

EXSYS

EX-1348HMV

8 porte da RS-232/422/485
a USB 2.0



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1. Descrizione

L'EX-1348HMV è un modulo per la conversione da USB 2.0 a otto 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-1348HMV è dotato di una porta USB avvitata e di una porta di alimentazione avvitata. 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.

Specifiche:

- 8 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 / WEEE**  **DE97424562**

2. Contenuto Confezione

Prima di procedere al collegamento tra l'EX-1348HMV al PC, controllare innanzitutto il contenuto della confezione:

- EX-1348HMV
- CD con Driver
- Manuale D'uso
- Cavo USB (Avvitabile)
- Alimentatore DC (12V/3A)
- Kit GUIDA DIN

3. Struttura e Attacchi

3.1 Struttura

S1-S8:

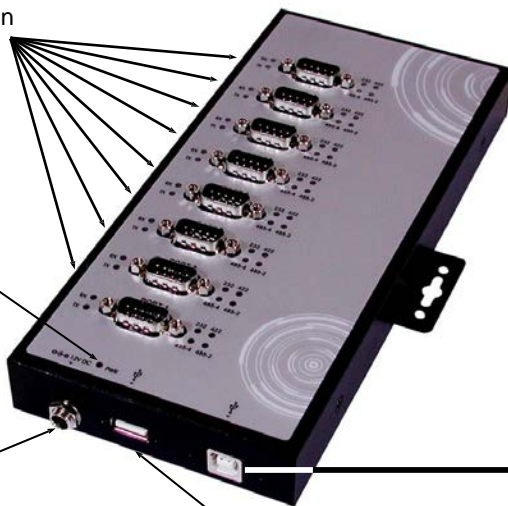
8 connettori x 9 Pin
Seriale
RS-232/422/485

LED di
Funzionamento

12V Presa per
alimentazione esterna
(avvitabile)

USB Type-A per espandere un
secondo EX-1348HMV

USB Type-B
Collegamento al
PC (avvitabile)



LED per
visualizzare
la modalità

Nome LED	Colore	Funzione LED
RX	Verde	Lampeggiante: ricezione dati
TX	Verde	Lampeggiante: invio dati

3. Struttura e Attacchi

3.2 Attacchi

Connettore da 12 Volt:



ATTENZIONE!!!

Da utilizzare solo con alimentatore opzionale!

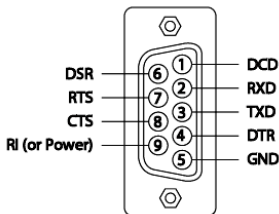
Connettore USB Type-B:



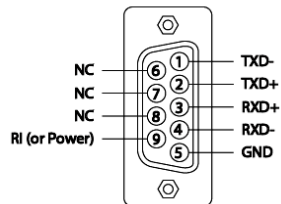
Connettore USB 2.0 Type-B			
Pin	Segnale	Pin	Segnale
1	VCC	3	DATA+
2	DATA-	4	GND

Connettore DB 9M:

RS232 Pin Assignment

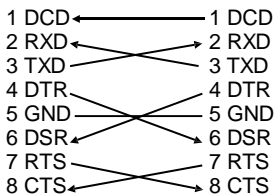


RS422 and RS485-4-wire Pin Assignment



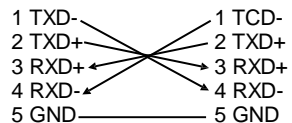
DB9 (EX-1344HMV)

DB9 (Terminale)



DB9 (EX-1344HMV)

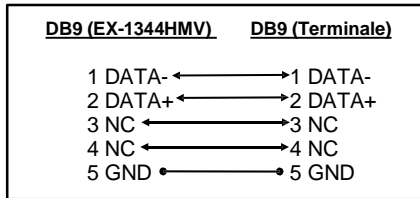
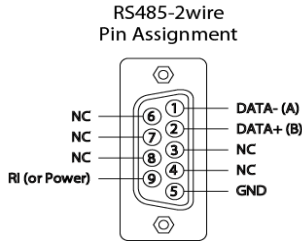
DB9 Terminale)



3. Struttura e Attacchi

3.2 Attacchi

Connettore DB 9M:

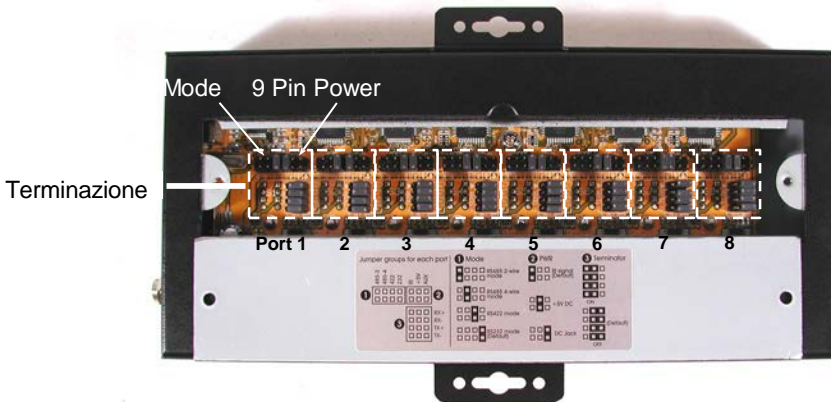


4. Settaggio Jumper

Ci sono 24 ponticelli all'interno dell'EX-1348HMV. Di questi, 8 ponticelli sono per la modalità (**JP1-JP8**), 8 ponticelli (**JP9-JP16**) servono per impostare l'alimentazione sul pin 9 del connettore DB9 e gli altri 8 ponticelli sono per la terminazione (**JP17-JP24**) (vedi immagine sotto). Per modificare la posizione del ponticello, è necessario aprire il coperchio sul fondo dell'EX-1348HMV con 2 viti. Il ponticello è numerato e quindi è possibile vedere quale ponticello è per quale porta.

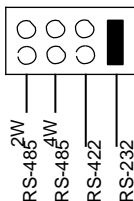
Nelle tabelle seguenti a pagina 8 e 9, è possibile vedere l'impostazione del ponticello di modalità, del ponticello di terminazione e del ponticello di accensione sul pin 9 o sul lato interno del coperchio.

parte inferiore:



4. Settaggio Jumper

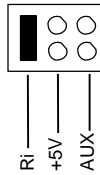
Modalità Ponticello (JP1-JP8)

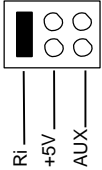
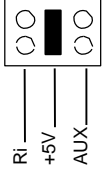
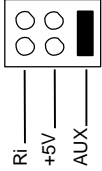


Jumper	Descrizione
<p>Diagram of a 5-pin header with labels RS-485 2W, RS-485 4W, RS-422, and RS-232. The top two pins are empty, the third pin has a small circle, the fourth pin has a small circle, and the fifth pin has a black jumper.</p>	<p>RS-232 (impostazione di fabbrica)</p>
<p>Diagram of a 5-pin header with labels RS-485 2W, RS-485 4W, RS-422, and RS-232. The top two pins are empty, the third pin has a small circle, the fourth pin has a black jumper, and the fifth pin has a small circle.</p>	<p>Modalità RS-422</p>
<p>Diagram of a 5-pin header with labels RS-485 2W, RS-485 4W, RS-422, and RS-232. The top two pins are empty, the third pin has a black jumper, the fourth pin has a small circle, the fifth pin has a small circle, and the sixth pin has a small circle.</p>	<p>Modalità RS-485 a 4 fili</p>
<p>Diagram of a 5-pin header with labels RS-485 2W, RS-485 4W, RS-422, and RS-232. The top two pins are empty, the third pin has a black jumper, the fourth pin has a small circle, the fifth pin has a small circle, and the sixth pin has a small circle.</p>	<p>Modalità RS-485 a 2 fili</p>

4. Settaggio Jumper

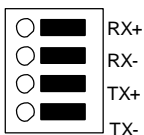
Alimentazione al ponticello a 9 pin (JP9-JP16)



Jumper	Descrizione
 <p>Ri +5V AUX</p>	<p>Nessuna alimentazione sul pin 9 (impostazione di fabbrica)</p>
 <p>Ri +5V AUX</p>	<p>+5V DC sul Pin 9</p>
 <p>Ri +5V AUX</p>	<p>Potenza dell'alimentatore sul pin 9</p>

4. Settaggio Jumper

Ponticelli di terminazione (JP17-JP24)

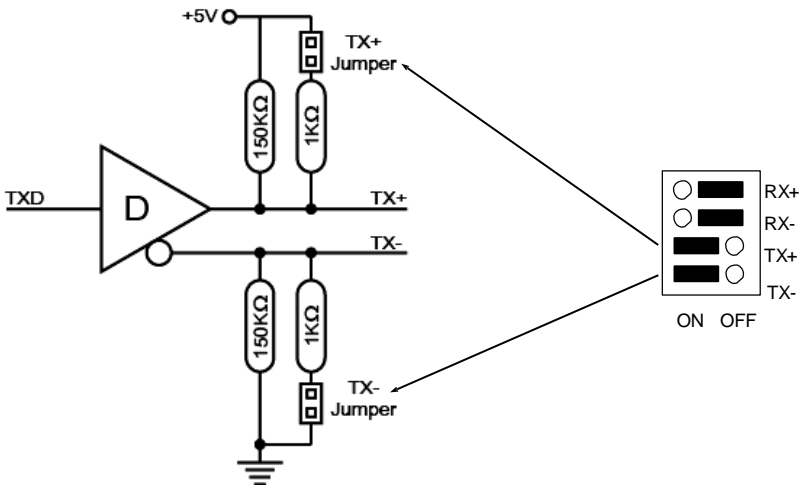
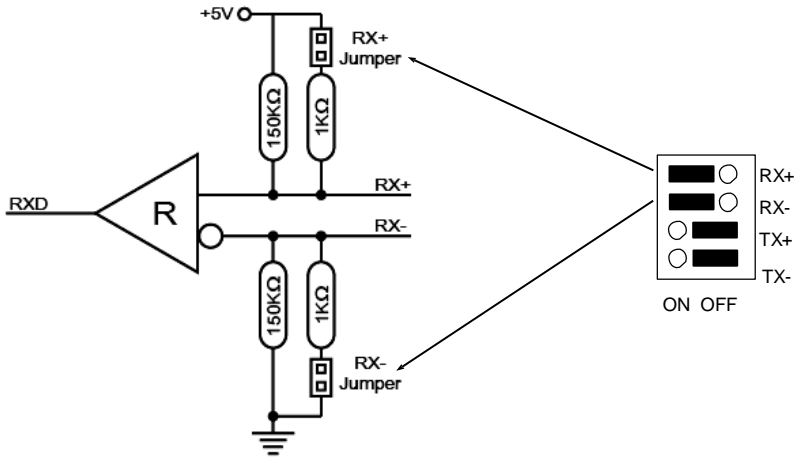


ON OFF

Jumper	Descrizione
<p>Legend for jumper settings:</p> <ul style="list-style-type: none"> <input type="radio"/> <input type="checkbox"/> RX+ <input type="radio"/> <input type="checkbox"/> RX- <input type="radio"/> <input type="checkbox"/> TX+ <input type="radio"/> <input type="checkbox"/> TX- <p>ON OFF</p>	<p>Entrambi i terminatori per RX+/RX- e TX+/TX- sono inattivi (impostazione di fabbrica)</p>
<p>Legend for jumper settings:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <input type="radio"/> RX+ <input checked="" type="checkbox"/> <input type="radio"/> RX- <input type="checkbox"/> <input checked="" type="checkbox"/> TX+ <input type="checkbox"/> <input checked="" type="checkbox"/> TX- <p>ON OFF</p>	<p>Il Terminatore è attivo RX+/RX-</p>
<p>Legend for jumper settings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input checked="" type="checkbox"/> RX+ <input type="checkbox"/> <input checked="" type="checkbox"/> RX- <input checked="" type="checkbox"/> <input type="checkbox"/> TX+ <input checked="" type="checkbox"/> <input type="checkbox"/> TX- <p>ON OFF</p>	<p>Il terminatore TX+/TX- è attivo (Terminatori per DATA+/DATA- per la modalità RS-485 a 2 fili)</p>
<p>Legend for jumper settings:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <input type="radio"/> RX+ <input checked="" type="checkbox"/> <input type="radio"/> RX- <input checked="" type="checkbox"/> <input type="radio"/> TX+ <input checked="" type="checkbox"/> <input type="radio"/> TX- <p>ON OFF</p>	<p>Entrambi i terminatori per RX+/RX- e TX+/TX- sono attivi</p>

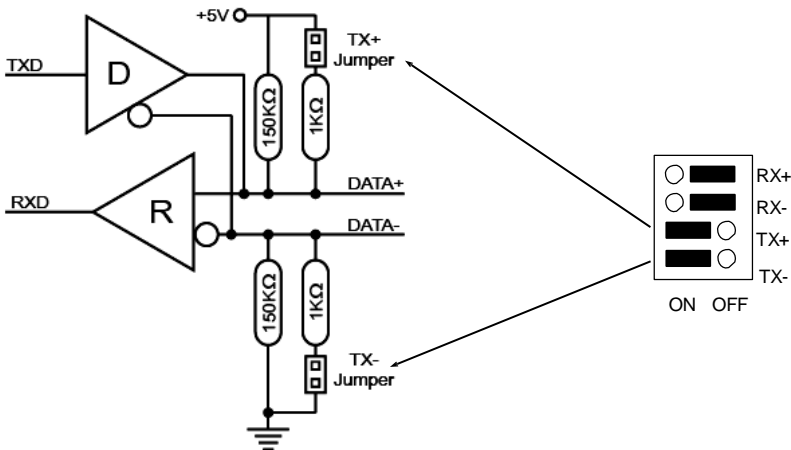
4. Settaggio Jumper

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

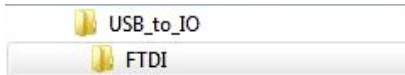
Si prega di notare le seguenti istruzioni di installazione. Poiché ci sono grandi differenze tra i PC, possiamo darti solo istruzioni generali per l'installazione. Se qualcosa non è chiaro, fare riferimento alle istruzioni per l'uso del proprio computer.

- Collegare il cavo USB in dotazione alla presa USB Type-B del modulo.
- Ora collega il connettore dell'alimentatore in dotazione alla presa da 12V del modulo e inserisci la spina dell'alimentatore in una presa.
- Ora collega l'altra estremità del cavo USB (Type-A) alla presa USB Type-A del tuo PC.
- Ora imposta i ponticelli sulle impostazioni desiderate. (vedi figura impostazioni jumper)
- 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 seguente cartella (vedi illustrazione).



VERIFICA INSTALLAZIONE DRIVER

Aprire >**Gestione dispositivi**<. Lì dovresti inserire diverse 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 INDIRIZZO COM (NON sotto 98 & ME)

Aprire il >**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 nella maggior parte delle versioni Linux. Poiché le singole distribuzioni e le versioni del kernel differiscono notevolmente l'una dall'altra, purtroppo non possiamo fornirvi istruzioni per l'installazione. Segui le istruzioni di installazione per le porte USB per la tua versione Linux.

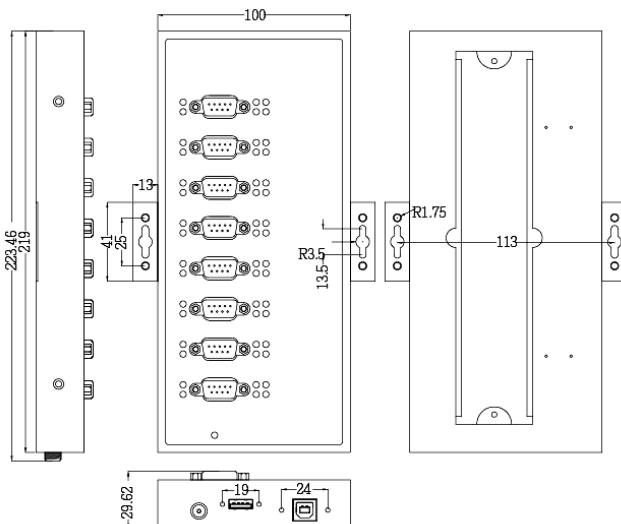
MAC

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 l'una dall'altra, 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 energia:	5V/0.7A (USB) oppure 12V/0.3A (Alimentatore)
Temperatura d'esercizio:	Da 0°C fino a 55°C (32°F fino a 132°F)
Temperatura di conservazione:	Da -20°C fino a 85°C (-4°F fino a 185°F)
Umidità d'esercizio:	Dal 5% fino al 95% RH
Velocità di Trasmissione:	Da 110bps fino a 921.6Kbps
Bit di Data:	5, 6, 7, 8, 9
Bit di Stop:	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-1348HMV are plug & play high-speed USB 2.0 to Serial module. It converts USB 2.0 to eight 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-1348HMV 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-1348HMV 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:

- 8x 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 ~~X~~ DE97424562**

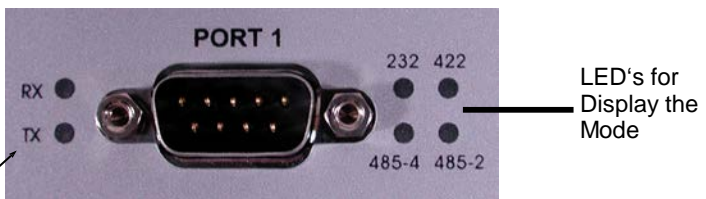
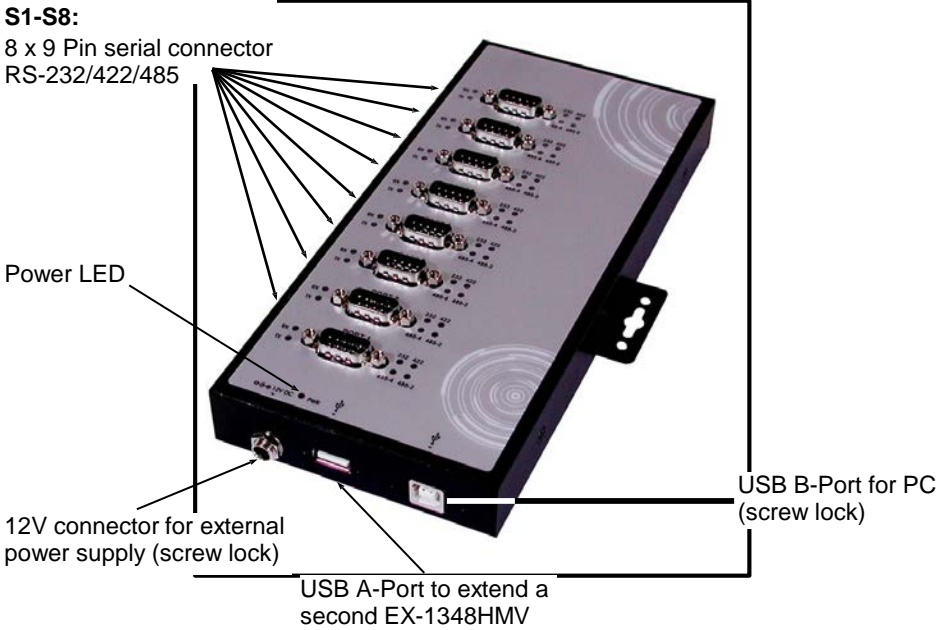
2. Extent of Delivery

Before you connect the EX-1348HMV to your PC, you should first check the contents of the delivery:

- EX-1348HMV
- Driver CD
- Manual
- USB Cabel (screw lock)
- Power Supply (12V/3A)
- DIN-RAIL Kit

3. Layout and Connections

3.1 Layout



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:



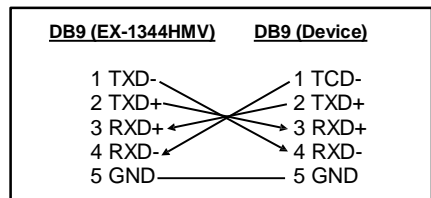
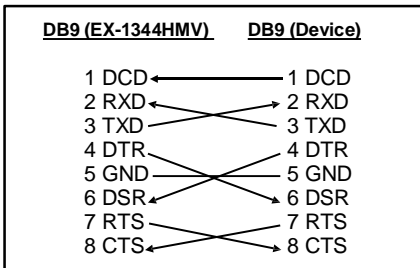
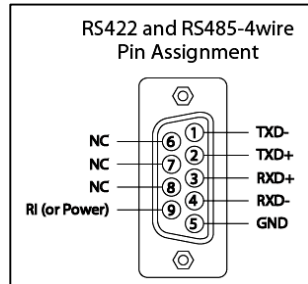
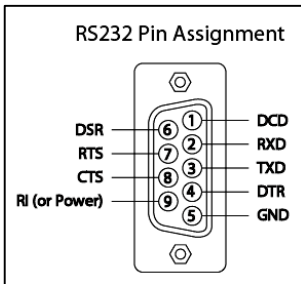
ATTENTION!!!
Only use with optional power supply!

USB B-Port:



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

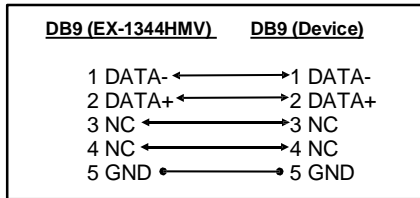
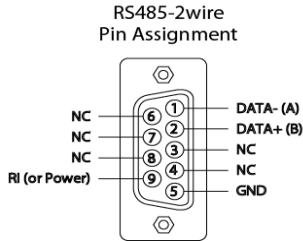
DB 9M:



3. Layout and Connections

3.2 Connections

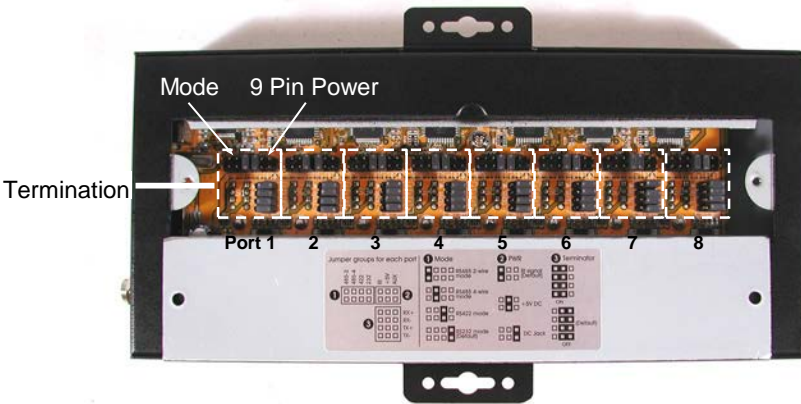
DB 9M:



4. Jumper-Settings

There are 24 jumper at the inside of the EX-1348HMV. Of these, 8 jumpers are for the mode (JP1-JP8), 8 jumpers (JP9-JP16) are for setting the power on 9 pin at the DB9 connector and the other 8 jumpers are for termination (JP17-JP24) (see picture below). To change the jumper position, you must open the cover on the bottom of the EX-1348HMV with 2 screws. The jumpers 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

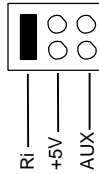
Mode Jumper (JP1-JP8)

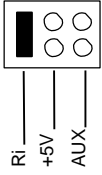
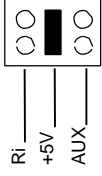
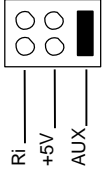


Jumper	Description
	<p>RS-232 (Factory Setting)</p>
	<p>RS-422 Mode</p>
	<p>RS-485 4-wire Mode</p>
	<p>RS-485 2-wire Mode</p>

4. Jumper-Settings

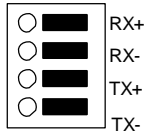
Power to 9 Pin Jumper (JP9-JP16)



Jumper	Description
 <p>Ri +5V AUX</p>	<p>Keine Power auf Pin 9 (Factory Setting)</p>
 <p>Ri +5V AUX</p>	<p>+5V DC to Pin 9</p>
 <p>Ri +5V AUX</p>	<p>Power of the Power Supply to Pin 9</p>

4. Jumper-Settings

Termination Jumper (JP17-JP24)

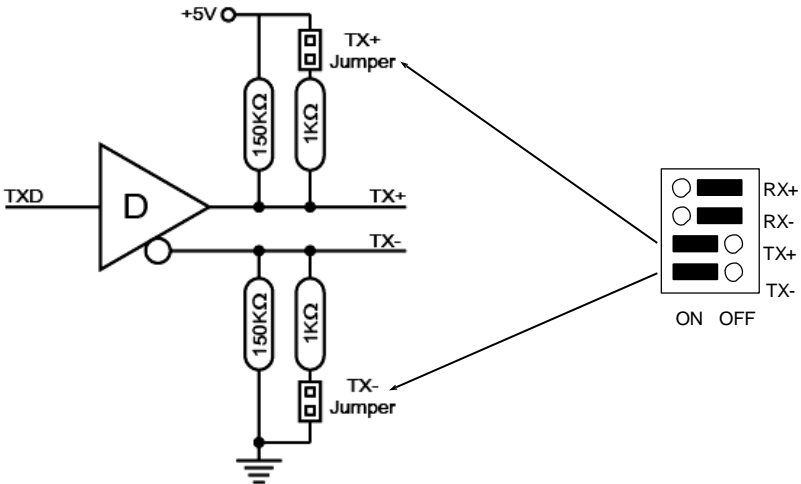
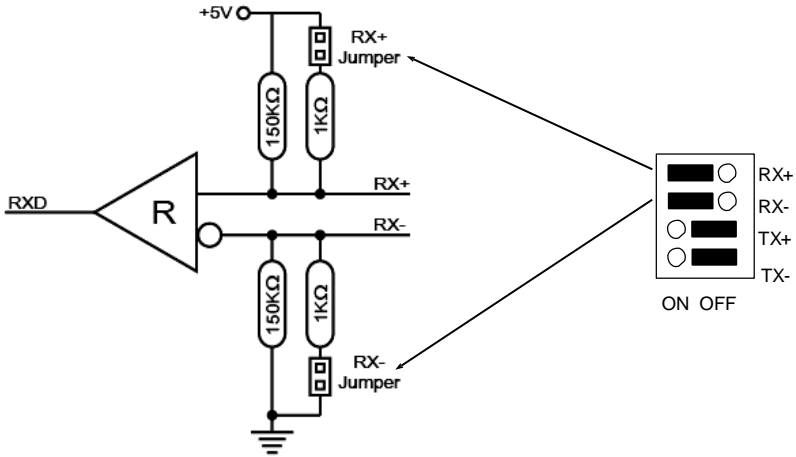


ON OFF

Jumper	Description
<p> <input type="radio"/> <input checked="" type="checkbox"/> RX+ <input type="radio"/> <input checked="" type="checkbox"/> RX- <input type="radio"/> <input checked="" type="checkbox"/> TX+ <input type="radio"/> <input checked="" type="checkbox"/> TX- ON OFF </p>	Both Terminator for RX+/RX- and TX+/TX- are disable (Factory Setting)
<p> <input checked="" type="checkbox"/> <input type="radio"/> RX+ <input checked="" type="checkbox"/> <input type="radio"/> RX- <input type="radio"/> <input checked="" type="checkbox"/> TX+ <input type="radio"/> <input checked="" type="checkbox"/> TX- ON OFF </p>	RX+/RX- Terminator are enable
<p> <input type="radio"/> <input checked="" type="checkbox"/> RX+ <input type="radio"/> <input checked="" type="checkbox"/> RX- <input checked="" type="checkbox"/> <input type="radio"/> TX+ <input checked="" type="checkbox"/> <input type="radio"/> TX- ON OFF </p>	TX+/TX- Terminator are enable (Terminator for DATA+/DATA- for RS-485 2-wire Mode)
<p> <input checked="" type="checkbox"/> <input type="radio"/> RX+ <input checked="" type="checkbox"/> <input type="radio"/> RX- <input checked="" type="checkbox"/> <input type="radio"/> TX+ <input checked="" type="checkbox"/> <input type="radio"/> TX- ON OFF </p>	Both Terminator for RX+/RX- and TX+/TX- are enable

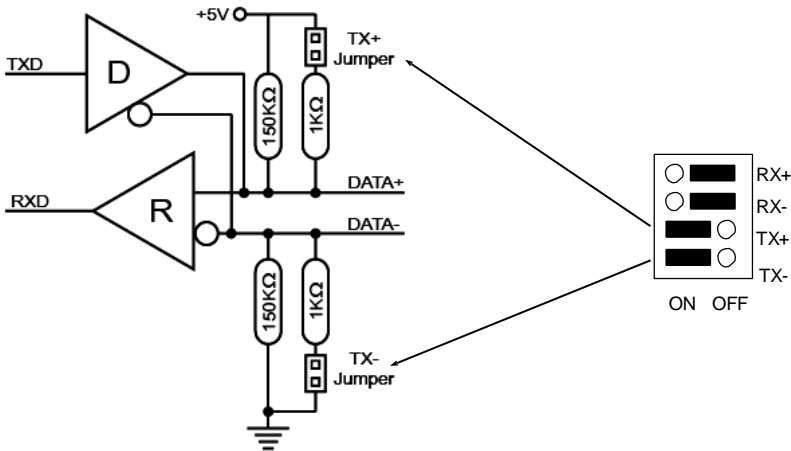
4. Jumper-Settings

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



4. Jumper-Settings

Terminator for RS-485 2-wire Mode



5. Hardware Installation

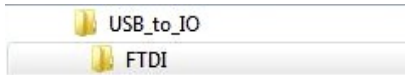
Because there are large differences between PC's, we can give you only a general installation guide for the EX-1348HMV. Please refer your computers reference manual whenever in doubt.

1. Connect the USB cable (B-Plug) to the USB B-Port at the EX-1348HMV.
2. Now connect the power supply to the 12V connector at the EX-1348HMV, 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 Serialer 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/0.7A (USB) or 12V/0.3A (Power Supply)
Operating Temperature:	0 to 55°C (32 to 132°F)
Storage Temperature:	-20 to 85°C (-4 to 185°F)
Operating Humidity:	5 to 95% RH
Baud Rate:	110bps to 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

