

USB-DMX/RDM



Ecco, è una interfaccia USB-DMX/RDM compatibile allo standard E1.20 RDM e DMX USITT 1990, dispone della parte DMX OPTOISOLATA e si alimenta direttamente dalla porta USB del PC, non risente di problemi di potenziali elettrici diversi tra linea DMX e PC anche se scollegata e ricollegata mentre sta funzionando, il software di corredo ripristina le funzionalità immediatamente. La struttura Hardware è disegnata per lavorare in applicazioni professionali rendendo questa interfaccia robusta ed affidabile. Ecco, permette di comunicare con le apparecchiature RDM in modo bidirezionale sfruttando la linea utilizzata per il DMX a due fili. Ecco è dotata di software di gestione che tramite il protocollo RDM permette di riconoscere i fari (device) collegati al DMX tramite comando di discovery, secondo il formato RDM questi sono dotati di indirizzo MAC che appare in un elenco con la tipologia del faretto collegato ed i relativi canali DMX utilizzabili in quella determinata apparecchiatura, in modalità RDM è possibile anche assegnargli un indirizzo DMX digitandolo nella apposita finestra del programma, la funzione RDM è applicabile a tutte le lampade compatibili a questo standard.

Ecco può essere utilizzata anche come interfaccia DMX pass thru compatibile con i migliori software disponibili sul mercato. Il software in dotazione funziona solo con Ecco e grazie ai suoi sofisticati algoritmi permette la funzione discovery dei fari lampade in pochi secondi.

ECCO ReadySteadyGo device can be defined and classified as the "lingua franca" (universal-translator) for all users of USB/DMX/RDM protocols. ReadySteadyGo is totally compatible with standard E1.20 RDM & DMX USITT 1990. ReadySteadyGo is opto isolated and can be powered directly from any PC USB port (Mac too). This device is totally free-electric interferences between DMX & PC. Should the device, inadvertently, be disconnected and immediately reconnected, the software will instantly reinstate connections. The hardware of the ColoursReadySteadyGo is robust and ergonomically designed to be handled without any fear of breaking if incidentally dropped. ColoursReadySteadyGo has been designed to facilitate RDM bi-directional communications using the 2-core DMX protocol. ColoursReadySteadyGo integrates the discovery RDM protocol that identifies all fixtures connected with DMX protocol.

The ColoursReadySteadyGo is also the perfect interface DMX pass-through gear compatible with the majority of all existing world's software

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Hardware Specificaiton for DMX application:

A DMX output connector is always female, and a DMX input connector is always male. Some manufacturers use 3-pin XLR connectors, eliminating Pins 4 and 5.

The DMX512 signal is transmitted via the industry standard interface EIA485, more familiarly known as RS485. RS485 is a balanced connection. The standard wiring is a twisted-pair, shielded, low-capacitance data cable designed for RS-485 -- never use standard microphone cable. Recommended cables are [Belden](#) 8227, Belden 9156, Belden 43906 (European DMX Cable Version) or can be used OVERLED DMX cable this is compliant with the standard.

Data is transmitted in serial format asynchronously with the transmission speed of 250 Kbps. Voltage on both pins ("+" and "-") should be between +5 volts and 0 volts (measured to ground). EIA485 defines that the signal voltage between the two wires should be at least 200 millivolts. Higher voltage on the "+" pin and lower voltage on the "-" pin results in a digital "1". Higher voltage on the "-" pin and lower voltage on the "+" pin results in a digital "0". The ground wire is only a reference point and can be used as shielding.

DMX devices such as lights are connected in a daisy-chain MODE: from the controller to light #1, to light #2, to light #3 and so forth. According to the standard, a DMX512 controller can only drive up to 32 loads (e.g., one light = one load).

To control additional loads (lights), a RDM/DMX splitter(DDS378) needed . The device in the daisy-chain must be terminated by Terminating plugs containing a 120 ohm resistor soldered across pins 2 and 3. The terminator functions is for attenuating signal noise which would otherwise be reflected back into the cable and degrade the data.

Specification

Power Supply from PC 200mA

DMX USITT compliance

RDM e1.20 Compliance

DMX optoinsulation :

2500VRMS Bus Isolation Using On-Chip High-Voltage Capacitors

+4.5V to +5.5V Power-Supply Voltage Range

±15kV ESD Protection

Hot-Swap-Protected Driver-Enable Input

Undervoltage Lockout

Isolation-Barrier Fault Detection

Short-Circuit Protected

Thermal Shutdown

Open-Line and Shorted-Line Fail-Safe Receiver



Pinout connection

Pin 1: Shield (ground)

Pin 2: Primary Data Complement (-) **B**

Pin 3: Primary Data True (+) **A**

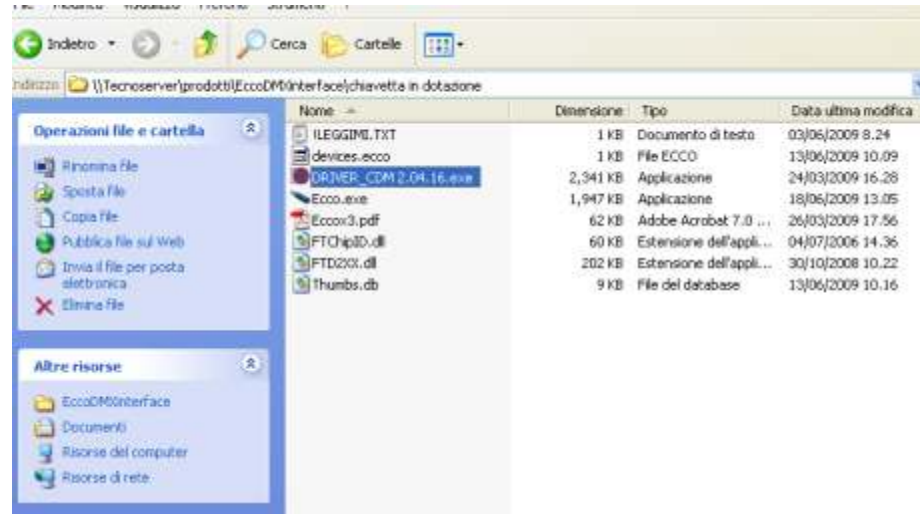
Pin 4: Optional Secondary Data Complement (-)

Pin 5: Optional Secondary Data 2 True (+)



Interface accesories

installare i driver prima di collegare l'interfaccia RDM
 install DRIVER first !



Dopo la installazione dei driver, click su ecco.exe che lancia il software poi trascinare dalla directory il file devices.ecco nella videata del software, questo file contiene le chiavi di abilitazione delle interfacce, senza questo la interfaccia USB NON è riconosciuta.

After installing Driver,click on ecco.exe to start the program, then please proceede to activate the RDM interface, drag and drop devices.ecco in the Ecco window, this will allow the interface to work.



Videata del software ECCO, **installare il driver di interfaccia USB**, prima di collegare il device poi lanciare il software ECCO.exe, la videata da lo stato di connessione o disconnessione della interfaccia, un led bianco posteriore ad ECCO lampeggia indicando la presenza della interfaccia, a questo punto selezionare dal menù DMX o discovery dei dispositivi e una lista di device connessi apparirà in una pagina a sinistra del software, selezionando il device trovato con Identify questo lampeggia indicando la sua posizione fisica, poi è possibile scegliere le modalità di funzionamento del dispositivo DMX selezionando le opzioni disponibili, il canale DMX assegnato è modificabile da apposita finestra sulla destra della videata.



ECCO software application, **install USB driver** first then click on ECCO.exe the software will appear as in the picture, connect ECCO and a white led close to USB connector start to blink, this mean the software is running and DMX is in out, also in a PC display USB connected will appear, now click on DMX or Discovery to activate DEVICE discovery, a list will appear on the left of the display with manufacturer and ID of each device, just click on the device found and identify the lamp will BLINK to indicate phisical position of the device, DMX address setting possibile changing value in the window.



diventa un mixer DMX con 512 cursori e manda il valore dello slider in rete DMX
DMX mixer activation key, 512 slider appare on screen the selected value is sent

fa lampeggiare il dispositivo in evidenziato nella lista dei trovati
Blink the device found on the DMX network to identify position

attiva la ricerca dei dispositivi compatibili in rete DMX compatibili RDM
Start the device Finder on DMX network RDM compatible

What is DMX512?

DMX512 is a standard that describes a method of digital data transmission between controllers and lighting equipment and accessories. It covers electrical characteristics (based on the EIA/TIA-485 standard), data format, data protocol, and connector type. This standard is intended to provide for interoperability at both communication and mechanical levels with controllers made by different manufacturers. The 1986 and 1990 versions also addressed cable requirements and premises wiring. A series of ANSI standards are being developed to address these cable issues not appearing in the ANSI version. DMX512 comes from Digital Multiplex with 512 individual pieces of information.

What is RDM?

Remote Device Management is an open standard in development. This is an enhancement to USITT DMX512 for configuration, status monitoring, and management of DMX512-based systems. This standard (ANSI/ESTA 1.20, Entertainment Technology - Remote Device Management over USITT DMX512) was developed by the ESTA Technical Standards Program and is designed for interoperability between many manufacturers. Compliant DMX512 and DMX512-A devices are completely functional when RDM is present.