H802RA Instructions



1. Abstract

H802RA is a four ports controller that transmit data based on Ethernet protocol and supports Art-Net protocol. It supports multiple kinds of LED driver chips and can address for DMX512 driver chips. The input network interface can be connected to master controller or computer.

Online software are "LED Studio" and "MADRIX", offline software is "LED Build".

2. Supported Driver Chips

DMX512, HDMX, LPD6803, LPD8806, LPD1882, LPD1889, LPD1883, LPD1886, TM1812, TM1809, TM1804, TM1803, TM512, TM1926, TM1913, TM1914, TM1814, UCS6909, UCS6912, UCS1903, UCS1909, UCS1912, UCS512, UCS8904, APA102, APA104, P9813, WS2801, WS2803, WS2811, WS2812, WS2821, SM16716, SM16711, INK1003, LX1003, MY9221, MBI6021, MBI6024, LD1510, LD1512, LD1530, LD1532, etc.

For UCS8904, H802RA controls maximum 3200 pixels. For other chips, H802RA controls maximum 4096 pixels.

3. Features

- (1). Four ports, drive maximum 4096 pixels.
- (2). Support Art-Net protocol, so H802RA can work with MADRIX.
- (3). Address for the TM and UCS DMX512 driver chips, such as TM512, UCS512.
- (4). Configured as repeater or amplifier by LED Studio.
- (5). Work with master controller or computer.
- (6). Distance between two controllers can be up to 100 meters.

4. Controller Configuration

(1). Connect to master controller, software is LED Build.



The blue line is crossover cable(one side is T568A, the other side is T568B), the following images show the color sequence.



LED Build Software(download please contact us)



Support dozens of driver chips.

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Connect	ion mode													í í
Single	e Row			1				Lighti	ina se	ttina		×		
○ Singl	e Col			-										
ORetur	re Row			Bright	100 🔽	control sig	nals: T	L	~					
ORetur	m Col			ClockR	ate: 1.00 🗸	MHz GrayL	evel: 16	384 🗸	Po	rt Number: 4		Gamma: 2.2		
O Shor	distance			LightTy	e: RGB	✓ Add		IC	Type:	HasEnable	-	ColorReverse		
O Short	dist row									HasEnable				
Four line	with a slave	~		✓No.	LightType	IC	Clock	Bright	Gray	RGB Parallel	Gar	m		
r our mic	inter a oraro			1	RGB	HasEnable	1.00	100	16384	LPD8806	2	2		
Module:	Single pixel	~								LPD1886				
LineLimitF	Pixels: 50	¥								LPD6812				
Min	Count									LPD1882				
	Count	- 11								WS2801				
2	50									WS2803				
2	50									DMX512 HDMX				
3	50									TM1812	TM1803	3,TM1804,TM1809,UCS1903	UCS1909,UCS1912,WS2811,WS2812,INK1003,LX10	03
6	0									TM1829				
6	0									TLS3001				
7	0									TLS3002				
8	0									DM413				
9	0									LPD1883				
10	0									P9813				
11	0			Contro	ller type: T	A/TB/TC/SA	¥	TotalPixel	Num:	SM16716	100	5.0 Aug		
12	0									BS0825		Exit Apply		
13	0			-						BS0901				
	~	~								LD15xx				
Master po	rt All: 4									MY9221				

Built-in dozens of effects and support importing various formats of video files.

► Left Moving Pict Symmetry	Н		Open		×
Ng Interleaving Up() Diffusing Dow Rotation Gradual changing Dropping □ Re PictureAndText Toy bricks Make Sound wave Jalousie Roma V shape Text Step Other	Look in: 最近访问的位置 桌面 库 这名电脑 《	県面 ○ OneDrive ○ 家庭组 ○ Kevin Qi ○ 这台电脑 庫	v 🎯 🏂 📂 🗄] ↓	Width:
	网络File	name:	~	Open	HighSpeedImportSWF Output Controller Data

(2). Connect to computer, software is LED Studio or Madrix.



Distribute an IP address for H802RA

eneral	
You can get IP settings assigned this capability. Otherwise, you r for the appropriate IP settings.	d automatically if your network supports need to ask your network administrator
Obtain an IP address auto	matically
• Use the following IP addres	SS:
IP address:	192.168.6.5
Subnet mask:	255.255.255.0
Default gateway:	· · · ·
Obtain DNS server address	s automatically
Use the following DNS serv	er addresses:
Preferred DNS server:	
Alternate DNS server:	
Validate settings upon exi	t Advanced

Setting sculpt



Slave setting

ClockRa .ightTyp	tte: 0.8 → e: RGB	MHz Grayl	evel: 4	096 - Test II	Port C Type: (Number:	8 -	Ga	mma: 4	2.2 verse
<mark>⊠N</mark> o.	LightType	ControlType	Clock	Bright	Gray	Reverse	Ports	Red	Gre	Blu
1	RGB	HasEnable	1.00	100	16384	No	8	100	100	10
										1
										1

Distribute controller for the specified IP address.

IP	SlaveNO.	SlaveN	
92.168.6.255	1-1	1 🥁	
92.168.1.255		0	-
Movello		afresh	
MoveUp	oveDown	efresh	

Effects make



5. Other Functions

Connect H802RA to computer, open LED Studio, click "setting" -- "H802RA setting", the following dialog box jumps out.

H802RA Setting	×
MAC: 72 - 67 - 88 - 64 - 24 - 59	
IP: X . X . X 18 (The first three bytes is adaptive)	
Clock: 250K	
⊙ Art-Net Number of controllers: 3	
ODMX encode, number of channels per chip 3	
O Amplifier\Repeater OK	
Cancel	

Normally, you don't need to set the MAC and IP, these numbers will appear after an IP address is distributed to H802RA.

The "Clock" has 250K, 500K, 750K three options, it only works when you are using Madrix.

"Art-Net Number of controllers" is used to set how many H802RA you want to connect to PC when using Madrix.

"DMX encode, number of channels per chip" is used to address for the TM or UCS DMX512 driver chips. Choose the channel number of each chip and then click "OK", you can address maximum 1024 pixels(1 pixel includes 3 or 4 channels) one time. Connection method: Connect GND, D-, D+, PI(addressing line) to GND, D-, D+, CLK on controller, then click "OK", after a few seconds, lights will change from white to green. Re-power the lights, address will be updated.

Choose "Amplifier/Repeater" and click "OK", H802RA will be configured as an amplifier or repeater.

6. Madrix setup

(1). Connect H802RA to computer, distribute an IP address for it.

(2). Open LED Studio. Click "Setting" -- "H802RA setting", choose "Art-Net Number of controllers" and enter a number, for example 3, then click "OK".

(3). Open Madrix, press "F4", pops up "Device Manager" window, choose the "Art-Net" label, click "Find Auto" to find Art-Net device, check the "Enable" option, then click "Apply".

🔰 Device Manager					×
DMX Devices DVI Devices	DMX Input	Art-Net MIDI	Audio Input Visualizer		
Device Name	Count / Net	Universe	IP Address / MAC Address	En En a	ble
ArtNet Remote	1 4	1	192.168.1.111 / 18:CF:5E:7B:76:9B (Receive Only From 192.168.1.111)	Synd	
H802RA	4	9,10,11,12	192.168.6.19 / 48:43:58:53:18:5D (Send Only To 192.168.6.19)	1	14
H802RA	4	5, 6, 7, 8	192.168.6.19 / 48:43:58:53:18:5D (Send Only To 192.168.6.19)		
H802RA	4	1, 2, 3, 4	192.168.6.19 / 48:43:58:53:18:5D (Send Only To 192.168.6.19)		
			HTTP Hostname : kevin-pc Count :	+ -	
			OK Apply Canc	el H	lelp

Click "DMX Devices" label, choose all universes of H802RA, check the "Enable" option on the right side and click "Apply" to enable DMX output.

Nata	Device Name	Universe		me (FDS	Frames	
On	ArtNet Remote (MADRIX) Port:0	ONITOISC	IN	30/33.3		H802RA (192.168.6.19) Bindld×1
On	H802RA (192.168.6.19) Bindldx1 Port:0	5	OUT	30 / 33.3	Optimized	Port:0
On	H802RA (192.168.6.19) Bindldx1 Port:1	6	OUT	30/33.3	Optimized	H802RA
On	H802RA (192.168.6.19) Bindldx1 Port:2	7	OUT	30 / 33.3	Optimized	5
On	H802RA (192.168.6.19) Bindldx1 Port:3	8	OUT	30/33.3	Optimized	Truss-Link OP Artistic Licence
On	H802RA (192.168.6.19) Bindldx2 Port:0	9	OUT	30/33.3	Optimized	
On	H802RA (192.168.6.19) Bindldx2 Port:1	10	OUT	30/33.3	Optimized	Settings
On	H802RA (192.168.6.19) Bindldx2 Port:2	11	OUT	30/33.3	Optimized	Enable Output
On	H802RA (192.168.6.19) Bindldx2 Port:3	12	OUT	30/33.3	Optimized	input 🗖
On	H802RA (192.168.6.19) Port:0	1	OUT	30/33.3	Optimized	Universe : 5 🚍
On	H802RA (192.168.6.19) Port:1	2	OUT	30/33.3	Optimized	
On	H802RA (192.168.6.19) Port:2	3	OUT	30/33.3	Optimized	Frame Time (ms) : 30 🚍
On	H802RA (192.168.6.19) Port:3	4	OUT	30/33.3	Optimized	FDC 23.3

7. Ports definition

GND CLK DAT D- D+ For double-line chips, connect GND, CLK, DAT For single-line chips, connect GND, DAT

For DMX512, connect GND, D-, D+, addressing line to CLK For TM1926, TM1913, TM1914, TM1814, connect GND, D+

8. Specifications

Input Voltage	AC220V
Consumption	1.3W
Drive pixels number	4096
Weight	1Kg
Working Temperature	-40C°85C°
Dimension	L163 x W155 x H54
Carton Size	L205 x W168 x H69
PCB Size	L119 x W47 x H21