

DMX Software User manual



Content:

1.	Introduction	3
2.	Installing the DMX Software	4
	2.1 PC System Requirement	4
	2.2 Installing the DMX Software	4
3.	Installing the USB Driver	7
4.	Essential Hardware	9
	4.1 Smart Key	9
	4.2 The Pin definition of RJ-45	10
5.	Hardware Connection	12
6.	Smart Key PC Software Function Instruction	16



1. Introduction

The DMX software and Smart Key are used to configure MOONS' DMX driver.

This software is only compatible with MOONS' DMX (4channels) driver.

This manual guides you through the installation of the DMX software, the setup of the required hardware and describes the various application tabs and their functionality.

This manual was written for:

 \diamond MOONS' DMX software version 1.4

 \diamond Smart Key

 \diamond All MOONS' I series 4 channels DMX Intelligent driver and DC-DC version 4 channels DMX driver



2. Installing the DMX Software

2.1 PC System Requirement

Microsoft windows XP, Microsoft windows 7, Microsoft windows 2008.etc

NET Framework version 4.0; (NET Framework is part of your Windows operating system; In the software package, there's the package of NET Framework 4.0. You also can download it from the Microsoft official website.)

2.2 Installing the DMX Software

To install the Smart Key PC software, carry out the following steps:

- 1) Go to https://leddriver.moons.com.cn/SouProduct/UCenter/M Search/Software view.aspx?MATNR=DMXSoftware&rnd=7553
- 2) Download the DMX software and save it to your computer
- 3) Release the DMX software package

There are 5 files in the package;



If your computer hasn't installed "Microsoft Framework4.0" or "Windows Installer3.1" before,

Please open the folder "DotNetFX40" and then double click "dotNetFx40_Full_x86_x64" to install the Microsoft Framework4.0; "CDM v2.12.00WHQL Certified" is the USB driver;



4) Double click "setup" to install DMX software;

The detailed installing steps can be referenced from following figures and notes.

a) Click "Next"



c) Click "Next"



5	Dmx	_ □
Select Installa	tion Folder	
The installer will install D	mx to the following folder.	
To install in this folder, cl	lick "Next". To install to a different folder, enter	it below or click "Bro
<u>F</u> older:		
C:\Program Files	(x86)\MOONS'\Dmx\	B <u>r</u> owse.
		<u>D</u> isk Cos
Install Dmx for yourself	f, or for anyone who uses this computer:	
Eugenera		
OJust <u>m</u> e		
	Cancel < <u>B</u>	ack <u>N</u> e:
ick "Close" to :	finish the software installation	on
ick "Close" to : ₽	finish the software installation	on – ⊏
ick "Close" to : P Installation Co	finish the software installation Dmx	on – ⊏
ick "Close" to :	finish the software installation Dmx omplete	on – ⊏
ick "Close" to a Installation Co	finish the software installation Dmx omplete	on – 🗆
ick "Close" to :	finish the software installation Dmx omplete	on – –
ick "Close" to :	finish the software installation Dmx omplete ully installed.)n
ick "Close" to a Installation Co	finish the software installation Dmx omplete ully installed.	on – –
ick "Close" to :	finish the software installation Dmx omplete	on
ick "Close" to :	finish the software installation Dmx omplete)n
ick "Close" to Installation Co Dmx has been successfu Click "Close" to exit. Please use Windows Up	finish the software installation Dmx mplete ully installed.	Dn – □
ick "Close" to Installation Co Dmx has been successfu Click "Close" to exit.	finish the software installation Dmx mplete ully installed.	Dn – □



"Next"

When completing the software installation, the software icon will appear on the desktop.





3. Installing the USB Driver

The USB driver should be installed in the computer in order to recognize the serial port number of Smart Key when you connect the Smart Key to your PC's USB port at first time. Remarks: The PC needs few seconds to recognize the serial number of Smart Key at first connection.

In this chapter, guide you how to install the USB driver of Smart Key:

Double click "CDM v2.12.00WHQL Certified"

a) Click "Extract"







vice Driver
ftware drivers that some o work.
Next > Cancel

c) Choose "I accept this agreement" and click "Next"

Device Driver	Device Driver Installation Wizard							
License Agreement								
To continue, accept the following license agreement. To read the entire agreement, use the scroll bar or press the Page Down key. IMPORTANT NOTICE: PLEASE READ CAREFULLY BEFORE INSTALLING THE RELEVANT SOFTWARE: This licence agreement, (Licence) is a legal agreement between you (Licenser of four and force free free free free free free free f								
I accept this agreement Save As Print I don't accept this agreement								
	< Back Next > Cancel							

successfully and then click "Finish"

Device Driver Installation Wi	Device Driver Installation Wizard							
	Completing the Device Driver Installation Wizard							
	The drivers were successfully in	stalled on this computer.						
	You can now connect your devi came with instructions, please re	ice to this computer. If your device ead them first.						
for c BUY A WWW.	Valuation furfores only Licence NOW 1 MODDYSOFT.COM/SPX/LICENS	E.HTML						
	Driver Name	Status						
	✓ FTDI CDM Driver Packa	Ready to use						
	✓ FTDI CDM Driver Packa	Ready to use						
	< Back	Finish Cancel						



d) The following picture shows you have completed to install the serial port driver

4. Essential Hardware

To work with the DMX software, you need:

1) A PC to run the software

2) Smart Key

3) RJ-45 and USB-to-mini USB cable. Both cables are supplied with the Smart Key

4) MOONS' DMX driver that you wish to configure

4.1 Smart Key (RJ-45 Version)







Mini USB connector on the Smart Key



4.2 The Pin definition of RJ-45

RJ45 PIN No.	Definition	POWER Pin	Color
1	DMX-	Not used	White Oran
2	DMX+	Not used	Orange
7	GND	Not used	White Brov
3	MCS+	MCS+	White Gree
6	MCS-	MCS-	Green
5	DALI+	DA+	White Blu
4	DALI-	DA-	Blue
8 GND		Not used	Brown



RJ45 connector on the Smart Key





Smartkey (Plug Version)







5. Hardware Connection

AC-DC version DMX driver











DC-DC version DMX driver

As mentioned in the chapter 1, The DMX software and Smart Key are used to configure MOONS'DMX driver.

Here guide you how to complete the corresponding hardware connection of MOONS' DMX Intelligent drivers.

During the configuring process, the driver should be charged (DC Source).











6. Smart Key PC Software Function Instruction

ettings				
1				
1				
	-			
8 bits	~	Default	Read	Write
4	~			
Auto-addressing mode	~	Control settings		
Auto-addressing mode		1.Show index	0	-
1	T	2.input time-out to show	0	
0	*	3.Show running or stopped	Stopped	~
1	~	4.Fade time scale	1	~
2	~	5.Wait time scale	1	~
3	~	6.Master dimmer value	1	•
		7.Dimming curve	Gamma dimming	~
200	•	8.Group R scaling	1	-
200	•	9.Group G scaling	1	-
200	•	10.Group B scaling	1	-
200	-	11.Group W scaling	1	÷
		0		•
ult show 0-5		1		-
ult show 0-5		1		A
ult show 0-5		1		
ult show 0-5		1		
default show 6-8		1		
	4 Auto-addressing mode 1 1 0 1 2 3 200 200 200 200 200 200 200 200 200	4 ✓ Auto-addressing mode ✓ 1 ↓ 0 ✓ 1 ✓ 2 ✓ 3 ✓ 200 ↓ 200 ↓ 200 ↓ 200 ↓ 1 ✓ 200 ↓ 200 ↓ 1 ✓ 200 ↓ 1 ✓ 1 ✓ 200 ↓ 1 ↓ 1 ✓ 200 ↓ 1 ↓ 1 ✓ 1 ✓ 1 ✓ 1 ✓ 200 ↓ 1 ↓ 1 ↓ 1 ↓ 1 ↓ 1 ↓ 1 ↓ 1 ↓ 1 ↓ 1 ↓ 1 <	4 V Auto-addressing mode I.Show index 1 Image: Control settings 2 Image: Control settings 2 <td>4 Image: Control settings Auto-addressing mode I.Show index 0 1 Image: Control settings 1.Show index 0 1 Image: Control settings 1.Show index 0 0 Image: Control settings 1.Show index 0 1 Image: Control settings 1.Show index 0 1 Image: Control settings 1.Show index 0 1 Image: Control settings 1 1 2 Image: Control settings<</td>	4 Image: Control settings Auto-addressing mode I.Show index 0 1 Image: Control settings 1.Show index 0 1 Image: Control settings 1.Show index 0 0 Image: Control settings 1.Show index 0 1 Image: Control settings 1.Show index 0 1 Image: Control settings 1.Show index 0 1 Image: Control settings 1 1 2 Image: Control settings<

Base info settings interface of DMX software





Scene settings interface of DMX software



Base info settings

Default	Initialize configuration
Read	Gain the configuration of the DMX driver
Write	Set the configuration of the DMX driver

Networking Settings

Network Start address	Set the start address of DMX receiving signal, the valid range of start address: 1-512;				
Network 8bits or 16bits	Set the dimming precision				
	This instruction	n has two options: 8bits o	r 16bits.		
	In the 8bits mo	It totally has 255 dimming levels.			
	In the 16bits m	ode, the maximum lumina	ance value is 655	535. It totally has 65535 dimming leve	
Footprint	Set active the r	number of channels			
	The valid range of footprint: 1-4;				
	E.g. Normally, for the RGB fixture, the footprint may set to be 3, it means this fixture has 3 p				
	footprint may set to be 4.				
Daisy-chain mode	There are 4 modes that Auto-addressing mode, Forwarding mode, Master mode and Manual m				
	①In the Auto-addressing mode, device may receive the necessary data from the Network state				
	the rest data will be transferred to the next device.				
	E.g. If the configuration status likes following form shows:				
	Device Network Start address Footprint Network 8bits or 16bits				



		-

els.

physical channels. For the RGBW fixture, the

node for you select.

art address and then gain these data. Finally,

,				
	A	3	2	8
Hand	lling steps	5:		
Step1: Device A receives the DMX512 dimming signal.				
S	tep2: Ignore	slot0, slot1, slot2 data of d	imming signal.	
S	tep3: Gain slo	ot 3, slot 4 data of dimming	g signal and per-	form dimming. At the same time slot
	transferr	red to next device.		
(2 In the Forw	varding mode, device may	receive the nece	essary data from the Network start a
Ċ	lata will be tra	ansferred to the next device	e again.	
F	E.g. If the con	figuration status likes follo	wing form show	vs:
	Device	Network Start address	Footprint	Network 8bits or 16bits
	A	3	2	8
	L Handling steps	s:		I
Ś	Step 1: Device	A receives the DMX512 d	imming signal.	
S	tep2: Ignore	slot0. slot1.slot2 data of di	mming signal.	
ر د	Sten3: Gain slo	ot3 slot4 data of dimming	signal and nerfo	rm dimming At the same time slot3
-	trongforr	red to payt daviag	signar and perio	in dumining. At the same time stors
	transferr	ed to next device.		
,		1 1	11.22 1	1.4 1 6 1 1 . 4
	3)In the Mast	er mode, one device can h	old 32 slaves and	a the number of slave can be set thr
Ľ	Device may re	ceive the necessary data fi	com the Network	<i>start address</i> and gain these data.
b	evice through	n forwarding mode. The sl	ave device won'	t stop to repeat the same action until
d	imming signa	I. And then transfer the re	st data to the nex	kt device.



t5-slot512 data of dimming signal will be

ddress and then gain these data. Finally, the



-slot512 data of dimming signal will be

bugh this DMX driver configuration software. hen the data will transferred to the slave the final slave device receives the necessary

Notes: Whatever mode device is, if it connects to the "master mode device", it will change to be the slave of the "master mode device" forcibly.

E.g. If the configuration status likes following form shows:

Device	Daisy-chain mode	Footprint	Network 8bits or 16bits	Network start address
Α	Master	2	8bits	3
В	Slave	2	8bits	1
C	Slave	2	8bits	1
D	Auto-addressing	2	8bits	3
Е	Forwarding	2	8bits	3

Assume: The Network address is set to be 3. The whole device chain will perform like following steps shows. Handling steps:

Step1: Device A receives the DMX512 dimming signal.

Step2: Ignore slot0, slot1, slot2 data of dimming signal.

Step3: Gain slot3, slot4 data of dimming signal and perform dimming. At the same time slot3-slot512 data of dimming signal will be transferred to the device B.

Step4: Device B receives the slot3-slot512 data of dimming signal and gain slot3, slot4 data of dimming signal to perform dimming. And

then device B transfers the slot3-slot512 data of dimming signal to device C.

Step5: Device C receives the slot3-slot512 dimming signal and gain slot3, slot4 data of dimming signal to perform dimming. Because

device C is the final slave device, device C transfers the slot5-slot512 data of dimming signal to device D.

Step6: The Daisy-chain mode of device D is Auto-addressing, assume the Network start address is 3, it will gain the slot7, slot8 data of

dimming signal and perform dimming. And then it transfers slot9-slot512 data of dimming signal to device E.



	④In the Manual mode, device may receive the necessary data from the Network start addre											
	original data w	vill be transferred to the ne	xt device.									
	E.g. If the con	figuration status likes follo	wing form show	'S:								
	Device	Network Start address	Footprint	Network 8bits or 16bits								
	A	8										
	Handling steps: Step1: Device A receives the DMX512 dimming signal.											
	Step2: Ignore slot0, slot1, slot2 data of dimming signal.Step3: Gain slot 3, slot 4 data of dimming signal and perform dimming. At the same time sl transferred to next device.											
Daisy-chain mode 2: slave count	Set the number of slave, the maximum value is 32											
Group R channel mapping	This parameter	r allows you to map group	R to another cha	annel. Group R is mapped to channe								
	it to channel 1,	, 2 or 3.										
Group G channel mapping	This parameter	r allows you to map group	G to another cha	annel. Group G is mapped to channe								
	it to channel 0,	, 2 or 3.										
Group B channel mapping	This parameter	r allows you to map group	B to another cha	annel. Group B is mapped to channe								
	it to channel 0,	, 1 or 3.										
Group W channel mapping	This parameter	r allows you to map grou	p W to another c	channel. Group W is mapped to cha								
	map it to chann	nel 0, 1 or 2.										

Driver Settings



ss and then gain these data. Finally, the



t1-slot512 data of dimming signal will be

el 0 by default, but this parameter lets you map

el 1 by default, but this parameter lets you map

el 2 by default, but this parameter lets you map

annel 3 by default, but this parameter lets you

Current setting output1	
Current setting output2	Set the output current value, the minimum value is 200 mA, the maximum value can be gained
Current setting output3	
Current setting output4	

Other Settings

Thermal throttling temperature	Let you set the temperature at which you want the driver to start throttling the LEDs in ord
	temperature exceeds the limit set with this parameter, the light output will be gracefully decrea
PRESCALE_R channel for default show 0-5	
PRESCALE_G channel for default show 0-5	Set the pantograph ratio of channel R/G/B/W's output current in the show mode.
PRESCALE_B channel for default show 0-5	Set the pantograph ratio of all channels output current in the show mode.
PRESCALE_W channel for default show 0-5	Remarks: these function are just available in show0~show5. And also, it hasn't the influence of
PRESCALE_RGBW channel for default show 0-5	

Control Settings

Showindex	Show 0: the output of the R/G/B/W channels is 0
	Show 1: the output of the R/G/B/W channel is 255(in 8 bits mode) or 65535(in 16bits mode)
	Show 2: the output of R is 255(in 8 bits mode) or 65535(in 16bits mode) and the output of the
	Show 3: the output of G is 255(in 8 bits mode) or 65535(in 16bits mode) and the output of the
	Show 4: the output of B is 255(in 8 bits mode) or 65535(in 16bits mode) and the output of the
	Show 5: the output of W is 255(in 8 bits mode) or 65535(in 16bits mode) and the output of the



I from the automatic recognition function.

der to bring the temperature down. When the ased by 50%.

on the DMX dimming.

- e G/B/W channel is 0;
- R/B/W channel is 0;
- R/G/W channel is 0;
- e R/G/B channel is 0;







					R+V	VI	G+W	B	+W	R +	W	
						-						
				I		ļ		ļ		ļ	ļ	
					2s		2s		2s	2	2s	
]	The fad	e time is 0	s, the w	vait time	is 2s;		
	Show 9: User can	create co	orrespond	ling sho	waccor	ding to	the user's	require	ement.			
	Remarks	: It's nec	essary fo	or user t	o comple	ete the	configurat	ion of s	show 9 b	efore cho	oose it.	
Input time-out to show	User can set the tin	ne to rur	the corr	respond	ing time	when	the driver 1	oses the	e DMX o	dimming	signal.	
	The valid range: 1	-15; Th	e unit is	1.25s;	For exa	nple if	the value	is set	to be 3,	when th	ne driver	loses the DMX dimming signal, after
	3*1.25s=3.75s the	driver w	vill run th	e show	automat	ically.						
Show running or stopped	Driver may perform	n wheth	er to igno	ore the l	OMX di	nming	signal or i	not thro	ugh this	function		
	If set "running", th	e driver	may igno	ore the l	DMX di	mming	signal, the	e driver	may run	the corr	respondin	ng show that has been set previously.
	If set "stopped",	the drive	er may n	ot igno	ore the I	DMX (dimming s	ignal, 1	the drive	er may i	run the c	corresponding show that has been set
	previously, if there	e's no D	MX dim	ming si	gnal. Wl	hen it	receives th	e DMX	K dimmir	ng signal	l, it will p	perform the dimming according to the
	corresponding DM	X dimm	ing signa	ıl.								
Fade time scale	User can set the pa	ntograpl	h ratio of	the fad	e time, r	eferenc	e table:					
	Fade time	1	2	3	4	5	6	7	8	9	10	
	Pantograph ratio	1	2	3	4	5	6	7	8	9	10	
	Fade time	17	18	19	20	21	22	23	24	25	26	
	Pantograph ratio	1/1	1/2	1/3	1/4	1/5	1/6	1/7	1/8	1/9	1/10	





	For example: In some shows, the fade time is set to be 5s, fade time scale is set to be 10, the actual fade time will be 50s											
Wait time scale	User can set the pantograph ratio of the wait time, comparison table:											
	Wait time	1	2	3	4	5	6	7	8	9	10]
	Pantograph ratio	1	2	3	4	5	6	7	8	9	10	
	Wait time	17	18	19	20	21	22	23	24	25	26	
	Pantograph ratio	1/1	1/2	1/3	1/4	1/5	1/6	1/7	1/8	1/9	1/10	
	For example: In some shows, the wait time is set to be 5s, wait time scale is set to be 10, the actual wait time will be 50s.											
Master dimmer value	Set the pantograph ratio of all channels.											
Dimming curve	User can set the dimming curve: Gamma dimming curve or linear dimming curve.											
Group R scaling	Set the pantograph ratio of channel R/G/B/W's output pantograph ratio in the show mode and DMX dimming.											
Group G scaling	The pantograph ratio=Group "X" scaling/0xFF											
Group B scaling	For example: the value of Group R scaling is 127;											
Group W scaling	The pantograph rat	tio =Gro	oup G sc	aling/0x	FF=127/2	255*100	%=50%	; The o	utput of	channel	R will be	reduced to be 50%
Min VBus Voltage	This function is on	ly availa	able on I	MU050I	05DQI5	and M	U050I10)5DQI51	•			
	The valid range is	30 - 60. I	f for the	se drive	; 4 loads	s(voltage) are dif	ferent, f	or exam	ple X, X	(+10, X - 5,	X+2;
	You need calculate	firstly.	Choose	the num	ber of th	e highes	t voltage	eX	+10, the	en plus 1	1V and the	en input the value=2
	If X+10+11 \leq 30V, please input 30 directly.											
	If X+10+11>30V, please input the value(X+10+11) directly.											





output.

X+10+11

Scene Settings





		Cust	om scene						
			Add a new sce	ene	Channel 2(%)) Channel 3(%) Channel 4(%)) Fade Time(s)	Wait Tir
			Delete the sel	ected scene					
			Save the show	,					
			Simulate show	,					
	4) S	et t	he configurati	on of each s	scene, user c	can create th	e special co	lor and set the	fade time,
			_						
	Y	ou	can input the	configuratio	n value thro	ough the key	board or cha	annel sliders.	
	-0	usto	miscene						
	Ĺ	4510	Scene Name	Channel 1(%)	Channel 2(%)	Channel 3(%)	Channel 4(%)	Fade Time(s)	Wait Tim
		• 1	Scene 1	41	0	0	0	3	4
	L L	2	Scene 2	0	48	0	0	5	5
		3	Scene 3	0	0	42	0	3	3
		4	Scene 4	40	0	46	0	4	4
						1			
	5) K	ign		custom scen	le and choos	se simulate s	now. You ca	an see the dim	ming effec
	th	le L	LEDs.						
	6) If	yo	u are satisfied	l with the sh	low, you car	n save it. If 1	not, you also	can modify it	again unti
	7) W	/he	n you save th	e show, you	can choose	which show	you want tl	he driver perfo	orm in the (
		Cont	rol settings						
		1 Sh	ow index	9	1				
	R	em	arks: control	settings is in	the "Base i	info settings	"		
Channel sliders	Uger	. 0.3	n modify the	configuration	n of show t	brough the k	exhoard or	hannel slider	
Chamiler suders	0301	Ca.	ii mouny uic	comgutation		litougii the k).
	- Chan	nel S	Bliders				5x		
					•	100%	Faster		
	(gam) 82%		(gam) (gam) ((54% 86% 3	gam) 30%	-				
				-		: :			
				-		: :			
					-	Master	5x		
						Dimmer	Slower		



me(s)

wait time value.



et, if your DMX is charged and connects to

you are satisfied with the show.

control settings.

DMX Software User manual

