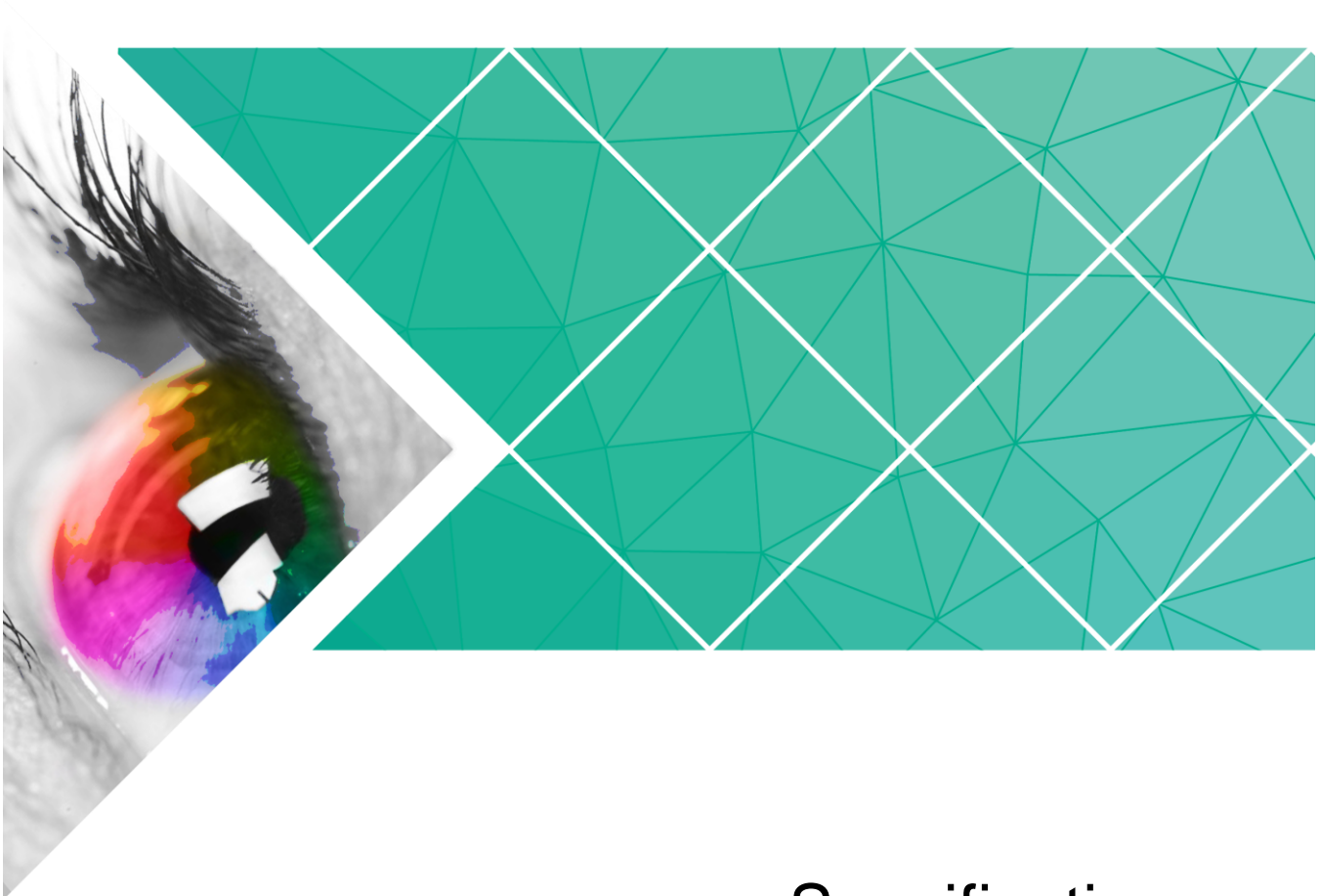


LED Display Controller S1



Specifications

Version: V1.0.1
Document Number: NS110100638

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Change History

Version	Release Date	Description
V1.0.1	2018-08-23	Changed pictures in the document.
V1.0.0	2017-06-22	First release.

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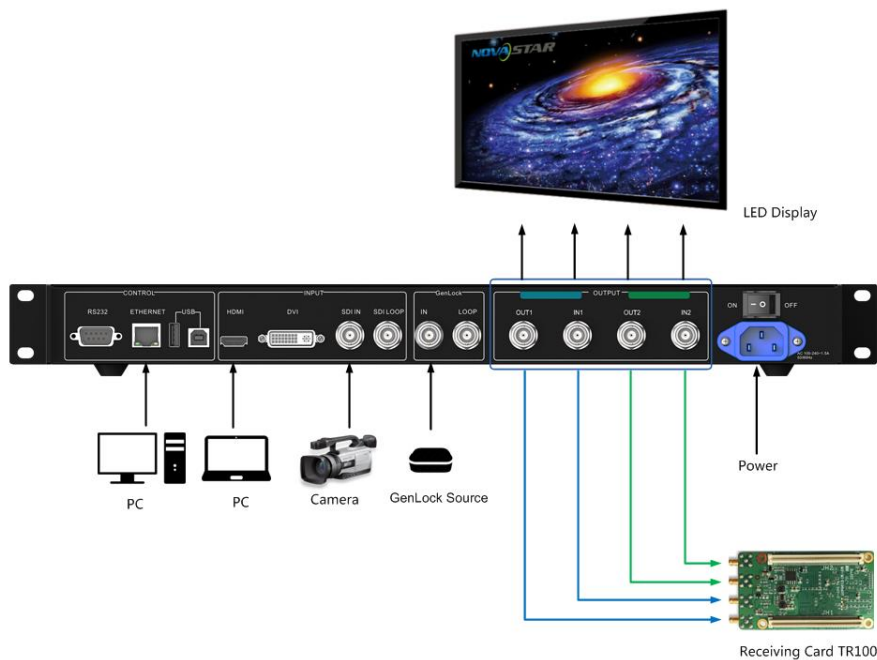
1 Overview

The S1 is NovaStar's new generation of Thunderview series display controller especially designed for high-end display applications. With multiple I/O connectors and control connectors, it is ideal for different applications, such as broadcasting and television, indoor high-end screens with fine pitch, rental for stage, security monitoring, etc.

The S1 has 3G data transmission bandwidth. A single coaxial connector can support up to 1920x1080@60Hz and the device supports up to 3840x1080@60Hz. Benefiting from the SerDes technology, the S1 can realize zero-frame latency.

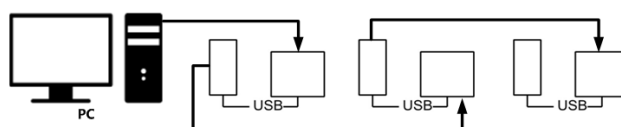
Connection of hardware devices to the S1 is shown in the figure below. The device must be powered off before connection.

Figure 1-1 Hardware device connection



To control multiple S1 units, cascade them according to the figure below.

Figure 1-2 Cascade

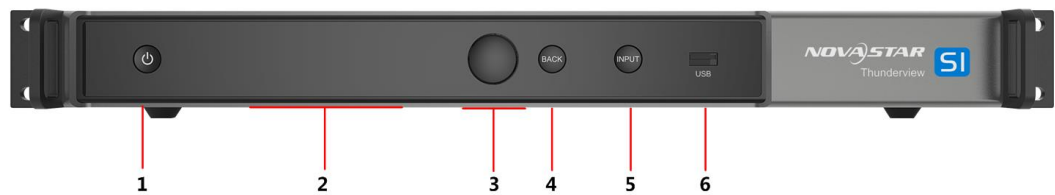


2 Features

- The inputs of the S1 include 3G-SDI×1, HDMI×1, DVI×1 and support input resolutions up to 3840×1080@60Hz.
- The outputs of the S1 include BNC×2 pairs.
- Low latency feature, the whole system including S1 and TR100 only 1 frame.
- Capable of cascading multiple controllers to load a large screen.
- Support pixel-level calibration technology.
- Support Mapping.
- Support the hardware backup solution.
- The system can be configured with a knob and a button on the front panel. Computer software for system configuration is not necessary.
- The OLED display makes operations much easier.

3 Appearance

3.1 Front panel



No.	Description
1	Power
2	OLED
3	A knob
4	BACK: Go back to the previous menu.
5	INPUT: Switch video sources
6	USB: used for firmware upgrade.

3.2 Rear panel



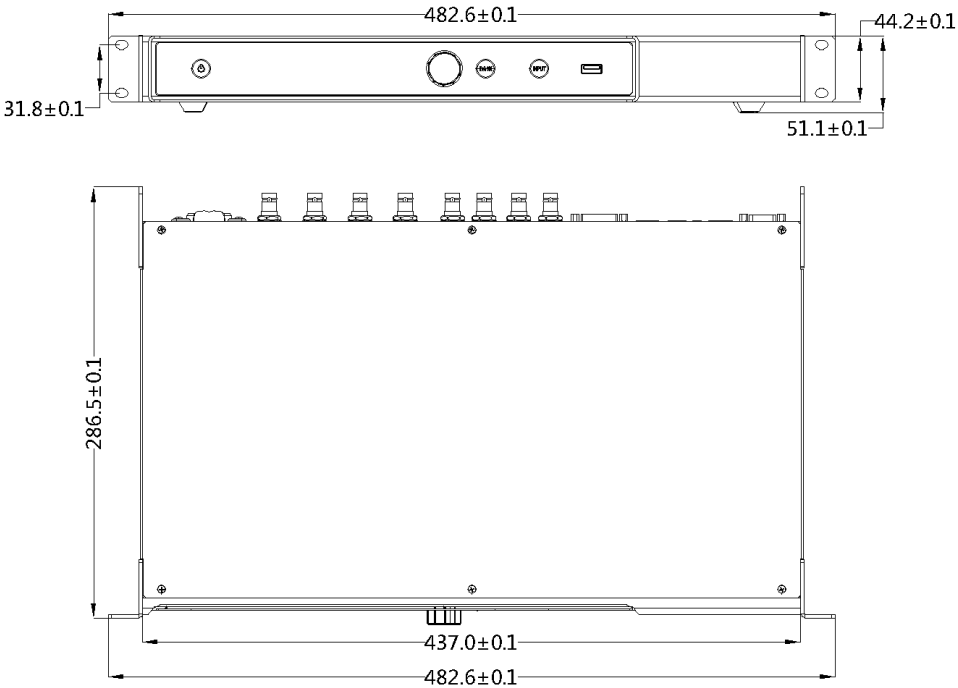
Connector Type	Connector Name	Description
Inputs	DVIx1	<ul style="list-style-type: none"> Single-link DVI User-defined resolution settings Horizontal resolution up to 3840 pixels Vertical resolution up to 3840 pixels
	HDMIx1	<ul style="list-style-type: none"> Supports 3840×2160@30Hz, 3840×1080@60Hz, etc.
	SDIx1	<ul style="list-style-type: none"> Supports 3G-SDI. SDI Loop.
Outputs	BNCx4	<ul style="list-style-type: none"> 2-channel outputs and 2-channel inputs, with each pair channel supporting bandwidth

		up to 3.25G. <ul style="list-style-type: none"> • Zero-latency. • The maximum transmission distance of the coaxial cable is 100 meters.
GenLock	INx1	<ul style="list-style-type: none"> • GenLock synchronizing signal keeping pictures being displayed on the screen in sync with external GenLock source.
	LOOPx1	<ul style="list-style-type: none"> • GenLock loop out.
Control	RS232(Baud rate 115200Bps)/ USB(cascading) / RJ45 (TCP/IP).	
Switch	100~240VAC@50/60Hz	AC power interface.

Note:

The type-A USB port is prohibited from being connected to the upper computer directly.

4 Dimensions



Unit: mm

5 Specifications

Input voltage	AC 100V~240V
Rated current	1.5A
Rated power consumption	20.0W
Operating ambient temperature	-20°C-60°C
Operating ambient Humidity	10%RH-90%RH, non-condensing
Dimension	482.6mm × 288.5mm × 45.0mm
Net weight	3.85kg
Space requirements	1RU

6 FCC Caution

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This is Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.