DMX UNIVERSE DR1.1 RDM

User manual











For your own safety, please read this user manual and warnings carefully before installation.

Description

The **DMX UNIVERSE DR1.1 RDM** is a compact Ethernet Interface (DMX via Ethernet), which can be used for Art-Net[™]/TPM2/sACN to DMX/RDM or DMX to Art-Net[™]. Via a standard RJ45 net work connection the connection to ethernet net work occurs.

Switchable DMX direction

The DMX direction can be switched according to usage.

Settable DMX frame rate

In the DMX-OUTPUT mode the DMX frame rate is adjustable, so this interface is compatible to "slow" DMX devices.

RDM via Art-Net™

Supports RDM via Art-Net[™] and thus enables connected RDM devices to be configured via Art-Net[™] using corresponding software.

Disengageable LED display

The LED-Display at the DMX UNIVERSE DR1.1 RDM is disengageable via Art-Net[™]-Command (AcLedMute) or time controlled. This is very helpful to avoid disturbing "light points" on stage.

Easy Configuration

A user friendly configuration via web browser allows a fast and uncomplicated setting of all parameters. No special software is necessary, a standard web browser is enough. So, the configuration is possible any time from PC, Smartphone or tablet. For an easy setting of the IP we provide the IP-Configurator as PC-Tool or Android-App for free. The net work settings can be leaved unchanged and the IP can be configured without any problems.

Compact Design

With a width of only 29.2mm the DMX UNIVERSE DR1.1 RDM is suitable for the optional DIN rail housing 350.

Art-Net[™] Merge-Function

Two Art-Net[™] sources are output by LTP (Latest) or HTP (Highest) combined to the DMX output.

Combinable with WiFi components

In combination with a WLAN bridge the DMX UNIVERSE DR1.1 RDM can also be integrated into WLAN net works.

Firmware update function

To use future functions the DMX UNIVERSE DR1.1 RDM offers a Firmware-Update-Function. This can be started with any web browser, so no direct access to the device is necessary!

DMX4ALL Communication-Interface

The DMX UNIVERSE DR1.1 RDM has an additional communication interface using the DMX4ALL-Commands via TCP or UDP packages.



Data sheet

Power supply:	8-24V DC (150mA@12V; 100mA@24V)				
Connections:	Ethernet: RJ45 Power: Screw terminals DMX: Screw terminals				
DMX:	Settable: - 512 channels OUT - 512 channels IN				
DMX frame rate:	Settable (5 - 44 fps)				
RDM:	RDM via Art-Net™ on/off switchable				
Data Fail (DMX-OUT):	HOLD last data CLEAR all to 0% SET all to 100% NO OUTPUT DEFAULT VALUES INTERNAL PROGRAM				
DMX-IN Fail (DMX-IN):	HOLD last data CLEAR all to 0% SET all to 100% NO OUTPUT DEFAULT VALUES				
Protocol:	Art-Net™ TPM2 sACN (Unicast) DMX4ALL Commands (as with the LAN-DMX STAGE-PROFI)				
Internal program:	User configurable Stand-Alone Program				
LED display:	Green: ethernet connection Yellow: data transfer				
Dimensions:	29.2mm x 82mm				

Contents

- 1x DMX UNIVERSE DR1.1 RDM
- 1x Quick guide german and english



Connection





LED-Display

LED green

The green LED flashes, if no Ethernet-Connection is available and lights permanently, if an Ethernet-Connection is available.

LED yellow

The yellow LED lights up as soon as data are received.



Configuration

The configuration of the **DMX UNIVERSE DR1.1 RDM** occurs about a web interface which can be called about any web browser.

Set the IP with IP-Configurator

The **IP-Configurator** enables the IP-Address and the net mask setting even if the PCs network setting is not within the IP range of the DMX UNIVERSE DR1.1 RDM.

- Install the program IP-Configurator
- Connect the DMX UNIVERSE DR1.1 RDM with net work and turn it on
- Start the program IP-Configurator

G DMX4ALL IP-Configurator for ArtNet devices - V1.5.0.0						
Parameter						
Network: 2.0.0.1	-					
Name		IP	MAC			
DMX4ALL DMX UNIVERSE DR1.1	IRDM	2.0.0.10	FC-C2-3D-20-78	E-ED		
Find devices Web config Factory Reset	⊤ Device setting IP: Netmask:	gs 2 . 0 . 0 255 . 0 . 0	. 10 Calc. fro . 0	m MAC		

- The DMX UNIVERSE DR1.1 RDM is shown in the list
- Select entry (click)
- Enter the news IP and net mask
- Click SET



Set IP with web browser

During the delivery status the given **IP-Address** is **2.0.0.10**, which can be used via the web interface.

Set the net work card of the PC to this IP range to call the IP-Address 2.0.0.10 via the web browser.



The net work settings of the PC must be set to IP address 2.0.0.1 and sub net mask to 255.0.0.0

> Please take further details from Art-Net[™]-Specifications.

IP-Einstellungen können automatisch zu Netzwerk diese Funktion unterstützt. W den Netzwerkadministrator, um die geei beziehen.	ugewie 'enden gneter	se Si IF	n w ie s P-Ei	ich nsl	den an tellu	, w der ingi	enn das nfalls an en zu
IP-Adresse automatisch beziehen							
• Folgende IP-Adresse verwenden:							
IP-Adresse:	2		0		0		1
Subnetzmaske:	255		0		0	-83	0
Standardgateway:		×		43		-13	
ONS-Serveradresse automatisch b	eziehe	'n					
👝 Folgende DNS-Serveradressen ve	rwend	en					
Bevorzugter DNS-Server:	-	4		2		23	
Alternativer DNS-Server:						•	
					ſ	F	inweitert



Device Configuration

Call the DMX UNIVERSE DR 1.1 RDM IP-Address in the web browser and address bar (delivery status: 2.0.0.10) to get the following configuration site:

DMX	DMX UNIVERSE DR1.1 RDM					
Main Settings	Main Settings DMX Output Service					
Network Settings						
IP Address 2.0.0.10	User Information					
Netmask: 255.0.0	DMX UNIVERSE DRT.1 RDM is an Art-Net. We interface with 1 DMX output of 1 DMX input.					
Gateway: 2.0.0.254	The device provides one Art-Net™ Node with 1 port/universe					
Short Name : DMX DR1.1 RDM	Veri en site east ande es sum ID addeses. Obedeses es d'Les serves la diffective ande					
Long Name : DMX4ALL DMX LINIVERSE DB1-1 B	Fou can give each node an own IP address, Shortname and Longhame to differ the node in the network.					
	Please use in one Art-Net™ network the IP address 2.x.x. or 10.x.x. with the Netmask 255.0.0.					
 DMX Input DMX Output 	Other IP addresses like 192.168.1.x with Netmask 255.255.255.0 are also possible.					
● Art-Net™						
TPM2						
sACN (Unicast)						
RDM Settings						
🖌 Enable RDM	Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd					
Search ESTA-ID's :						
DMX4ALL Command Settings						
O Disabled						
10001 Port						
(Every change needs a restart of the	e hardware.)					
LED Indicator Settings						
LED auto off						
	Save					

Network Settings

 \wedge

Each device (node) needs an own **IP-Address**, so the assignment in the net work occurs clearly. According to the Art-Net[™] specifications please use the IP-Addresses 2.x.x.x or 10.x.x.x.

Each other IP addresses are also possible, for example 192.168.1.10. Then the net mask must be changed to 255.255.255.0 !

For an easier identification you can assign each node with any names. The Short-Name is limited to 18 marks and the Long-Name is limited to 64 marks. The net mask is to leave according to the Art-Net[™] specifications auf 255.0.0.0.



Device Settings

Device Settings specify the DMX direction (DMX Input / DMX Output) as well as the used protocol (Art-Net[™] / TPM2 / sACN).

RDM Settings

Enable RDM activates the RDM function of the DMX UNIVERSE DR 1.1 RDM .

In addition to the global search for RDM compatible devices, the IDs specified under **Search ESTA-IDs** are also requested during discovery. During standard operation this field can remain empty.

DMX4ALL Command Settings

The configuration of the Ethernet port for the DMX4ALL commands is done here.

LED Indicator Settings

The option **LED auto off** turns off automatically the LED display at the DMX UNIVERSE DR 1.1 RDM after 5 minutes if an Ethernet connection exists throughout.

SAVE stores the configuration.



DMX-Output

For using the **DMX UNIVERSE DR1.1 RDM** as DMX-Output (Ethernet to DMX) please select the Interface Mode **DMX-Output** in the Main-Settings.

By clicking *DMX-Output* you reach the following configuration site:

DMX DN	IX UNIVERSE DR1.1 RDM
DMX Output Settings	Main Settings DMX Output Service
ArtNet Parameter Net : 0 🔄 SubNet : 0 🔄 Universe : 0 🔄 ArtNet Merge Options © LTP (Latest) ● HTP (Highest) Advanced Options Framerate : MAX 👻 Fail Action: HOLD last data 👻 © Enable Sync 🌓 Save current DMX values as defaults	User Information The DMX4ALL DMX UNIVERSE DR1.1 RDM has 1 DMX output. The DMX output is working with 512 channels (1 Universe).
Enable DMX output after first data packet	Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd © Copyright DMX4ALL GmbH - All rights reserved
Save	

The Art-Net[™] parameter **SubNet**, **Net** and **Port** must be set in accordance to the Art-Net[™] specifications and show the aim for the DMX data.

The **Merge** settings can be adjusted at LTP (Latest) for last change or HTP (Highest) for highest value.

Framerate set the maximum DMX frame rate in the output. MAX is the maximum frame rate of ca. 44 fps (frames / second).

Fail Action sets the behavior in case of failure of the Art-Net[™] data.

Via **Enable Sync** the DMX output of several devices can be synchronized.

The option **Save current DMX values as defaults** stores current DMX values and restores these in case of Fail Action.

The option **Enable DMX output after first data packet** starts the DMX-Output not until the first Art-Net[™] data package is received after turn on.



DMX-Input

For using the **DMX UNIVERSE DR1.1 RDM** as DMX-Input-Interface (DMX to Art-Net[™]), please select the interface mode **DMX-Input** in the main settings.

By clicking *DMX-Input* you reach the following configuration site:

	JNIVERSE DR1.1 RDM
DMX Input Settings	Main Settings DMX Input Service
ArtNet Parameter Net: Universe: Universe: Universe: Use Broadcast Use Unicast Destination IP: 2.0.0.1 DMX Input Fail O NO DATA HOLD Iast DMX data CLEAR all DMX channels to 0% SET all DMX channels to 100%	User Information The ArtNet parameter SubNet, Net and Universe set the destination of the DMX packets. DMX packets can be sent unicast to the specified IP or broadcast to all. If "Use Unicast is selected enter the Destination IP. If "Use Broadcast is selected the Destination IP. If OD Dath and the DMX signal is received. - NO DATA = The ArtNet data packets are send without DMX channel data - HOLD = The last DMX channel values are set to 0 - SET = The DMX channel values are set to 255 The DMX Update Rate can be selected with fixed timing or dynamic DMX timing.
DMX Update Rate DMX framerate ✓ DMX Input - Refresh interval ✓ Disable 4 second Art-Net refresh ✓ Use Sequence Number Save	Art-Net™ Designed by and Copyright Artistic Licence Holdings Lid € Copyright DMX4ALL GmbH - All rights reserved

The Art-Net[™] parameter **SubNet**, **Net** and **Port** must be set in accordance of Art-Net[™] specifications and show the aim for the DMX data.

Use Broadcast: The DMX data will be send to all devices within the Art-Net[™] **Use Unicast**: The DMX data will be send to a specified device with the **Unicast IP** within the Art-Net[™]

Several actions are available for the DMX input in the case of a breakdown of the DMX signal (**DMX Input Fail**).

NO DATA	- via Art-Net™ will be no DMX input received
HOLD last DMX data	- the last data will be retained
CLEAR all DMX channels to 0%	 all DMX channels will be set to 0
SET all DMX channels to 100%	- all DMX channels will be set to 255

The **Update-Rate** with which the DMX input data are outputted can be switched in several times.

On change data transferred only the DMX input data if these changes, however max. every 0.1 seconds.

DMX Framerate transferred the received DMX values as soon as a frame has finished. So, the frame rate of the incoming DMX signal will be used for the update rate.

Create / Use internal program

The **DMX UNIVERSE DR1.1 RDM** has a user programmable Stand-Alone-Function which can replay an internal program.

The internal program can be used within the DMX-Output-Mode and can be executed after turning and in case of hold off Art-NetTM data (*DMX Output* \rightarrow *Fail Action*).

The internal program is created with the software DMX-Configurator.



Program 1 (New 1) is executed in case Art-Net[™]-Fail

The program created with the DMX-Configurator software is then transferred to the **DMX UNIVERSE DR1.1 RDM** via *Hardware* \rightarrow *Write* memory.



DMX4ALL-Command

The **DMX UNIVERSE DR1.1 RDM** has a further communication interface, using DMX4ALL-Commands.

For the communication interface the following settings are available in the main settings:

DMX4ALL Command Settings				
🔵 Di	sabled			
• TC)P			
🔾 UI)P			
100	01 Port			
(Every	change needs a restart of the hardware.)			

The DMX4ALL-Commands can be controlled by sending the RAW data packages via TCP or UDP to the set port.

The possible DMX4ALL-Commands can be found in the separate DMX4ALL-Command description.



VCP-Control

For controlling via a COM-Port a TCP-VCP-program must be installed, which provides a virtual Com Port (VCP).

We recommended the tool *Serial to Ethernet Connection* which we tested. You find this tool as download in our support area.

During the installation you have to enter a password (see opposite figure).



After the installation please start the tool "Centos SEC" you find on your desktop. Now, add a VCP with *Add* and enter the parameters for this VCP-Port as shown opposite.

Make sure, that the IP is used which is adjusted via the web browser.

Finally, click into the main window to **Update all** to activate the VCP. Now, the status *Available* and the COM-Port will be shown into the device manager.

Edit ¥irtual	COM Port		X
COM Name	COM5 💌	Type Client	•
IP Address	2.0	. 0 . 10	
Port	10001	Net. Protocol RAW	•
Remark	ArtNet-DMX :	STAGE-PROFI 1.1	
	Cancel	ОК	

🌡 Serial I	to Ethern	et Utility R-1.00	2	2011(c) Centos	Inc.		×
Add	Edit	Remove Rem	nove all	Load list	Save list		Help
COM#	Туре	IP Address	Port	Net. Protocol	Status	Remark	
COM5	Client	2.0.0.10	10001	RAW	Available	ArtNet-DMX STAG	E-PROFI 1.
4				111			4
Sort		Update Upd	late all				Exit





Factory Reset

The **DMX UNIVERSE DR1.1 RDM** can be reset into the delivery status via the web browser.

Please proceed as follows:

- Open web browser and call the Service site
- Enter the Service-Code "7319" within the input field
- Click Send
- Following wait minimum 10 seconds



If the Factory-Reset is done via the web site the IP-Address and the Subnet Mask is reset. It is not always possible to return. Set the IP-Address again if necessary (see *Set the IP with IP-Configurator* or *Set the IP via web browser*).

Alternatively, you can reset the delivery status via the DMX4ALL LAN-Updater:

- Turn on the device
- Start software DMX4ALL LAN-Updater
- Generate net work connection to PC
- Turn on device
- The yellow LED lights for ca. 3 seconds
- Click **FIND** while yellow LED lights
- Select DMX UNIVERSE DR1.1 RDM from list
- Click FACTORY RESET
- Now, the Reset will be executed

Alternatively, you can restore the delivery status via **DMX4ALL IP-Configurator**:

- Turn on device
- Start the software DMX4ALL IP-Configurator
- Click FIND
- Select DMX UNIVERSE DR1.1 RDM from list
- Click FACTORY RESET
- Now, the Reset will be executed





Firmware-Update

The **DMX UNIVERSE DR1.1 RDM** has an update function, which allows transferring future firmware versions.

Please proceed as follows:

- Turn off the device
- Start the update software DMX4ALL LAN-Updater
- Generate network connection to PC
- Turn on the device
- The yellow LED lights for around 3 seconds
- During the yellow LED is on press **FIND**
- Select DMX UNIVERSE DR1.1 RDM from list
- Click Firmware-Update
- Select firmware file (.bin) and confirm
- Wait until the update has finished (Entry RUN application. appears)

Activate firmware update via web browser (older units):

- Open web browser and call up the site Service
- Enter the service code "**1379**" into the text box
- Click Send
- Start the update software DMX4ALL LAN-Updater
- Select the DMX UNIVERSE DR1.1 RDM from list
- Click Firmware-Update
- Select and confirm firmware file (.bin)
- Wait until the update has finished (Entry RUN application. appears)
- Click Back within the web browser



If an error occurs during the update you can activate the firmware update at the device directly any time and start again.



Dimensions





Accessories

Top hat rail housing 350



Power supply 12V / 20W









CE-Conformity

CE

This assembly (board) is controlled by a microprocessor and uses high frequency. In order to maintain the properties of the module with regard to CE conformity, installation into a closed metal housing in accordance with the EMC directive 2014/30/EU is necessary.

Disposal



Electronical and electronic products must not be disposed in domestic waste. Dispose the product at the end of its service life in accordance with applicable legal regulations. Information on this can be obtained from your local waste disposal company.

Warning



This device is no toy. Keep out of the reach of children. Parents are liable for consequential damages caused by nonobservance for their children.



Risk-Notes



You purchased a technical product. Conformable to the best available technology the following risks should not excluded:

Failure risk:

The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

Initiation risk:

For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

Operating risk:

The Change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

Misusage risk:

Any nonstandard use could cause incalculable risks and is not allowed.

Warning: It is not allowed to use the device in an operation, where the safety of persons depend on this device.



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