

Version 1.02
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User Manual

CrossGate PRO

CGP-X-2DE2B, CGP-X-4DE4B

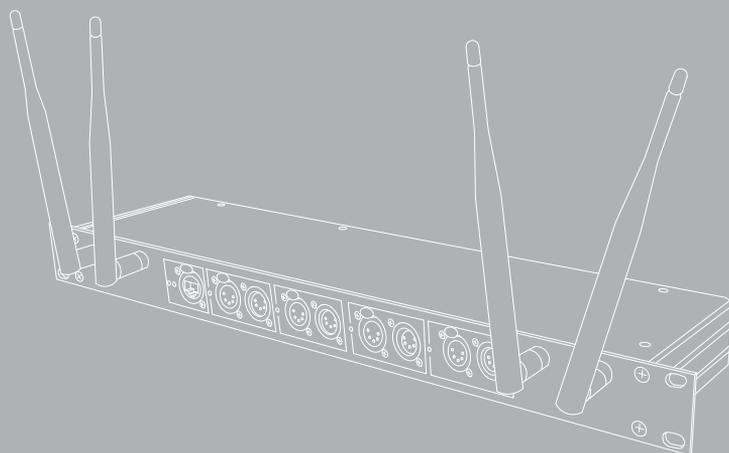


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Appearance



Pic.1 Main interfaces and indicators

1	Bluetooth antenna	5	DMX LED indicators
2	Ethernet LED indicators	6	DMX output
3	Ethernet port	7	DMX input
4	Rack mount case		

Specifications

BeDMX ports	2 or 4
DMX ports	2 or 4
Connectors	4 or 8 XLR (5 pins, 3 pins)
Ethernet port	10/100 Base-TX
Ethernet connectors	RJ-45/ EtherCon
Supported protocols	ArtNet I, II, III/ sACN, DMX512, RDM
DMX data refresh rate	44 Hz
Transmission range	100 m (default antenna)
Communication protocol	Bluetooth 2.0
RF band	2,4 GHz
Setup	Web-interface
Power supply	~90-250 VAC, 50/60 Hz
Input Power (max)	5 W
Mains Fuse	0,5 A
Operating Temperature	0...+60°C
IP Rating	IP20
Dimensions, mm	482(D) x 44(H) x 110(W)

Safe operation



WARNING!

The device uses hazardous voltage AC 230 V

In installation, operation, preventive maintenance and repairs of the device, the requirements of the safety rules must be followed.

To ensure safe and reliable operation of the devices, please observe the following requirements:

- Use the device only for its intended purpose;
- Do not use devices that shows signs of malfunctioning;
- Avoid strong physical impacts on the device;
- Protect devices and cables from contact with moisture or other corrosive liquids;
- Prevent any improper disconnection of the Ethernet cable from the device being disconnected.

Whenever a fault is detected in the device, please contact the manufacturer.

General information

CrossGate PRO devices designed for combining wireless and Ethernet transmission of DMX512/ArtNet/sACN data used in intellectual lighting control systems.

Key features:

- Easy installation and programming
- Profile storage on hard drive
- Master IP (never gets lost)
- Simple web interface
- Galvanic isolation of all ports
- Merging modes: HTP, LTP, AUTO, PRIORITY
- Configurable parameters of DMX signal
- Configurable DMX port direction

Merging

Variable merging options: **HTP** (highest takes precedence), **LTP** (latest takes precedence), **AUTO** (last modified takes precedence – intelligent merging mode that provides availability to manage installation from two consoles simultaneously), **OVERLAY** (merges custom slots from two ArtNet/sACN streams, fully customized through web interface), **PRIORITY** (for sACN streams with priority tag, console with the highest priority for a given Universe will be in charge). Merged data may be outputted to physical DMX ports, and also may be looped back to Ethernet as new ArtNet/sACN stream.

Connection types

Ethernet connection

Device is connected to the network via RJ-45 (EtherCON). Each device has unique IP and MAC addresses. Device's IP address, subnet mask, and other network parameters can be changed, but even in this case, the device is still available on the original IP address (2.x.x.x) for ping and http requests. Even in case of loss of the new IP address, the device can be accessed on the network using the original IP address through the web-interface.

DMX connections

XLR 5-pin connectors are used to input/output DMX signals to/from the device. If necessary, the device can be equipped with XLR three-pin connectors. DMX port has 2 connectors – one M connector and one F connector, which allow the port to pass-through the DMX bus. In some cases the device can be equipped with a single M-type connector for each port.

BeDMX connection

There are 1 or 2 coaxial RF connectors RP-SMA type for antenna connection, capable of working both on reception and transmission. Connection of BeDMX-ports with external master or slave devices is performed by Bluetooth 2.0.

Installation

Before mounting and power up, it is necessary to verify protective earthing and cable connections.

1. Ensure the device has no damage due to transportation.
2. Install device into 19" rack and fix it using 4 screws (not included in package).
3. Attach supplied antennas and connect necessary DMX cables.
4. Connect device to Ethernet network using RJ45 cable.
5. Connect device mains supply cable 230 V to the power outlet and configure the device.

Web-settings

CrossGate PRO devices allow you to configure most of its settings via Web interface by HTTP protocol (TCP-port 80). To access the interface, open any browser and type in the address bar the IP address of the device in form of [2 . x . x . x], which is written on the device's case. To access to Web interface, the device must be switched on and connected to LAN.

Main settings

To access the settings page enter the IP address of the device to the browser. Main settings page of CrossGate PRO device will be displayed.



Pic.2 Main settings

- Indication – buttons to switch the LED indication modes:

Normal	Indication depending on the current port status
Blink	Search mode.
Off	LEDs are off.

- Device name – edit device name (up to 17 characters);
- Device description – editable device description (up to 63 characters);
- Device status – current state of the device;
- Ports – configuration and status of DMX ports:

Subnet	Art-Net subnet number (0-15)
Universe	Art-Net universe number (0-15)
I/O mode	IN- input, OUT- output, LOOP- loop output with network loopback, OFF- off
Merge mode	Merging mode (LTP, HTP, Auto, Priority, Overlay)
ACN unv.	sACN stream number (from 1 to 65279, the value of 0 disables sACN transmission and reception)
Status	Current state of the port

- To save the changes in main settings, click "Save settings".
- To restore default values of main settings, click "Set default".
- To reset to the current saved values of main settings, click "Reset".

Advanced settings

To edit advanced settings, press link "Advanced".

- DMX signal timing – sets the parameters of output DMX-signal for all ports:

Break	from 4 to 1000 ms
MaB	from 4 to 1000 ms
Data slots	Number of slots from 1 to 512
Pause	Pause between frames from 0 to 10000 ms

- RDM devices- list of RDM devices, connected to DMX ports:

Start discovery	Starting search connected devices
Refresh report	Update the status search/list of found devices

- Wireless settings- wireless configuration via ports BeDMX:

Ports for search	Setting remote port number to search for and connect, any - any port.
Function	Function (role) of device's interface in wireless communication (Transmit, Receive, Off).
State	Current state of interface, depending on current function.
Action	For transmitter - available SETUP actions (Search or Accept, depending on current SETUP procedure phase).

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Advanced settings

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[Main](#) [Advanced](#) [Network](#) [Profiles](#) [Firmware](#)

DMX signal timing:

RDM devices:

Wireless settings:

Overlay/loopback settings:

Parameter	Break, usec	MaB, usec	Data slots	Pause, usec
Value	120	40	512	0

DMX 1 - no information
DMX 2 - no information
DMX 3 - no information
DMX 4 - no information

Name	Ports for search	Function	State	Action	1	2	3	4	5	6	7
BeDMX 1	BeDMX 1 ▼	Transmit	Normal	<input type="button" value="Search"/>							
BeDMX 2	BeDMX 2 ▼	Transmit	Normal	<input type="button" value="Search"/>							
BeDMX 3	BeDMX 3 ▼	Transmit	Normal	<input type="button" value="Search"/>							
BeDMX 4	BeDMX 4 ▼	Transmit	Normal	<input type="button" value="Search"/>							

Port	Universe	Src. start	Src. step	Dst. start	Dst. step	Steps cnt.	Block size
DMX 1	1-0	1	0	1	0	0	0
DMX 2	1-1	1	0	1	0	0	0
DMX 3	1-2	1	0	1	0	0	0
DMX 4	1-3	1	0	1	0	0	0
BeDMX 1	1-4	1	0	1	0	0	0
BeDMX 2	1-5	1	0	1	0	0	0
BeDMX 3	1-6	1	0	1	0	0	0
BeDMX 4	1-7	1	0	1	0	0	0

Pic.3 Advanced settings

1,2,3,...,7	For transmitter – current state of connections with receivers ("+" - connection established, "-" - connection not established/lost).
4 to 4 config	Set connection scheme "4 to 4" (to connect 2 or more devices CrossGate PRO with each other)
4 to 2+2 config	Set connection scheme "4 to 2+2" (to connect CrossGate PRO with 2-channels RadioGate devices)
Free search config	Set connection scheme "4 to any" (to connect CrossGate PRO with any RadioGate devices ports in single channel mode)
Refresh status	Update port status.

- Overlay/loopback settings – settings of overlay merging:

Universe	Set Art-Net universe (from 0 to 15).
Src.start, Src.step	Start slot number and sampling step in the merged stream
Dst.start, Dst.step	Start slot number and sampling step in the output stream
Steps cnt.	The number of steps of copying
Block size	Size (in slots) of blocks for copying from the merged stream to the output stream

- To save the changes in advanced settings, click "Save settings".
- To restore default values of advanced settings, click "Set default".
- To reset to the current saved values of advanced settings, click "Reset".

Network settings

To edit network settings, press link "Network".

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Network settings

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MAC address:	00:17:E8:B0:14:29 (secondary IP: 2.171.20.41)
Main IP:	<input style="width: 80%;" type="text" value="192.168.1.41"/>
Subnetwork mask:	<input style="width: 80%;" type="text" value="255.255.255.0"/>
Gateway IP:	<input style="width: 80%;" type="text" value="0.0.0.0"/>
Art-Net UDP port:	<input style="width: 80%;" type="text" value="6454"/>
ACN UDP port:	<input style="width: 80%;" type="text" value="5568"/>

Save settings
Set default
Reset

Pic.4 Network settings page

- MAC address – MAC address and the secondary IP address of the device, which are set by the manufacturer and are not editable. The secondary IP address can be used to get access to device’s web-interface even in situation when the main IP address is lost/forgotten by the user;

- Main IP – view/edit main network address of the device;
- Subnetwork mask – view/edit IP subnetwork mask;
- Gateway IP address – view/edit gateway IP address (used only for transmitting via Internet);
- Art-Net UDP port – view/edit UDP port for Art-Net protocol;
- ACN UDP port – view/edit UDP port for sACN protocol.
- To save the changes in network settings, click “Save settings”.
- To restore default values of network settings, click “Set default”.
- To reset to the current saved values of network settings, click “Reset”.

Profiles management

To edit profiles settings, press link “Profiles”.



Pic5 Profiles page

- Download current profile – download the current settings as a file;
- Profile for uploading – select the file of previously saved profile;
- Upload profile – to upload the selected profile in the device.

Firmware update

To upgrade the Firmware of the device, press link “Firmware”.

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Firmware update
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Main Advanced Network Profiles Firmware

Reboot

Current firmware rev.: 1.01

New firmware file: Open file

Update firmware

Pic.6 Firmware update page

- Reboot – reset the device, also confirm uploaded firmware;
- Current firmware rev. – version of the current firmware;
- New firmware file – browse for new firmware’s file;
- Update firmware – upload the chosen firmware to the device.



Please note! Selecting and uploading any other third-party file may cause device malfunction.

After the download is complete, you must confirm software updating by pressing the Reboot button.

BeDMX configuring

Network configuring (receiver):

1. Using Web-interface set "IN" port mode.
2. Device is ready for further configuration of the network.

Network configuring (transmitter):

1. Using Web-interface set "OUT" port mode.
2. Turn on all receivers that are needed to connect to device, placing them at a minimal distance from the device. If all receivers work properly, they light up "STATUS" LED (red). Turn off all receivers, which should not be included in the configured network.
3. Press "Search" button in Web-interface (Advanced settings). Then within 10 seconds will be made searching vacant (not connected with transmitters) receivers.
4. Upon completion of search process, verify the correctness of created network: in web-interface window should appear <+> icons of detected devices.

1	2	3	4	5	6	7
+	+	+	+			
+	+					

Pic.7 Wireless connected devices

5. If your network configuration is correct, press "Accept" button to save configured network. Transmitter and network ready to work.

Technical maintenance

Maintenance the device, search and troubleshooting should be performed by service personnel. The device should be free from dirt, dents, connecting cables and wires must be intact and securely fastened.

Please send all your warranty-related questions to
support@sundrax.com

All Sundrax products are covered by a 36 months warranty.



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