

# 'INTERRA

CERTIFIED R&D CENTER OF AUTOMATION

*Developer of Uniqueness*



# KNX/DMX Gateway ITR831-0001



## Introduction

It is not only a KNX/DMX gateway, but also can make record, play back and delete DMX program.

The maximum record time is up to 4 hours. This module can be used to control devices with built-in DMX protocol, such as LED color changer, laser light, etc.



# DMX input type

HDL Net DMX/ArtNet DMX: If use RJ45 as communication, select these modes.

DMX-1990: If connect OUT ports as communication, select this mode, generally speaking, use this communication way.

Device: 1.1.11 M/DMX512.1

- General
- IP/MAC config
- DMX config**
- DMX to EIB config

>>DMX input type	HDLNet DMX
HDLNet DMX input for universe(1..255)	HDLNet DMX
DMX input start address(1..512)	1
Change DMX input type via bus	Disable
Change Net DMX input universe via bus	Disable
Change DMX input start address via bus	Disable
Read DMX input type(0-HDLNet DMX,1-ArtNet DMX,2- DMX-1990)	Disable
Read Net DMX input universe form bus	Disable
Read DMX input start address from bus	Disable

# Work mode

**External record mode:** this mode is as a recorder, it can record some scenes, and then you can play the scenes by other devices after recording.

**DMX dimming(EIB to DMX):** this mode is as a dimmer, it can control channel, scene and sequence.

**DMX to EIB:** this mode is as converter, can achieve the DMX signal to control EIB devices.

Device: 1.1.11 M/DMX512.1

- General
- IP/MAC config
- DMX config
- Program config
- Program group A

Work mode select

External record mode

External record mode

DMX dimming(EIB to DMX)

DMX to EIB

Information of DMX shown below:

DMX type:->HDLNet DMX. ->ArtNet DMX. ->DMX-1990.

DMX universe:HDLNet DMX(1..255), ArtNet DMX(0..255)

DMX start address:1..512

# DMX output start address

The valid address is 1-512, is according to your DMX driver address. There are X100,X10, X1 for address, if your address is 001, the start address is 1

Device: 1.1.11 M/DMX512.1

- General
- IP/MAC config
- DMX config**
- Channel config
  - Channel 1
  - Channel 2
  - Channel 3
  - Channel 4
  - Channel 5
  - Channel 6
  - Channel 7
  - Channel 8
- Scene config
  - Scene NO.1
  - Scene NO.2
  - Scene NO.3
  - Scene NO.4
  - Scene NO.5
  - Scene NO.6
- Sequence config
  - Sequence 1

>>DMX output type	DMX-1990
DMX output start address(1..512)	1
Change DMX output type via bus	Disable
Change Net DMX output universe via bus	Disable
Change DMX output start address via bus	Disable
Read DMX output type(0-HDLNet DMX,1-ArtNet DMX,2- DMX-1990)	Disable
Read Net DMX output universe from bus	Disable
Read DMX output start address from bus	Disable

# Fade time

Fade time: For example, you set 3 seconds and turn it on by pressing a user panel, the load will turn on slowly and reach the max brightness 3 seconds later

Device: 1.1.11 M/DMX512.1

- General
- IP/MAC config
- DMX config
- Channel config**
- Channel 1
- Channel 2
- Channel 3
- Channel 4
- Channel 5
- Channel 6
- Channel 7
- Channel 8
- Scene config

Fade time for channel dimming ([0%..100%]/[0..255s])	5
Enable channel 1..8	Enable
Enable channel 9..16	Disable
Enable channel 17..24	Disable
Enable channel 25..32	Disable
Enable channel 33..40	Disable
Enable channel 41..48	Disable

# Channel state feedback

## 1bit:

normally use this object to feedback the channel state to the button, so the button indicator can show the correct state of it. if the channel brightness>0, send out command '1'; if the brightness=0, send out command '0'.

## 1 byte:

normally use this object to feedback the channel specific brightness to the app, then the app can show the percentage value of its brightness.

The screenshot shows the configuration interface for a DMX512 Gateway I M/DMX512.1 device. The left sidebar lists various configuration categories, with 'Channel 1' selected under 'Channel config'. The main area displays settings for channel state feedback:

- The response of channel state:** A dropdown menu currently set to 'Invalid', with a list of options: 'Invalid', '1bit always response', '1bit only changed', '1byte always response', and '1byte only changed'.
- The status after voltage recovery:** A dropdown menu set to 'Enable'.
- Enable switch ON/OFF(1bit):** A dropdown menu set to 'NO'.
- Enable relative dimming(4bits):** A dropdown menu set to 'Enable'.
- Relative dimming saved as the brightness of switch:** A dropdown menu set to 'NO'.
- Enable absolute dimming(1byte):** A dropdown menu set to 'Enable'.
- Absolute dimming saved as the brightness of switch:** A dropdown menu set to 'NO'.

# Relative/absolute dimming

## Relative dimming:

long pressing the button to dim up/down, adjust the brightness visually.

## Absolute dimming:

The channel will output a certain brightness when receives a percentage telegram

Device: 1.1.11 M/DMX512.1

General		
IP/MAC config		
DMX config		
Channel config		
Channel 1	The response of channel state	Invalid
Channel 2	The status after voltage recovery	OFF
Channel 3	Enable switch ON/OFF(1bit)	Enable
Channel 4	Enable relative dimming(4bits)	Enable
Channel 5	-Relative dimming saved as the brightness of switch	NO
Channel 6	Enable absolute dimming(1byte)	Enable
Channel 7	-Absolute dimming saved as the brightness of switch	NO
Channel 8		
Scene config		

# Scene

Scene: the combination of several channels' status (on/off or different brightness levels.)

This gateway supports 64 scenes totally, and each scene can be applied to 48 channels at most  
Assign current channel to some scenes and set the brightness for different scenes in scene page.

Device: 1.1.11 M/DMX512.1

General	Fade time for scene channel dimming ([0%..100%]/[0..255s])	3
IP/MAC config	Channel 1 brightness	Invalid
DMX config	Channel 2 brightness	Invalid
Channel config	Channel 3 brightness	Invalid
Channel 1	Channel 4 brightness	Invalid
Channel 2	Channel 5 brightness	Invalid
Channel 3	Channel 6 brightness	Invalid
Channel 4	Channel 7 brightness	Invalid
Channel 5		
Channel 6		
Channel 7		
Channel 8		
Scene config		
Scene NO.1		

# Sequence

**Sequence: the combination of difference scenes with playing parameters.**

one sequence can have up to 24 steps, one step can call one scene, set the step running time, when this time elapses, will turn to next step.

Device: 1.1.11 M/DMX512.1

- General
- IP/MAC config
- DMX config
- Channel config
- Scene config
- Sequence config
  - Sequence 1**
  - Sequence 2
  - Sequence 3
  - Sequence 4
  - Sequence 5
  - Sequence 6

Total 24 steps, configuration as following:

Total 24 steps, configuration as following:

>> Step 1 configuration

Invalid

Time for step 1 (0..65535s) 5

Time for step 1 (0..999ms) 0

>> Step 2 configuration

Invalid

Time for step 2 (0..65535s) 5

# Configuration/Dimming

on/off(channel output): 1 bit data point, here we assign group address 1/4/0, 1/5/0 for channel1,2 respectively.

relative dimming: it is enabled by default, 4 bit data point, here we assign group address 1/4/1, 1/5/1 for channel1,2 respectively.

Channel config	The status after voltage recovery	OFF
Channel 1	Enable switch ON/OFF(1bit)	Enable
Channel 2		
Channel 3	Enable relative dimming(4bits)	Enable

↔ 30	Channel 1	Switching(1bit)	1/4/0	1 bit	C	-	W	-	U	switch	Low
↔ 31	Channel 1	Relative dimming(4bits)	1/4/1	4 bit	C	-	W	-	U	dimming control	Low
↔ 32	Channel 1	Absolute dimming(1byte)		1 Byte	C	-	W	-	U	percentage (0..100%)	Low
↔ 34	Channel 2	Switching(1bit)	1/5/0	1 bit	C	-	W	-	U	switch	Low
↔ 35	Channel 2	Relative dimming(4bits)	1/5/1	4 bit	C	-	W	-	U	dimming control	Low

# Configuration/Dimming

In the panel setting page, select the 'Dimming controller' as the work mode. assign the same group addresses of channel1,2 for Rocker A, B respectively, then can use Rocker A to control channel1, Rocker B to control channel2:

short press the button, for on/off control; long press the button, for dim up/down control.

Device: 1.1.14 M/DLP04.1

General 1	Rocker A work mode	Dimming controller
General 2	Rocker A operation mode	Double buttons mode
Rocker A	-> Reaction on short button	Left=Toggle,Right=Toggle
Rocker B	-> Reaction on long button	Left=Dim(Toggle),Right=Dim(Toggle)
Rocker C		
Rocker D		
Rocker E		

	Numb...	Name	Object Function	Description	Group Address...	Length	...	R	W	T	U	Data Type
➡	40	Rocker A short	Switching(Toggle)		1/4/0	1 bit	C	-	W	T	U	switch
➡	41	Rocker A long	Dimming		1/4/1	4 bit	C	-	W	T	U	dimming control
➡	50	Rocker B short	Switching(Toggle)		1/5/0	1 bit	C	-	W	T	U	switch
➡	51	Rocker B long	Dimming		1/5/1	4 bit	C	-	W	T	U	dimming control

# Configuration/Dimming

absolute dimming:

Enable absolute dimming(1byte)

Enable

-Absolute dimming saved as the brightness of switch

NO

absolute dimming: it's enabled by default, it's 1 byte data point, here we assign group address 1/4/5, 1/5/5 for channel1,2 respectively.

30	Channel 1	Switching(1bit)	1/4/0	1 bit	C	-	W	-	U	switch	Low
31	Channel 1	Relative dimming(4bits)	1/4/1	4 bit	C	-	W	-	U	dimming control	Low
32	Channel 1	Absolute dimming(1byte)	1/4/5	1 Byte	C	-	W	-	U	percentage (0..100%)	Low
34	Channel 2	Switching(1bit)	1/5/0	1 bit	C	-	W	-	U	switch	Low
35	Channel 2	Relative dimming(4bits)	1/5/1	4 bit	C	-	W	-	U	dimming control	Low
36	Channel 2	Absolute dimming(1byte)	1/5/5	1 Byte	C	-	W	-	U	percentage (0..100%)	Low

# Configuration/Dimming

In the panel setting page, select the 'Percentage controller' as the work mode for rocker F. set the favorite brightness for each button's short/long press operation same as rocker G.

Device: 1.1.14 M/DLP04.1

General 1	Rocker F work mode	Percentage controller
General 2	-> Percentage on left short button	100%(255)
Rocker A	-> Percentage on left long button	0%(0)
Rocker B	--Delay on left short button(0..255s)	0
Rocker C	--Delay on left long button(0..255s)	0
Rocker D	-> Percentage on right long button	80%
Rocker E	-> Percentage on right long button	50%(128)
<b>Rocker F</b>		
Rocker G		
Rocker H		
-> Air-condition(IR)		

# Configuration/Dimming

assign the same group address of channel1 absolute dimming object for Rocker F, then can use Rocker C to control channel1:

- short press rocker C left button, channel1 will output 100%;
- long press rocker C left button, channel1 will output 0%;
- short press rocker C right button, channel1 will output 80%;
- long press rocker C right button, channel1 will output 50%.

same as rocker G

80	Rocker E left short	Sequence		1 bit	C	-	W	I	U	start/stop
82	Rocker E right short	Sequence		1 bit	C	-	W	T	U	start/stop
90	Rocker F	Percentage	1/4/5	1 Byte	C	-	W	T	U	percentage (0..100%)
100	Rocker G	Percentage	1/5/5	1 Byte	C	-	W	T	U	percentage (0..100%)

# Configuration/Scene

## Scene 1:

Set the Scene1 brightness for different channels, e.g. channel1 is 30%, channel 2 is 60%, channel 3 is 0%;

Device: 1.1.11 M/DMX512.1

General	Fade time for scene channel dimming ([0%..100%]/[0..255s])	3
IP/MAC config	Channel 1 brightness	30%
DMX config	Channel 2 brightness	60%
Channel config	Channel 3 brightness	0%(0)
Scene config		
<b>Scene NO.1</b>		
Scene NO.2		
Scene NO.3		

# Configuration/Scene

## Scene 2:

Set the Scene 2 brightness for different channels, e.g. channel1 is 50%, channel2 is 80%, channel3 is 0%;

Device: 1.1.11 M/DMX512.1

General	Fade time for scene channel dimming ([0%..100%]/[0..255s])	3
IP/MAC config	Channel 1 brightness	50%(128)
DMX config	Channel 2 brightness	80%
Channel config	Channel 3 brightness	0%(0)
Scene config		
Scene NO.1		
Scene NO.2		
Scene NO.3		

same steps for other scenes

# Configuration/Scene

here we assign group address 1/2/5 for scene object, use middle group 2 for scene function

14	DMX output univers	Read Net DMX output u		1 Byte	C	R	-	I	-		Low
15	DMX output start ad	Read DMX output addre		2 Byte	C	R	-	T	-		Low
230	Scene	Call scene(8bit)	1/2/5	1 Byte	C	-	W	-	U		Low
231	Scene	Scene dimming(4bit)		4 bit	C	-	W	-	U	dimming control	Low
232	Sequence	Sequence 1	1/2/7	1 bit	C	-	W	-	U	start/stop	Low
233	Sequence	Sequence 2		1 bit	C	-	W	-	U	start/stop	Low
234	Sequence	Sequence 3		1 bit	C	-	W	-	U	start/stop	Low
235	Sequence	Sequence 4		1 bit	C	-	W	-	U	start/stop	Low

# Configuration/Scene

In the panel setting page, select the 'Scene controller' as the work mode.

press rocker D left button to call scene1, channel 1 will go to 30%, channel 2 will go to 60%, etc;

press right button to call scene2, channel 1 will go to 88%, channel 2 will go to 70%, etc.

Device: 1.1.14 M/DLP04.1

General 1	Rocker D work mode	Scene controller
General 2	Call scene number of the left	Scene NO.01
Rocker A	Call scene number of the right	Scene NO.02
Rocker B		
Rocker C		
<b>Rocker D</b>		

51	Rocker B long	Dimming	1/5/1	4 bit	C	-	W	T	U
60	Rocker C	Percentage		1 Byte	C	-	W	T	U
70	Rocker D short	Call scene	1/2/5	1 Byte	C	-	W	T	U

# Configuration/Sequence

set to call one scene for each step, e.g. step1 call scene1, step2 call scene2, step3 call scene3.

set the step running time, here is 5s.

control mode is forward, running mode is cycle, when running the sequence, it will execute: step1->step2-step3->step1->step2->...

Device: 1.1.11 M/DMX512.1

- General
- IP/MAC config
- DMX config
- Channel config
- Scene config
- Scene NO.1
- Scene NO.2
- Scene NO.3
- Scene NO.4
- Scene NO.5
- Scene NO.6
- Sequence config
  - Sequence 1
  - Sequence 2
  - Sequence 3
  - Sequence 4
  - Sequence 5
  - Sequence 6

Total 24 steps, configuration as following:

>> Step 1 configuration	Scene NO.01
Time for step 1 (0..65535s)	5
Time for step 1 (0..999ms)	0
>> Step 2 configuration	Scene NO.02
Time for step 2 (0..65535s)	5
Time for step 2 (0..999ms)	0
>> Step 3 configuration	Scene NO.03
Time for step 3 (0..65535s)	5
Time for step 3 (0..999ms)	0
>> Step 4 configuration	Scene NO.04

# Configuration/Sequence

In the panel setting page, select the 'Sequence controller' as the work mode.  
assign the same group address for sequence object in dimmer and button E.

Device: 1.1.14 M/DLP04.1

General 1	Rocker E work mode	Sequence controller
General 2	Rocker E operation mode	Single button mode
Rocker A	-> Reaction on left short button	Toggle(Start-"1"-,Stop-"0")
Rocker B	-> Reaction on left long button	Invalid
Rocker C	-> Reaction on right short button	Toggle(Start-"1"-,Stop-"0")
Rocker D		
<b>Rocker E</b>		
Rocker F		
Rocker G		

'INTERRA

# Find Your Missing Part

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