2. Extent of Delivery

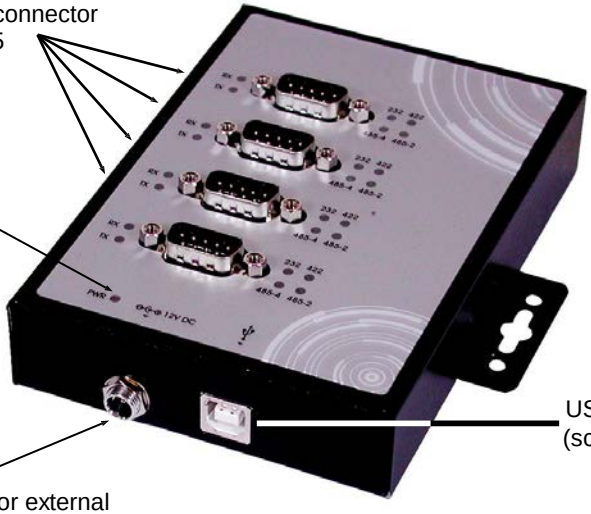
Before you connect the EX-1344HMV to your PC, you should first check the contents of the delivery:

- EX-1344HMV
- Driver CD
- Manual
- USB Cabel (screw lock)
- DIN-RAIL Kit

3. Layout and Connections

3.1 Layout

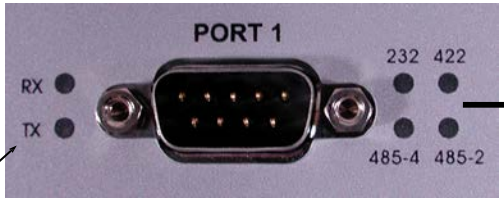
S1-S4:
4 x 9 Pin serial connector
RS-232/422/485



Power LED

USB B-Port for PC
(screw lock)

12V connector for external
power supply (screw lock)



LED‘s for
Display the
Mode

LED Name	Color	LED Function
RX	Green	**Flashing:** Receive Data
TX	Green	**Flashing:** Transmit Data

3. Layout and Connections

3.2 Connections

12 Volt Connector:

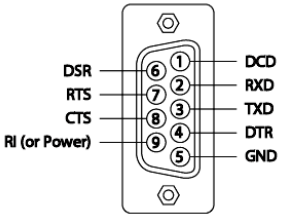
ATTENTION!!!
Only use with optional power supply!

USB B-Port:

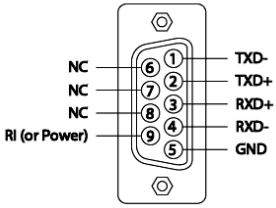
USB 2.0 B-Port			
Pin	**Signal**	**Pin**	**Signal**
1	VCC	3	DATA+
2	DATA-	4	GND

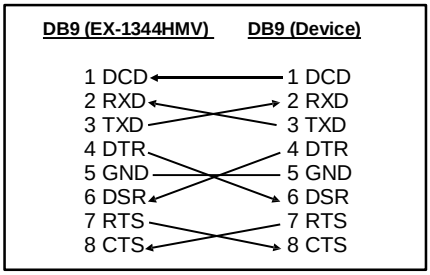
DB 9M:

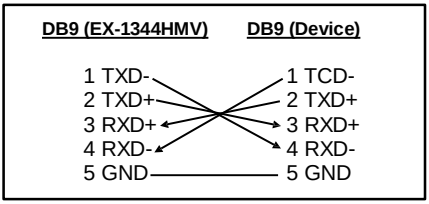
RS232 Pin Assignment



RS422 and RS485-4wire Pin Assignment



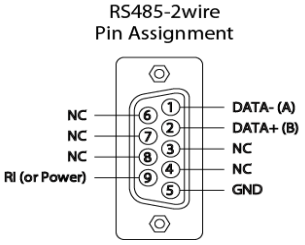




3. Layout and Connections

3.2 Connections

DB 9M:

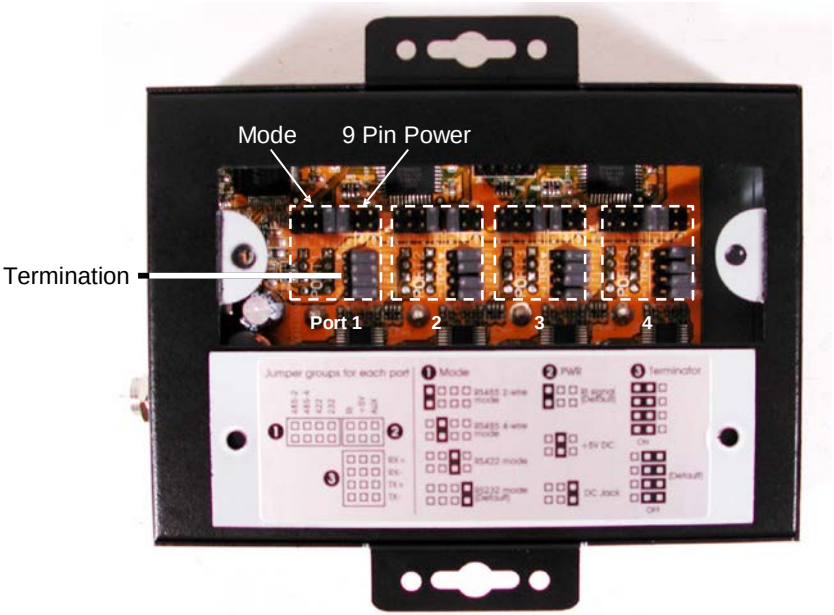


DB9 (EX-1344HMV)		DB9 (Device)
1 DATA-	⟷	1 DATA-
2 DATA+	⟷	2 DATA+
3 NC	⟷	3 NC
4 NC	⟷	4 NC
5 GND	⟷	5 GND

4. Jumper-Settings

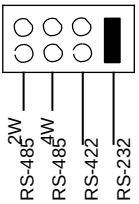
There are 12 jumper at the inside of the EX-1344HMV. Of thes, 4 jumper are for the mode (JP5-JP8), 4 jumper (JP1-JP4) are for setting the power on 9 pin at the DB9 connector and the other 4 jumper are for termination (JP9-JP12) (see picture below). To change the jumper position, you must open the cover on the bottom of the EX-1344HMV with 2 screws. The jumper are numbered and so you can see which jumper is for which port. The following tables on page 8 and 9, you can see the setting of the mode jumper, termination jumper and power on 9 pin jumper or in the inner side of the cover.

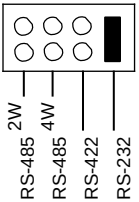
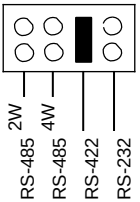
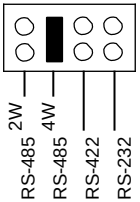
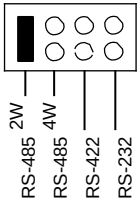
Bottom:



4. Jumper-Settings

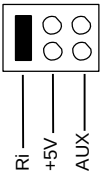
Mode Jumper (JP5-JP8)

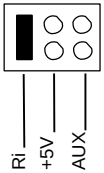
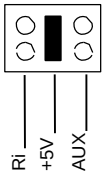
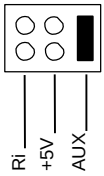


Jumper	Description
	RS-232 **(Factory Setting)**
	RS-422 Mode
	RS-485 4-wire Mode
	RS-485 2-wire Mode

4. Jumper-Settings

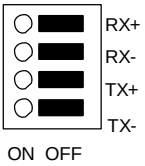
Power to 9 Pin Jumper (JP1-JP4)

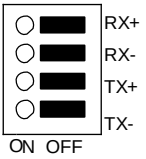
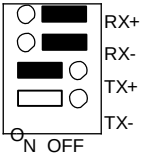
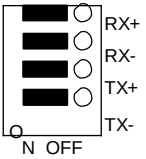


Jumper	Description
	Keine Power auf Pin 9 **(Factory Setting)**
	+5V DC to Pin 9
	Power of the Power Supply to Pin 9

4. Jumper-Settings

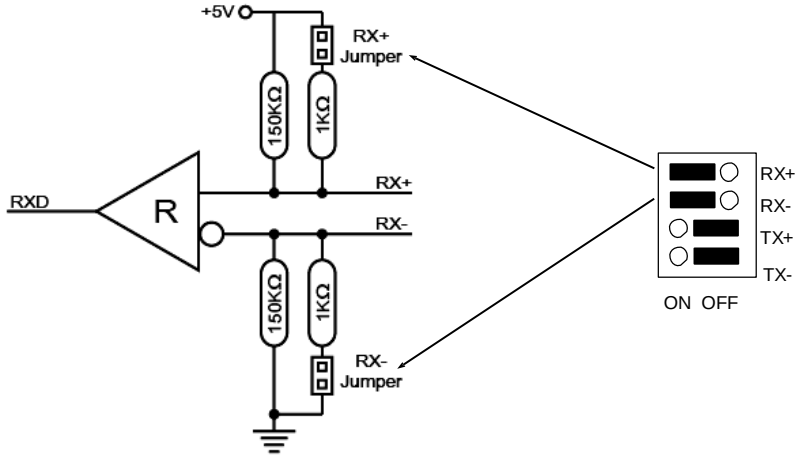
Termination Jumper (JP9-JP12)

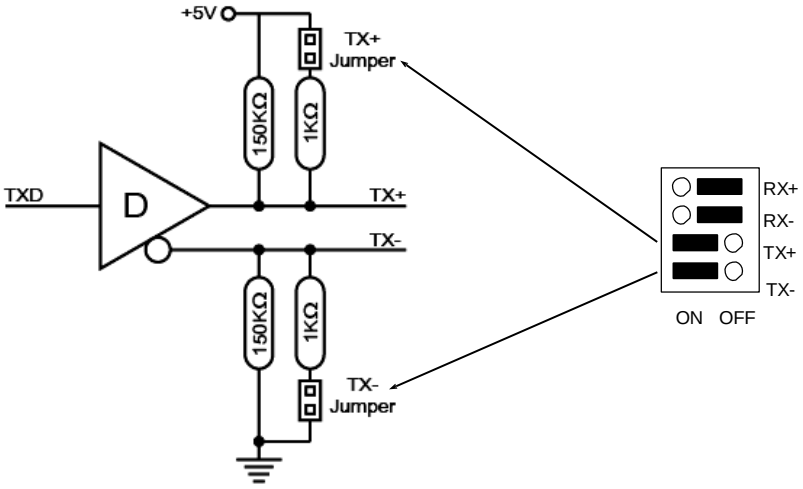


Jumper	Description
	Both Terminator for RX+/RX- and TX+/TX- are disable **(Factory Setting)**
	RX+/RX- Terminator are enable
	TX+/TX- Terminator are enable (Terminator for DATA+/DATA– for RS-485 2-wire Mode)
	Both Terminator for RX+/RX- and TX+/TX- are enable

4. Jumper-Settings

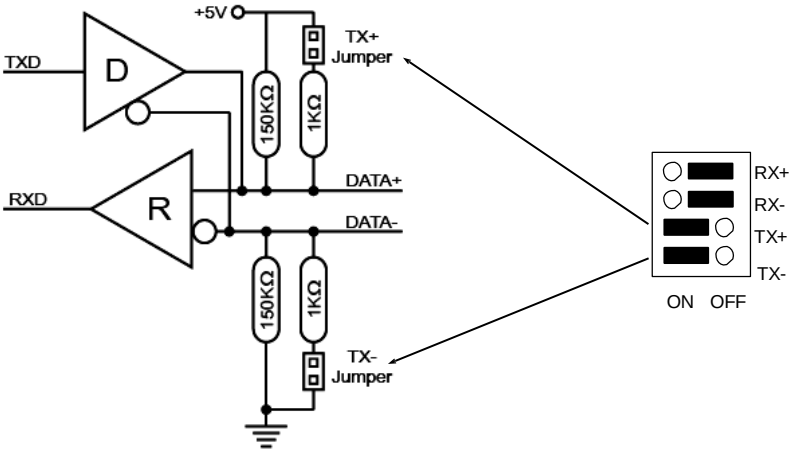
Terminator for RS-422 and RS-485 4-wire Mode





4. Jumper-Settings

Terminator for RS-485 2-wire Mode



5. Hardware Installation

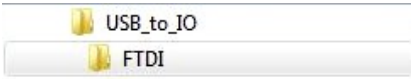
Because there are large differences between PC's, we can give you only a general installation guide for the EX-1344HMV. Please refer your computers reference manual whenever in doubt.

1. Connect the USB cable (B-Plug) to the USB B-Port at the EX-1344HMV.
2. Now connect the optional power supply to the 12V conector at the EX-1344HMV, and then connect the power plug of the power supply with a electrical socket.
3. After that connect the USB cable (A-Plug) to the USB A-Port at your PC.
4. Now you can set the jumper to the desired settings. (see picture Jumper-Settings)
5. Now you can start your PC and continue with the point Driver Installation.

6. Driver Installation

Windows 9.x/ ME/ 2000/ XP/ Vista/ 7/ 8.x/ 10/ Server 20xx

Windows will recognize a new „**FT232R USB UART**“ and open the hardware assistant. Please choose manual installation and put the driver CD into your CD-ROM drive. Do not start the automatically search for the driver. Please select the correctly driver in the FTDI folder for your operating system (see picture).



CHECK INSTALLED DRIVER

Open the **>Device Manager<**. Under **'Ports (COM and LPT)“** you should find four new **„USB Serial Port (COM3)“** entry and also you will find under **„Universeller Serieller Bus Controller“** a new **„USB Serial Converter“**. If you see this or similar entries the module is installed correctly.

CHANGE PORT NUMBER (NOT WIN98 & ME)

If you like to change the port number for example COM3 to COM10, open the **>Device Manager<** click at **>COM3<, >Settings<** and then **>Advance<**. There you can choose between COM3 up to COM256.

LINUX

There are drivers available for Linux. The drivers are located in the folder **“D:\USB_to_IO\FTDI\Linux x86_64“** on the driver CD. They are supported by the most versions of Linux. Because each individual distribution and kernel version of Linux is different, sadly we cant provide a installation instruction. Please refer to the installation manual for standard I/O ports from your Linux version!

MAC

There are drivers available for MAC. The drivers are located in the folder **“D:\USB_to_IO\FTDI\MAC OSX or Mac_OS_9_8“** on the driver CD. They are supported by the most versions of MAC OS. Because each individual version of MAC OS is different, sadly we cant provide a installation instruction. Please refer to the installation manual for standard I/O ports from your MAC OS version!

7. Technical Information

Power Consumption:	5V/0.35A (USB) or 12V/0.15A (Power Supply)
Operating Temperature:	0 bis 55°C (32 bis 132°F)
Storage Temperature:	-20 bis 85°C (-4 bis 185°F)
Operating Humidity:	5 bis 95% RH
Baud Rate:	110bps bis 921.6Kbps
Data Bits:	5, 6, 7, 8, 9
Stop Bits:	1, 1.5, 2
Parity:	None, Even, Odd, 1, 0
RS-232 Signal:	TXD, RXD, RTS, CTS, DTR, DSR, DCD, RI, GND
RS-485 2-wire Signal:	DATA+(B), DATA-(A), GND
RS-485 4-wire and RS-422 Signal:	TX+, TX-, RX+, RX-, GND

8. Technical Drawing