SUNDRAX RGS-X-DB-AC ArtGate DMX Ethernet Converter User Manual

Contents

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Specifications

DMX512 interfaces	1, 2, 4, 8 or 16
Supported protocols	DMX512, RDM (E1.20), ArtNet (I,II,III,4), sACN (E1.31, draft and release), KiNet (v1 and v2) RTTrPL, HTTP, etc.
DMX data refresh rate	44 Hz default, may be changed if necessary
I/O connectors	Depends on the modification
Max current consumption	0.1 A
Setup	web interface, specialized software ArtGate, ArtNet standard tools
Power supply	~90-250 V, 50/60 Hz or Power-over-Ethernet (PoE)
Fuse	0.1 A

General information

ArtGate is the series of full featured converters for converting network protocols ArtNet and sACN to light fixtures control protocol DMX512. Through their 1, 2, 4, 8, 12 or 16 DMX ports, LAN interface and Optical port (ArtJet Pro and GigaJet Pro, the devices transmit and receive DMX512 data streams via Ethernet LAN functioning in 10Base-T or 100Base-T mode (100Base-FX in ArtJet Pro, 1000Base-FX in GigaJet Pro. Compatibility with ArtNet and sACN protocols enables the use of ArtGate devices in a network
of heterogeneous devices from other manufacturers. As well as the standard broadcast data transfer ArtNet, ArtGate devices also support point-to-point data transfer in the local network or via the Internet. Address settings of the device name, SubNet, Universe and network settings IP address, subnet mask, UDP port, standard software tools for Art Net networks, such as DMX Workshop, as well as using the web based interface. Web interface allows changing advanced settings of ArtGate devices not covered by the Art Net standard, such as DMX signal direction and merge mode for each port physical characteristics (timing) of DMX512 signal data stream transmission and reception modes in Art Net network In addition, specialized utility software allows advanced users to assign custom MAC address to the Ethernet interface of the device and restore default settings of the device. ArtGate series is powered by AC ~90-250 V, 50/60 Hz, or from Ethernet using the Power-over-Ethernet technology depends on modification.

Safe operation

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

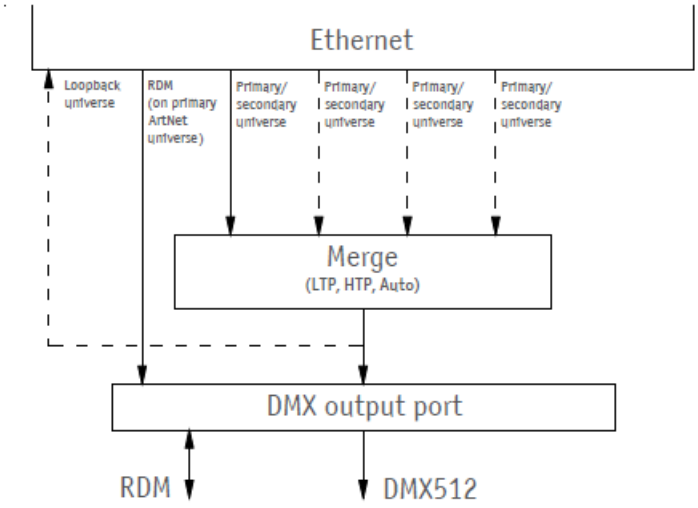
- Use the device only for its intended purpose;
- Do not use devices that shows signs of malfunctioning;
- Avoid strong physical impacts on the device;
- Protect devices and cables from contact with corrosive liquids.
- Whenever a fault is detected in the device, please contact the manufacturer.

Warning
The device uses hazardous voltage AC 90-250V

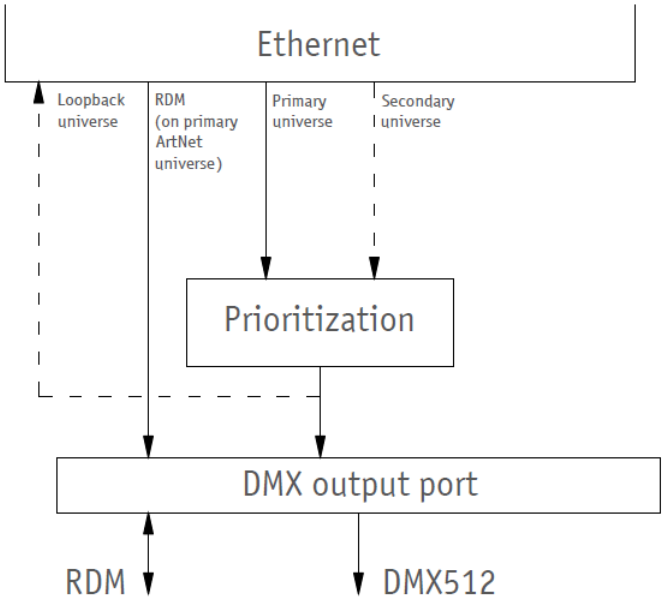
Merging

- HTP: highest takes precedence
- LTP: latest takes precedence
- AUTO: last modified takes precedence – intelligent merging mode
- PRIORITY: for sACN streams with priority tag
- BACKUP: primary/secondary universe backup
- TRIGGER and X-FADE: dedicated channel / dedicated universe controllable merging
- Merging and other output ports procedures for different merge modes.

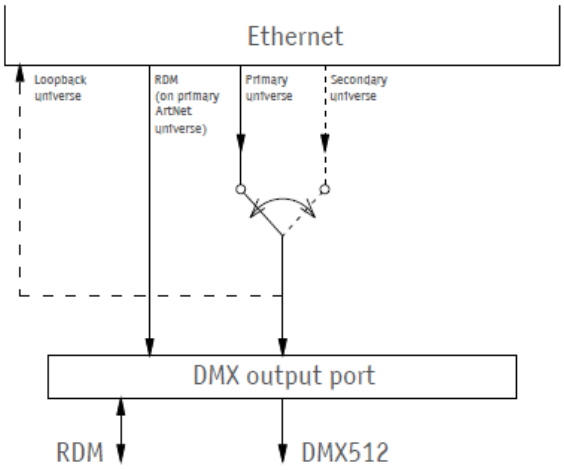
Output port procedures for LTP,HTP, Auto modes



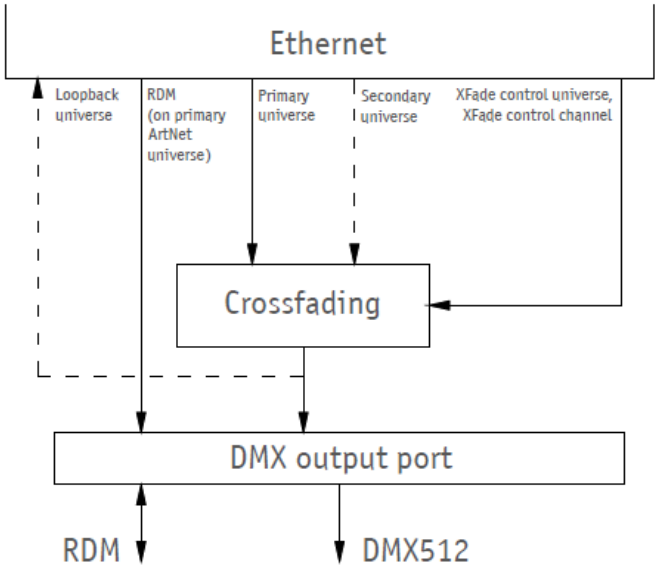
Output port procedures for Priority mode



Output port procedures for Backup mode



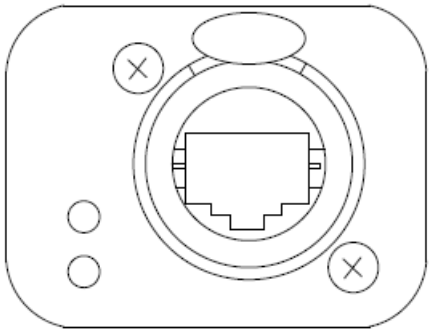
Output port procedures for Trigger and XFade modes



Input processing
When configured as input, DMX port of ArtGate can convert DMX512 signal to ArtNet, sACN or other type of universe. Universe type and protocol for input ports is always taken from primary universe settings. Input port can respond to RDM requests. Each port of one device has it's own RDM UID.
Standalone merger
ArtGate devices may be used as standalone (without permanent Ethernet connection) mergers. When 2 or more input ports are configured with the same universe protocol/number, DMX streams from them can be merged and outputted to another output port which must have the same protocol/number too to provide such feature. This configuration may work even if device is not connected to Ethernet.
Trigger inputs
Some ArtGate models have trigger feature. When trigger is activated, static scene stored in non-volatile memory is recalled and set for all DMX ports. Trigger is activated via "dry contact" inputs, which can be configured for working with normally opened and normally closed sensors (smoke sensors, buttons, etc). Each Trigger input can be also configured as alarm input. When alarm is activated, device returns
to normal work only after power cycle or manual reset, not just input deactivation.
By default, static scenes for all triggers are "all channels to 100%". User can set up the custom scene on all used DMX ports and then capture and save the scene for necessary trigger.

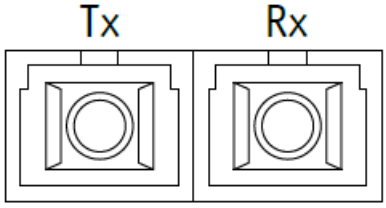
Connection types

Ethernet connection



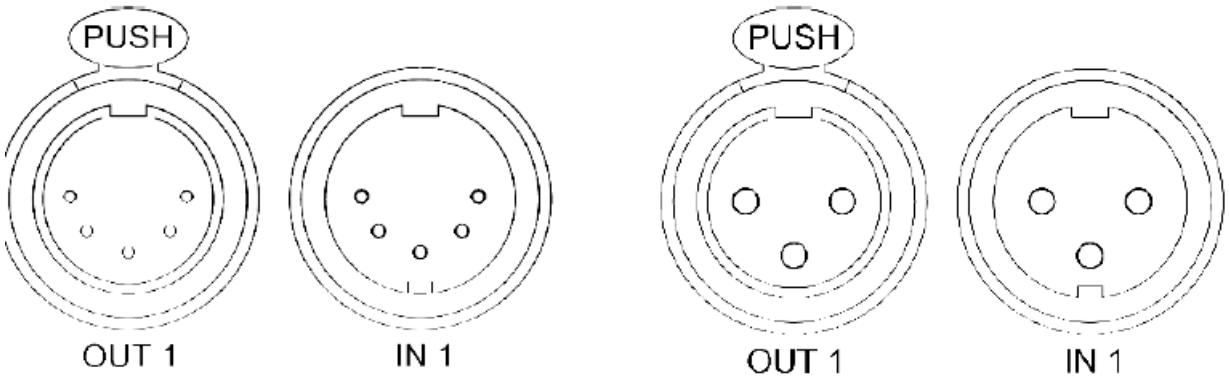
Device is connected to the network via RJ-45. All ArtGate devices have two LEDs to indicate the status of the network connection. If there is no Ethernet connection, both LEDs are off, if network is connected, one LED is constantly on, the other one flashes when data are transmitted and received over the network. 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. Thus, even in case of loss of the new IP address, the device can be access on the network using the original IP address through the web-interface.

Fiber optics connections



ArtJet devices are equipped with 100 Mbit fiber optics port duplex SC connectors. Fiber optics port works as another network interface, with functionality similar to Ethernet port. When connected both to fiber optics and ethernet, device acts as a network
switch/media converter.

DMX connections



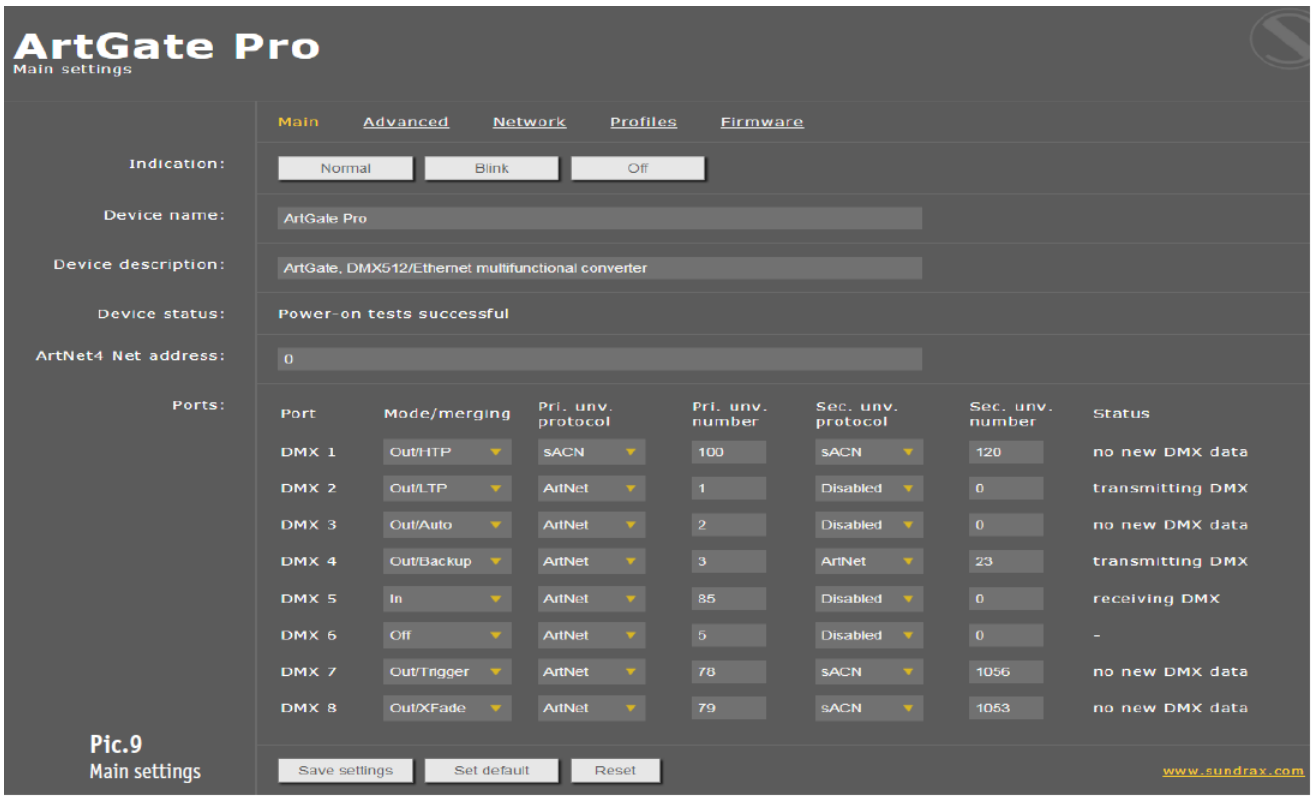
XLR 5-pin connectors are used to connect external master and slave devices to DMX ports. If necessary, the device can be equipped with XLR three-pin connectors. Each port on the 2 and 4-port devices has 2 connectors one M connector and one F connector, which allow the port to pass-through the DMX bus. On 8 and 16 port devices and ArtGate Compact, each port has single connector of type F. Each port is equipped with internal 120 ohms terminator which can be enabled via web interface.

Web interface settings

ArtGate devices support configuring most of their parameters through the Web interface using HTTP protocol TCP port 80.

Main settings

To access the settings page enter the IP address of the device to the browser. Main settings page of the ArtGate device will be displayed.4

- 

Pic.9
Main settings

Indication: Switching LED indication modes

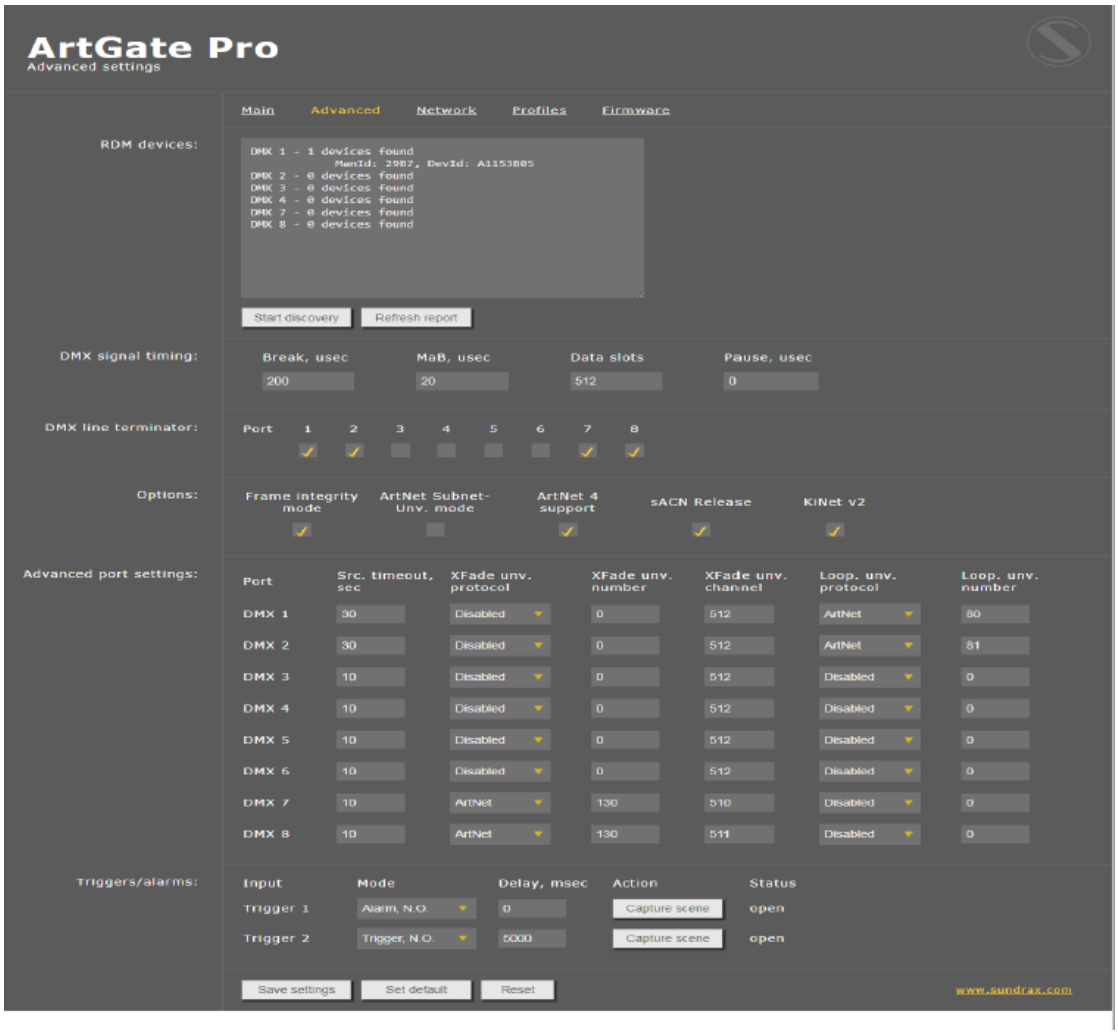
- Normal: Indication depending on the current port status
- Blink**:** Search mode
- Off: LEDs are off
- Device name :Editable device name up to 17 characters.
- Device description : Editable device description up to 63 characters
- Device status: Current state of the device
- ArtNet 4 Net address: Network number 0-127, only for ArtNet 4

Ports configuration and status for each DMX ports

- Mode/merging: Port direction and merge mode for output
- Pri unv protocol Primary universe protocol
- Pri unv number: Primary universe number
- Sec unv. protocol :Secondary universe protocol
- Sec unv. number ;Secondary universe number
- 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 the advanced settings of the device, click on the link Advanced.



RDM devices

RDM devices list, connected to DMX ports

- Start discovery: Searching connected devices
- Refresh report: Refresh search/list state detected devices.

DMX signal timing

Sets the parameters of the output DMX signal for all ports

Break	from 4 to 1000 µs
MaB	from 4 to 1000 µs
Data slots	1 to 512
Pause	from 0 to 10000 µs

DMX line terminator enables (selected) or disables (cleared) termination resistor between D+ and D- wires of DMX line on each port. Options enable/disable device features.

Advanced port settings settings for advanced features for each port

Src. timeout	Universe source timeout, in seconds
Trigger/XFade unv. protocol	XFade/Trigger control universe protocol
Trigger/XFade unv. number	XFade/Trigger control universe number
Trigger/XFade control channel	XFade/Trigger control channel
Loop. unv. protocol	Loop back universe protocol
Loop. unv. number	Loop back universe number

Triggers/alarms for ArtGates equipped with Trigger inputs setup the mode of Trigger inputs

- Input: Trigger/Sensor input
- Mode :Operating mode disabled, trigger/alarm sensor normally open/closed
- Delay, ms : Delay for triggering in milliseconds
- Status : Current status of input open, closed, active, alarm
- Action: Save the current state of all DMX ports as scene to recall on trigger activation.
- 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

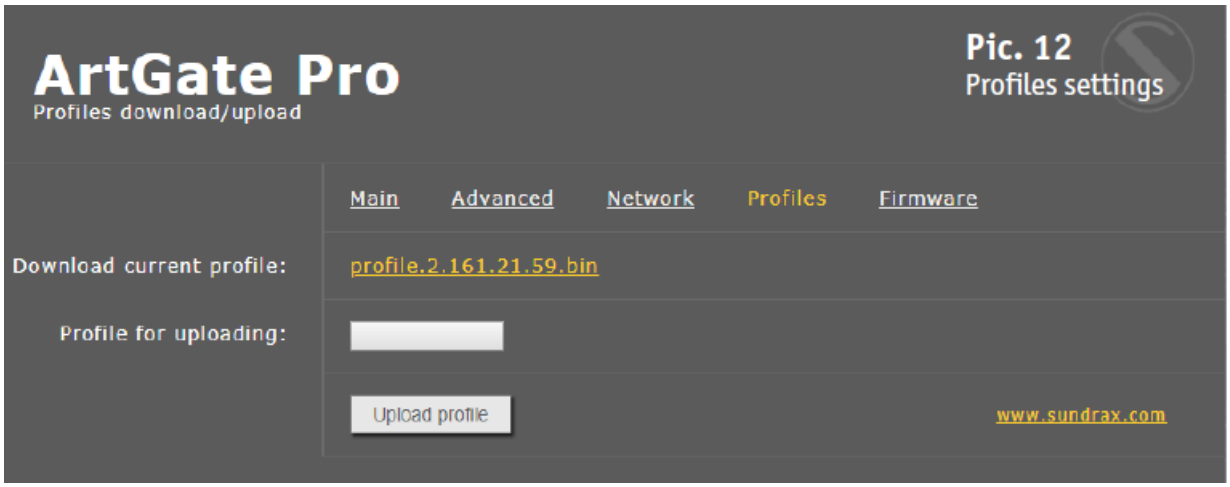
To edit the network settings of the device, click on the link Network.

- MAC address : Hardware address and secondary (permanent) IP-address of the device
- Main IP : Set the main network address of the device
- Subnetwork mask : Set the mask of the IP-subnet
- Gateway IP address : Set the network address of the gateway (if ability to operate via the Internet is required)
- Art-Net UDP port : Set the UDP-port for ArtNet protocol

- sACN UDP port : Set the UDP-port for sACN protocol
- Access login/password : Login and password for access to web-interface of device. If password is empty, authentification is not performed
- 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

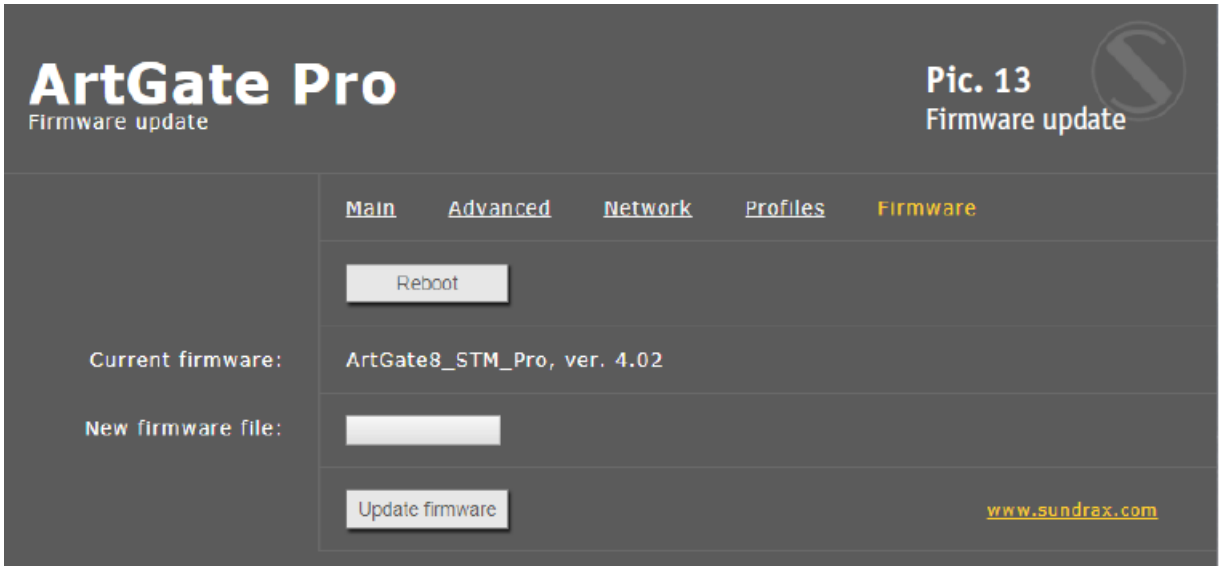
For profile operations, click on the link Profiles.



- 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 update firmware of the device, click on the link Firmware.



- Reboot : Device reboot button.

- Current firmware : Current firmware name and version.
- New firmware file : Select firmware file to upload to the device.
- Update firmware: Upload the selected firmware file.

Technical maintenance

Maintenance, 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.

Documents / Resources

	SUNDRAX RGS-X-DB-AC ArtGate DMX Ethernet Converter [pdf] User Manual RGS-X-DB-AC, RGS-X-2D2B-AC, RGS-X-DB-DC, RGS-X-2D2B-DC, RGA-0-DB-AC, RGA-0-2D2B-AC, RGA-0-DB-DC, RGA-0-2D2B-DC, RGS-X-4D2B-AC, RGS-X-4D2B-DC, RGA-0-4D2B-AC, RGA-0-4D2B-DC, GJP-5-8D5EF, RGS-X-DB-AC ArtGate DMX Ethernet Converter, ArtGate DMX Ethernet Converter

References

- Sundrax Electronics - Professional Lighting Management

Manuals+,