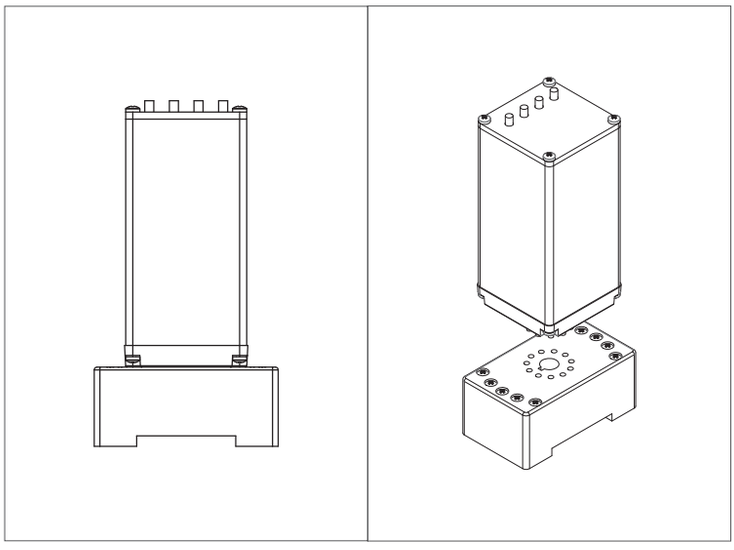
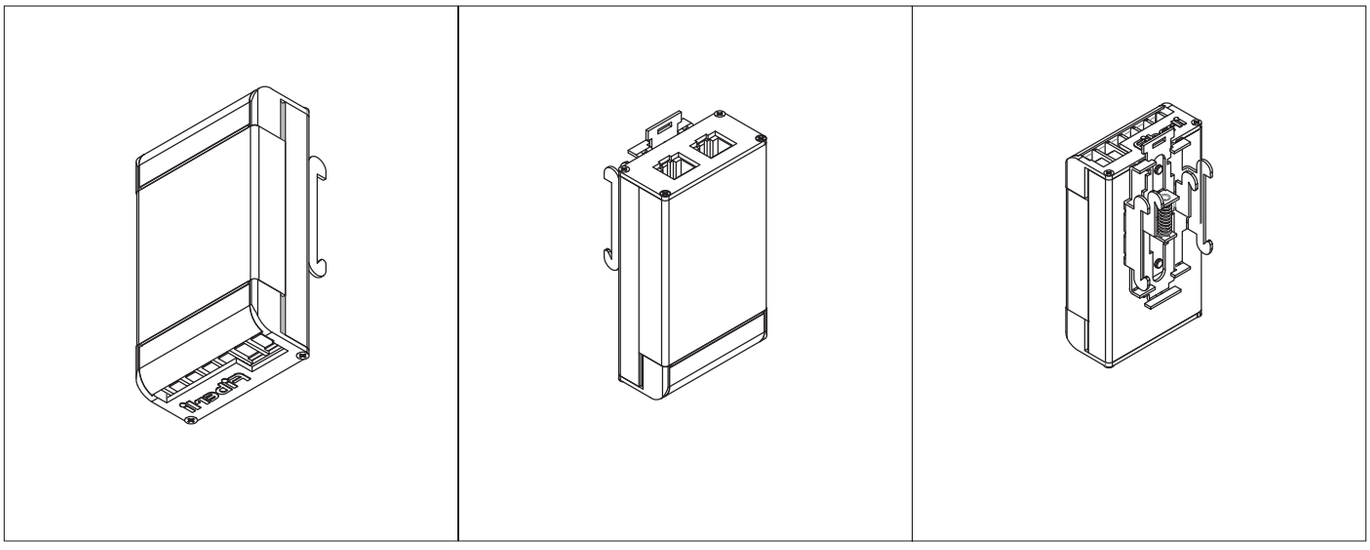


Electronic Control Systems

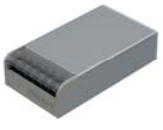
DMX, PWM and modulators are used for dim control, color control and on-off settings of the LED systems and they are called " Electronic Control Systems". On the project, the control units have to be designed and be determined compatible to each other, according to requirements of the project design.

Electronic Control Systems



Electronic - Electronic Systems

R Type



M1J Type

M2 Type

M2J Type

D Type

L Type

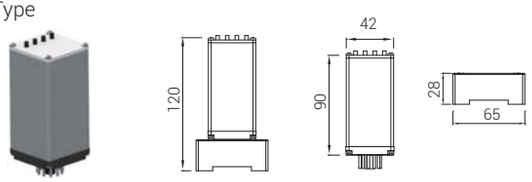
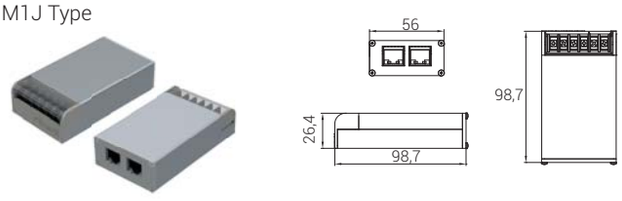
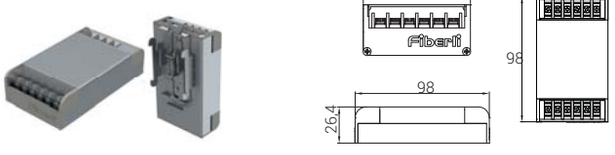
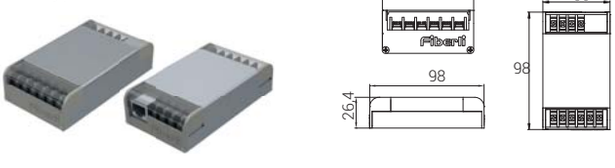
UK Type

DE Type

Wi-fi Bridge

Madrix

Box Types

	Explanation
R Type 	11 pinned socket compatible with mounting to internal panel ray.
M1J Type 	One side screw terminal and other side RJ45 socket compatible to use in or out of the panel.
M2 Type 	Both sides screwed terminal. In or out of the panel
M2J Type 	2 sides screw terminal and 1 side RJ45 socket, in or out of the panel
D Type 	Wall mounting, screwed terminal
L Type 	Designed with a thin long structure with cable inlets and outlets in order to be used inside the luminaire and on line, thus featuring the same mounting options with LEDLine luminaires.
UK Type 	Its Fibered Remote controls provides you with the opportunity for wireless control of lighting systems up to 30 Meters of distance. Depending on the remote control type, this type enables you to control the setting of the desired color and light intensity, powering o and off and various lighting animations with the 2.4 GHz RF modulation by means of the touch-sensitive area and function keys on the handle. It offers the controlling of many receiver control units or the flexibility to classify the remote controls with a single remote control. The 2.4 GHz receiver units are compatible with Fibered Wi-Fi Bridge control and enable control also with Smart Phones via the network established with the matching with the Bridge.

Box Types

	Explanation
DE Type 	Touchscreen, wall mounting, modulator and dimmer.

41000106 - Wi-Fi Bridge

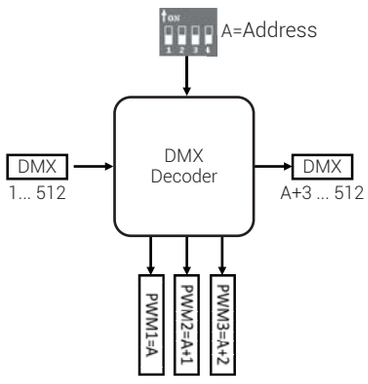
It is the bridge system, which also enables the control of fibered remote control products via Wi-Fi. It also offers the opportunity to control the lighting systems with smart telephones and tablets via the internet by means of IOS-Android applications.

Box Types

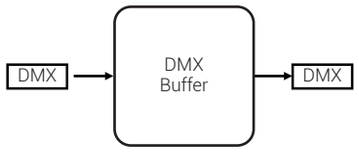
Product code	Description	Case	Interface	Input Control-Data signal	Output Data Signal	Output Number of the channels	Output Power Signal	Feed
33600239	DMX Decoder	R	DIP-Switch	DMX	DMX	3	PWM 3x6A	5-24V DC
33600285	DMX Decoder	R	DIP-Switch	DMX	DMX	3	INV-PWM 3x6A	5-24V DC
33600456	DMX Decoder	M1J	DIP-Switch	2 x DMX/PDMX	PDMX	3	PWM 3x5A	7-24V DC
33600317	DMX Decoder	M1J	DIP-Switch	2 x DMX/PDMX	PDMX	4	PWM 4x5A	7-24V DC
*	DMX Decoder	M2	DIP-Switch	DMX/PDMX	PDMX	3	INV-PWM 3x5A	7-24V DC
*	DMX Decoder	M2	DIP-Switch	DMX/PDMX	PDMX	4	INV-PWM 4x5A	7-24V DC
*	DMX Decoder	M2	DIP-Switch	DMX/PDMX	PDMX	3	PWM 3x5A	7-24V DC
33600424	DMX Decoder	M2	DIP-Switch	DMX/PDMX	PDMX	4	PWM 4x5A	7-24V DC
33600401	DMX Decoder	M2	DIP-Switch	DMX/PDMX	PDMX	3	INV-PWM 3x5A	7-24V DC
*	DMX Decoder	M2	DIP-Switch	DMX/PDMX	PDMX	4	INV-PWM 4x5A	7-24V DC
33600265	DMX Decoder	L	DIP-Switch	DMX	DMX	3	PWM 3x2A	7-24V DC
33600189	DMX Buffer	R	-	DMX	DMX	-	-	7-24V DC
33600307	DMX Buffer	M2	-	DMX/PDMX	PDMX	-	-	7-24V DC
33600389	DMX Buffer	L	-	DMX	DMX	-	-	7-24V DC
33600240	PWM Switch	R	-	PWM	-	3	PWM 3x6A	5-24V DC
33600279	PWM Switch	R	-	PWM	-	3	INV-PWM 3x6A	5-24V DC
33600369	PWM Switch	M2	-	PWM	-	4	PWM 4x5A	5-24V DC
33600391	PWM Switch	M2	-	PWM	-	4	INV-PWM 4x5A	5-24V DC
33600366	PWM Dimmer	R	DIP-Switch	0-10V/1-10V	-	1	PWM/INV-PWM 3x5A	5-24V DC
33600277	PWM Dimmer	M2J	-	4 Button	-	4	PWM/INV-PWM 4x2A	7-24V DC
33600365	PWM Dimmer	D	POT	-	-	1	PWM/INV-PWM 1x5A	7-24V DC
33600461	PWM Dimmer	L	1 Button	-	-	1	PWM 1x5A	7-24V DC
*	PWM Dimmer	L	1 Button	-	-	1	INV-PWM 1x5A	7-24V DC
33600190	PWM Dimmer	85x45x25	R.Control 1 Color	RF 2,4 GHz	-	1	PWM 2x6A	12-24V DC
33600191	PWM Dimmer	85x45x25	R.Control 2 Color	RF 2,4 GHz		2	PWM 2x6A	12-24V DC
41000198	PWM Dimmer	85x45x25	R.Control 4 Region	RF 2,4 GHz	-	2	PWM 2x6A	12-24V DC
33600171	PWM Modulator	R	4 Button	-	-	3	PWM 3x5A	5-24V DC
41000199	PWM Modulator	85x45x25	R.Control RGBW	RF 2,4 GHz	-	4	PWM 4x?A	12-24V DC
33600178	PWM Modulator	85x65x25	R.Control RGB	RF 2,4 GHz	-	3	PWM 3x6A	12-24V DC

* Unready

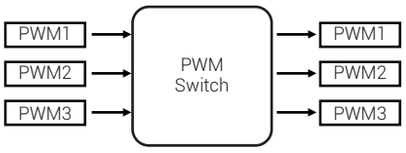
Control Devices



Product Description	Explanation	Place of use
DMX Decoder Converts the universal standard DMX512/1990 signal into analog signal. Dims the light for mono color products.	1-3 channel (RGB)/ + channel (RGBW) PWM/INV-PWM output. 2-Address setting with the DIP-SWITCH. It transmits the set address to the PWM /INV-PWM output and transmits the addresses that are not set to the DMX output	To control PWM fixtures with DMX signal. To set the input addresses of DMX fixtures.

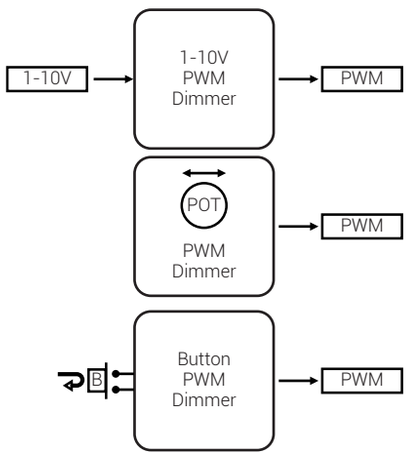


Product Description	Explanation	Place of use
DMX Buffer Repeats DMX Signal	1-Has DMX input and DMX output 2-Renews voltage of DMX input signal and transmits it to the output.	To transmit DMX signal for long distance. Repeats DMX signal

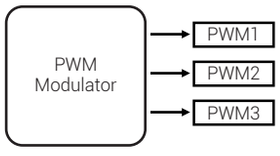


Product Description	Explanation	Place of use
PWM Switch Repeats PWM Signal	1-3 Channels (RGB) / 4 Channels (RGBW) of PWM input. 3 channels (RGB) PWM/INV-PWM output. Isolates all outputs and inputs from each other.	Increasing PWM signal current. Increasing and decreasing PWM signal voltage. Providing electrical isolation

Control Devices



Product Description	Explanation	Place of use
PWM Dimmer Generates PWM signal Dims the light on monocolor fixtures	1-10 V Analog or POT or button output or remote line. 2- 10 V ANALOG: Generates voltage values between 1V and 10V. Generates PWM signals variaty duty from %0 up to%100 3-POT: Generates PWM signals variaty duty from %0 up to%100 by rotating left and right. Button: Generates PWM signals variaty duty from %0 up to %100 by holding the button down. Once released and hold the button down again the direction changes. If the button released and	Regulating and dimming the light for mono color fixtures. Regulating the light for CW and WW color fixtures.



Product Description	Explanation	Place of use
DMX Modulator Generates PWM signal. Provides color animation for 3-color (RGB) and 4-color (RGBW) fixtures.	1-Set with button and remote control. PWM output Button: Sets animation speed or changes animation by pressig the button. Remote Controller: Sets animation speed or changes animation by the touch screen remote controller.	Animating for 3-color (RGB) / 4-color (RGB).

1. FBR 705SB

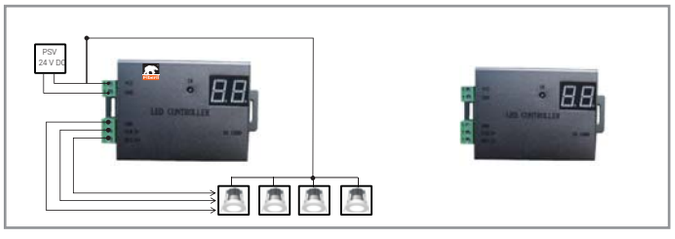
Single port output. Can control DMX 170 pixels ,Cell 4096 pixels. Up to 4 GB animation can be uploaded on a SD Card. Can be controlled by a remote controller. Ability to play only selected animation or all animations in sequence. Adjustable brightness and speed. Easy animation coding. Inpute voltage is 5V. It can operate monocolor by mixing desired colors.

***It is suggested to use this product with a Cell Protocole. 5V PSV is necessary if DMX is going to be used.**

2. FBR 705SB-12V

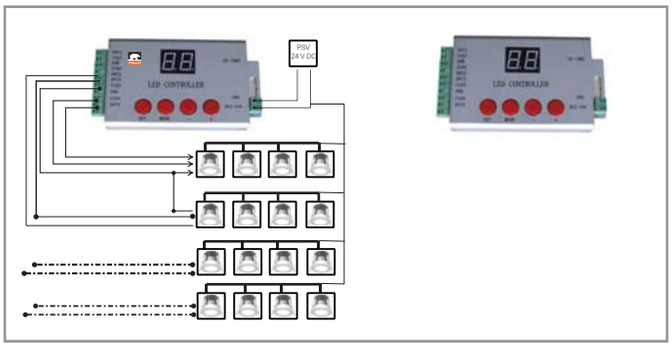
Single port output.Can control DMX 170 pixels ,Cell 4096 pixels. Up to 4 GB animation can be uploaded on a SD Card. Can be controlled by a remote controller. Ability to play only selected animation or all animations in sequence. It can operate monocolor by mixing desired colors. Adjustable brightness and speed. Easy animation coding. Input voltage is 6-24V.

***It is suggested to use this product with a DMX Protocole. 12V or 24V PSV is necessary in case of using with a Cell.**



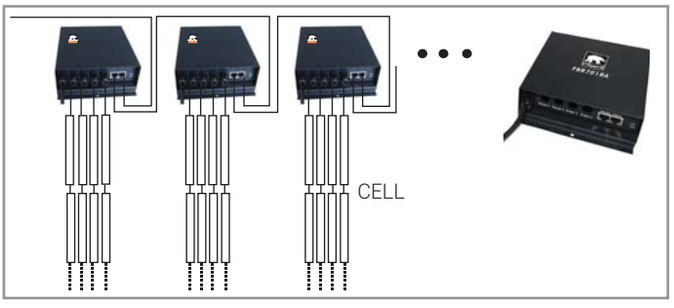
3. FBR 701SE

4 port outputs. Can control DMX 4x 170 pixels, Cell 4x20148=8192 pixels. Up to 4 GB animation can be uploaded on a SD Card. Ability to play only selected animation or all animations in sequence. Adjustable brightness and speed. Easy animation coding.Button avaliable.



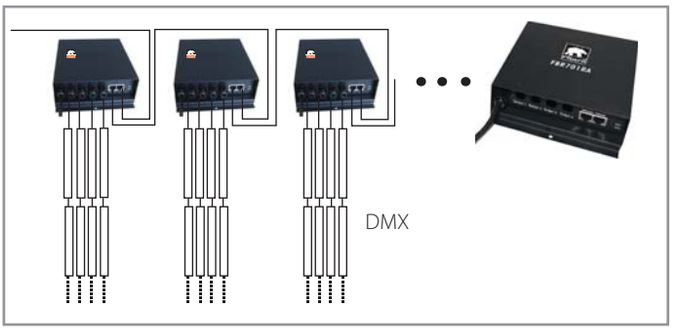
4. FBR 701RA

4 port outputs.Suggested for Cell products. It is a slave (can not operate by itself) control device which can be controlled by PC and Master controllers and can provide Cell 3412 piksel outputs and DMX 4x170 outputs in total.(With this device, DMX Decoder and DMZ buffer are needed for DMX Control) If PC control is desired, PC can control 100000 pixels. A maximum of 255 FBR 701RA can be connected one another in series. The distance between every slave controller can be max. 100m. Can also be controlled by master controllers such as FBR 702TB, FBR702TC, FBR 703TC..etc.



5. FBR 701RA - DMX

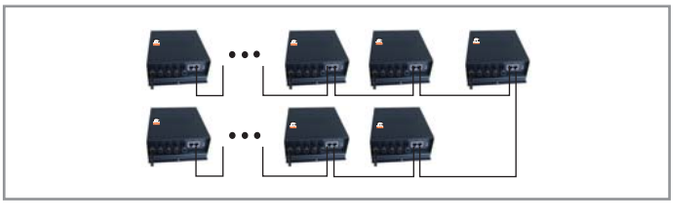
4 port outputs. Specifically made for DMX products. Includes decoder. Can provide Cell 3412 piksel outputs and DMX 4x170 outputs in total. (no need for a DMX Decoder or a DMX Buffer) Cell products. It is a slave (can not operate by itself) control device which can be controlled by PC and Master controllers. 100000 pixel can be controlled by PC. The distance between every slave controller can be max. 100m. Can also be controlled by master controllers such as FBR 702TB, FBR702TC, FBR 703TC..etc.



FRB Control Devices

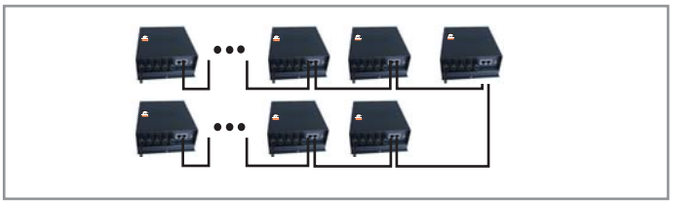
6. FBR 702TB

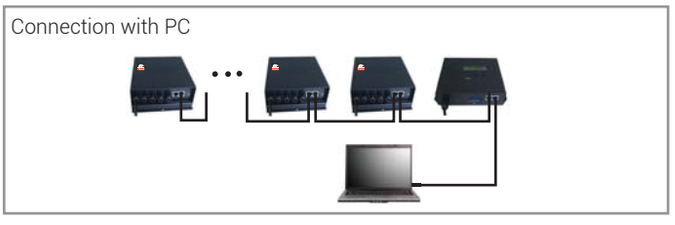
Two ethernet protocole outputs. Can provide Cell 30.720 pixel and DMX 30.720 pixel outputs that can operate offline by a programmable SD card. It is a master control device that max. 48 slave controller can be connected to it. Up to 4 GB animation can be uploaded on a SD Card. Ability to play only selected animation or all animations in sequence. Adjustable brightness and speed.Buttons are avaliable. Ethernet cable length between main controller and slave controller can be 100m where as the fiberoptic cable length can be 2km.

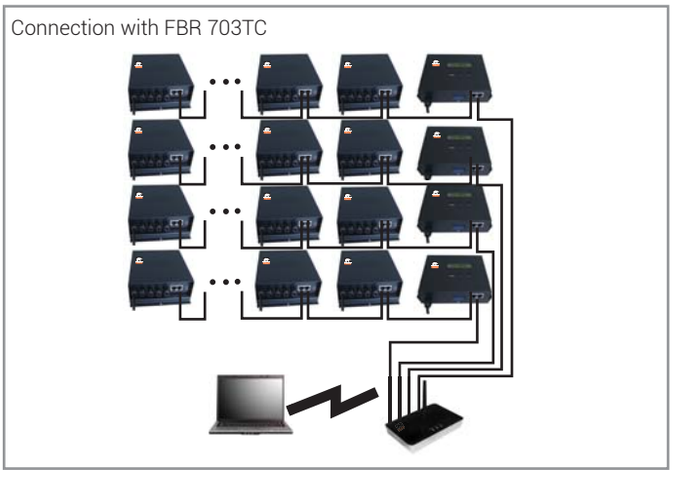


7. FBR 703TC

Two ethernet protocole outputs. Can provide Cell 122.880 pixel and DMX 170.000 pixel outputs that can operate online by a programmable SD card. It is a master control device that max. 255 slave controller can be connected to it. Up to 4 GB animation can be uploaded on a SD Card. Ability to play only selected animation or all animations in sequence. Adjustable brightness and speed. Easy animation coding. Ethernet cable length between main controller and slave controller can be 100 m where as the fiberoptic cable length can be 2 km. Controller starts running automatically with a SD card as soon as the ethernet cable is pulled out.







*These are the control devices produced per order according to project requirements.

8. FBR 704SA

4 port outputs. It can be programmed as 5 different settings; single, weekly, historical order, monthly and calender based. Can provide max. DMX 4096 pixel output. Up to 64 GB animation can be uploaded on a SD Card (SDHC).Buttons are available. Ability to play only selected animation or all animations in sequence. Easy animation coding. Adjustable brightness and speed.

9. FBR 701SD*

8 port outputs. DMX 8 x 170=13600 pixel output. It is a master control device. Up to 2 GB animation can be uploaded on a SD Card. Buttons are available.

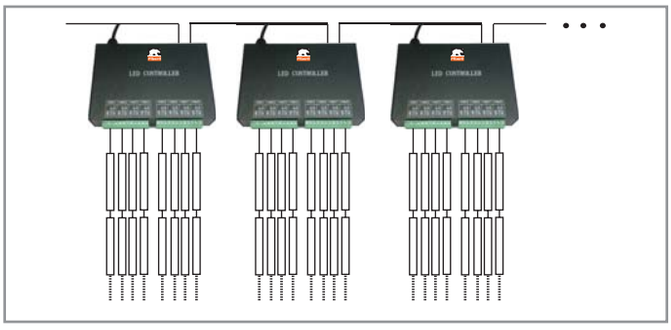
PURL:	EN	LAT	DAT	CLK	EN	LAT	DAT	CLK	EN	LAT	DAT	CLK	EN	LAT	DAT	CLK	EN	LAT	DAT	CLK
PWM:	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK	DAT	CLK
DMX:	D+	D-	D+	D-	D+	D-	D+	D-	D+	D-	D+	D-	D+	D-	D+	D-	D+	D-	D+	D-
	PORT 1		PORT 1		PORT 1		PORT 1		PORT 1		PORT 1		PORT 1		PORT 1		PORT 1		PORT 1	

10. FBR 703SC*

2 port outputs. Cell 2 x 1024=2048 pixel output. Sound and rhythm sensitive master control device with a built-in microphone. Adjustable sensitivity, play mode and speed with a dip switcher on the device

11. FBR 701 RC

8 port outputs.Suggested to use DMX and Cell products. Can provide Cell 8192 piksel outputs and DMX 8x170 outputs in total. In order to use it, every single port output has to be set as 1,2,4,8. Slave (can not operate by itself) control device controlled by a PC or a master control device. If controlled by a PC, 100000 pixels can be supported. . A maximum of 255 FBR 701RA can be connected one another in series. The distance between each slave controller can be max. 100m. Can also be controlled by master controllers such as FBR 702TB, FBR702TC, FBR 703TC..etc.




ST:41000198

RF 4 channel Warm- Cold White UK

This controller controls white color temp. and light intensity .
Every control unit controls only one spot.

Input Voltage	: 12V-24V DC
Output Control	: 2 circuits (WW-CW)
Controlling current	: 6A/circuit
Connection method	: Shared anode
Dimesion	: 85x45x22mm
Remote controlled distance	: 30 meter (outdoor)
Wifi Bridge	


ST:41000198

RF 4 channel Warm- Cold White UK (button)

This controller controls white color temp. and light intensity.
Every control unit controls only one spot.

Input Voltage	: 12V-24V DC
Output Control	: 2 circuits (WW-CW)
Controlling current	: 6A/circuit
Connection method	: Shared anode
Dimesion	: 85x45x22mm
Remote controlled distance	: 30 meter (outdoor)
Wifi Bridge	


ST:41000199

RGBW 4 Channel Remote Control

Input Voltage	: 12V-24V DC
Output Control	: RGB 3 channel/ RGBW 4 channels
Controlling current	: 6A/circuit
Connection method	: Shared anode
Dimesion	: 120x52x20mm
Remote controlled distance	: 30 meter (outdoor)
Programmes	: 9 variation


ST:33600191

RF Color Temperature Remote Control

Dimmer, 1 Brightness setting: %100-1%,20 class brightness settings
2. color temperature options : 11 classes of color options
Wireless, intuitive ,touch screen remote control

Effective control distance	: Approximately 30 m
Input/Output voltage	: 12V-24V DC
Total output current	: 12A
Output power	: 12V<144W,24V<288W
Wifi Bridge	


ST:33600190

RF LED Wireless Dimmer Remote Control

Dimmer,
100%-1%,50 class settings
Wireless, intuitive ,touch screen remote control

Effective control distance	: Approximately 30 m
Input/Output voltage	: 12V-24V DC
Total output current	: 6A
Output power	: 12V<72W,24V<144W
Wifi Bridge	

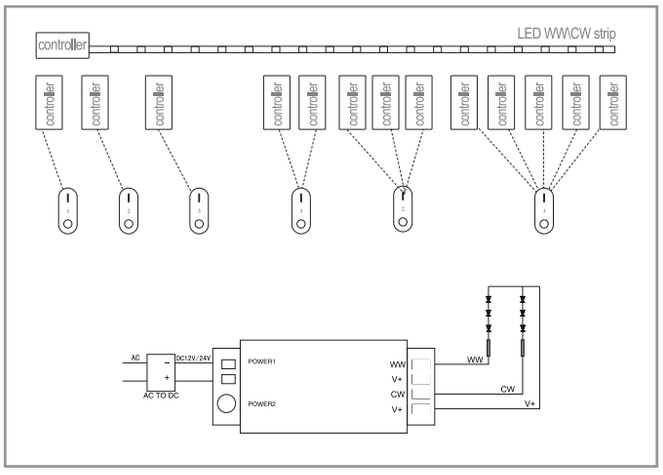

ST:33600178

2.4 G Touchscreen LED RGB Remote Controller

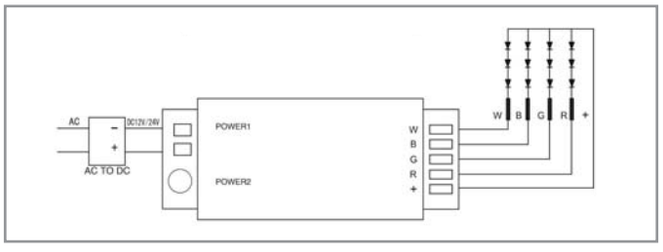
RF 2.4 G
Dimmer
Wireless, intuitive ,touch screen remote control

Effective control distance	: Approximately 30 m
Input/Output voltage	: 12V-24V DC
Total output current	: 18A
Output power	: 12V<216W, 24V<432W
16 million color changes	
Wifi Bridge	

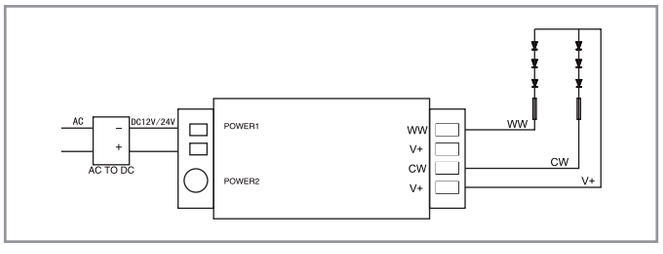
Electronic Systems



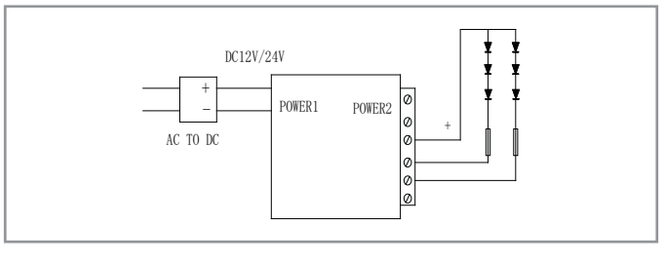
RF 4 Channel
Remote control of warm and cold.



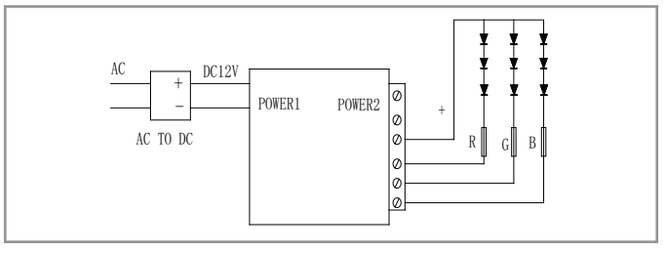
RGBW 4 Channel Remote Control
Grouping and connection Scheme



RF color temperature remote control
Connection Scheme



RF LED wireless dimmer remote control
Connection Scheme

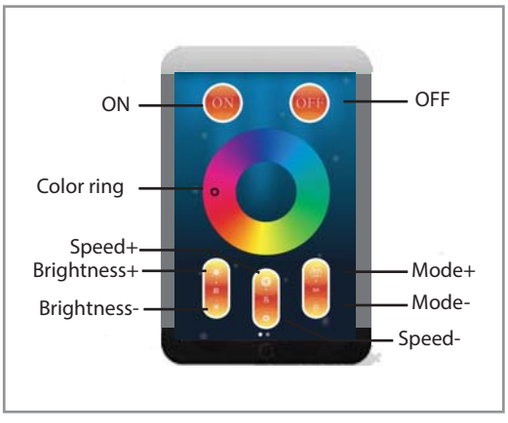


Touchscreen LED RGB remote controller
Connection Scheme

ST:41000106

WIFI BRIDGE
Connected by USB port or power adaptor
DC5V 500mA
Power: 2.3 Watts
It can be included in the home and work network. It is a bridge system that allows remote control products to be controlled over wifi system at the same time.It also allows to control with smart phones, tablets and internet with IOS-Android applications. The scheme for connecting with smart phones and lighting systems are below;

Iphone/ Ipad smart phone APP Android 2.2/IOS 5.0 üzeri



Family Mall, Iraq

What is Madrix?

MADRIX is the LED lighting controller. It is a feature-rich and intuitive Windows software. The MADRIX software can produce a complete LED light show from a normal computer or laptop. It can drive tens of thousands of LEDs without problems. This powerful controller will not only allow you to control nearly any 2D LED display in every possible way, but real 3D LED applications as well. It can process any live audio signal and create stunning real-time lighting visuals. MADRIX software is a highly productive LED lighting control suite, pixel mapper, and voxel mapper. Cutting-edge technologies provide you with all the tools you need for modern LED control.

Madrix software;

MADRIX KEY ultimate: Activates output for up to 256 x 512 DMX channels (256 DMX universes / 131,072 DMX channels) and up to 1,310,720 DVI pixels (for example, 1280 x 1024). 3 real-time previews to show your visual effects in advance (incl. 2D/3D, zoom, rotation).2 DVI outputs.Controls up to 4 color channels per pixel/voxel (e.g. 1-channel, 2-channel, RGB, RGBW fixtures).

MADRIX KEY professional: Activates output for up to 64 x 512 DMX channels (64 DMX universes / 32,768 DMX channels) and up to 786,432 DVI pixels (for example, 1024 x 768). Controls up to 4 color channels per pixel/voxel (e.g. 1-channel, 2-channel, RGB, RGBW fixtures)

MADRIX KEY basic: Activates output for up to 16 x 512 DMX channels (16 DMX universes / 8192 DMX channels).Variety of options to combine visuals and graphical elements (layers, mix modes, filters, etc.).Controls up to 4 color channels per pixel/voxel (e.g. 1-channel, 2-channel, RGB, RGBW fixtures).-Freely configurable Cue List for automated playback of a show (incl. time, date, duration, etc.).Supports Time Code from Art-Net, MIDI, SMPTE, and system time.Remote control available via DMX-IN, Art-Net Remote, Streaming ACN, MIDI-IN, HTTP (internet browser), CITP, MA-Net

MADRIX KEY entry: Includes 1 license for the software MADRIX. Activates output for up to 4 x 512 DMX channels (4 DMX universes / 2048 DMX channels). Already includes a multitude of stock effects that are fully customizable (in speed, color, shape, direction, size, movement, position, brightness, etc.) Supports media server features also: Conveniently load and play back images, pictures, and videos as well as live signal capturing, screen capturing, scrolling text (ticker), and more. Controls up to 4 color channels per pixel/voxel (e.g. 1-channel, 2-channel, RGB, RGBW fixtures).Includes various other tools and features (DMX Fader Tool, DMX Watcher, Matrix Generator, Patch Editor, Touch Screen window, backup system, scripting, mapping, scaling, etc.)

MADRIX KEY start: The software generates unique effects, visuals, and animations live and in real time. A normal PC/laptop can be used for professional LED control. Activates output for up to 1 x 512 DMX channels (1 DMX universe / 512 DMX channels).Allows mapping in 2D (pixel mapping) as well as real, spatial 3D (voxel mapping).Controls up to 4 color channels per pixel/voxel (e.g. 1-channel, 2-channel, RGB, RGBW fixtures)

Electronic Systems

MADRIX Hardware;

MADRIX LUNA 4 / 8 / 16: MADRIX LUNA is a Art-Net node or DMX512 USB interface. It distributes DMX512 data over long or short distances using Ethernet network or USB. 4, 8, or 16 XLR ports (5-pin, female) distribute the equal number of DMX universes per unit. 1 XLR port (5-pin, male) can be used for DMX input.

MADRIX NEBULA: MADRIX NEBULA directly connects to your LED pixels. This advanced SPI decoder receives control data over USB or Art-Net over Ethernet network. Directly connect to a wide range of supported LEDs via two 4-pin screw terminals. A signal frequency of up to 24 MHz is available. Supply power over USB (1x USB port) or 5 V to 24 V over a 2-pin screw terminal. Each device drives up to 1,360 RGB pixels.

MADRIX STELLA: MADRIX STELLA is a 2-port Art-Net node or DMX512 USB interface for solid-state projects. Directly connect DMX512 to the two 3-pin screw terminals to distribute 2 DMX universes per unit as input and/or output, eliminating the need for XLR connectors as a result.

MADRIX PLEXUS: MADRIX PLEXUS controls up to 2 universes via DMX512 or Art-Net as a versatile stand-alone interface or live controller. It is the first and only interface to offer stand-alone playback of MADRIX light shows and effects. Fully control 1024 DMX channels via MADRIX Software and use 2x DMX-OUT, 2x DMX-IN, 1x DMX-OUT and 1x DMX-IN, or Art-Net. The USB or the Ethernet connection can be used for live mode.

MADRIX NEO: MADRIX NEO hardware allows you to send or receive data via the MADRIX Software using 512 DMX channels. A male to male 3-pin or 5-pin XLR Gender Changer is required for DMX-IN. The USB 2.0 standard is fully supported to allow for a higher maximum speed of 480 MBit/s. Up to 60 NEOs can be connected to a USB host controller without having any frame rate problems. (60 DMX512 interfaces amount to 30,720 DMX channels.)

MADRIX USB contact closure | MADRIX USB temperature | MADRIX USB light sensor | MADRIX USB SMPTE