BrightSign Built-In
Manual and Specifications

Version 5.0, July 2023

Contents

Contents

Overview

BrightSign Built-In players integrate the BrightSign HS5 module into Bluefin's robust LCD displays, providing all of the features of BrightSign's ecosystem built directly into the screen.

BrightSign Built-In screens come standard with the HS145 module, which is equivalent in performance to the BrightSign LS5 player. HS125 modules are optionally available. XT1144 players are available as built-in screens for special order.

For more information on BrightSign, visit https://brightsign.biz

Integrated Player Differences

HS145

HS145 players include all available I/O ports listed in this manual, and 'Mainstream' HTML performance, as well as 4K video decoding. This player is recommended for most use cases and for the best CMS performance.

HS125

HS125 players include all available I/O ports in this manual. This optional player has reduced performance and 1080p video decoding, and is recommended for simple touchscreen interaction and looping video playback.

XT1144

XT1144 players include USB-C and RS232 Serial ports, and do not include Audio Out, GPIO, or USB-A ports. XT1144 players include dual 4K video decoding and 'Enterprise' HTML performance, and this player is recommended for robust interactive / javascript applications.

BrightAuthor and Configuration

Quickstart Guide

To view a BrightSign player quickstart guide, visit this link:
https://www.brightsign.biz/resources/quickstart-guide/

BrightAuthor Setup

BrightAuthor is a free content management and publishing desktop application which can be used to configure players and upload playlists of scheduled content to one, or a network, of players.

To download BrightAuthor and/or the latest HS5 firmware visit:
https://www.brightsign.biz/resources/software-downloads/

Creating a Presentation

When starting a project in BrightAuthor, set the presentation to the following parameters:
BrightSign Model: HS125
Connector Type: HDMI
Screen Resolution: 1920x1080x60
Monitor Orientation: Landscape or Portrait (Bottom on Right for power and ethernet connectors to face down.)

Ultrawide Presentations

For Ultrawide screens, continue to use the 1920x1080x60p resolution. Within the presentation, edit your zone to be the pixel height of the display and move it to the top of your presentation.

Learn BrightAuthor

For official user-guides, visit here: https://www.brightsign.biz/resources/user-guides/

To view tutorial videos on BrightSign and Brightauthor, visit here:
https://www.brightsign.biz/resources/tutorial-videos/

Controlling Room Scheduler LED's

These Instructions only apply to the BSBI Room Scheduler Screen.
The Room Scheduler unit comes with four LED strips on the sides of the screen, which can display in green or red. These LED's can be controlled via the GPIO commands in BrightAuthor.

To enable LED control

Open a BrightSign presentation in BrightAuthor and select File > Presentation Settings. Navigate to the I/O tab. Select "Output" next to GPIO 2 and 3. The lights will be turned off by default when running this presentation.

To Activate LED's within a Presentation

Double click the state or event where you want the LED to activate. Select the Advanced tab from the window that appears. Click the + button to add a new command.
To Display Green LED's, set this command to "GPIO > On > 3"
To Display Red LED's, set this command to "GPIO > On > 2"
To Display Yellow LED's, set both commands
To Turn Off LEDs, set any On's to Off.

On Screen Menu

The screen menu provides configuration options for the monitor outside of BrightSign's configurations. This includes color correction, brightness, and CEC controls. To enter the menu, press the **MENU** key four times.

Use the **UP** and **DOWN** buttons to navigate up and down, and the **VOL-** and **VOL+** to navigate left and right respectively. Return to the previous screen with **MENU**, or select an option with **SELECT.**

Page 1: Color Correction

Picture Mode: Adjust settings for Contrast, Brightness, Saturation, and Sharpness.
Color Temperature: Adjust the RGB levels.
Backlight: Turn the LCD backlight on or off

Page 2: Accessibility

OSD Language: Choose your language for the menu options
Restore Factory Default: Restore factory default settings for the screen
HDMI CEC: Enable and configure CEC controls between the screen and the BrightSign Built-In player. To enable CEC controls, select HDMI CEC from the menu, and press VOL+ to enable. If necessary, navigate down and press VOL+ to disable specific commands.

Page 3: Input

DMP and Input Source settings are not available on BrightSign Built-In units. **These settings should not be changed.**

Page 4: Software Update

Configure a screen software update via the 6-pin JST connector. This feature should not be utilized.

Hardware Interfaces

For more information on BrightSign Built-In hardware definitions, see full documentation at: https://brightsign.atlassian.net/wiki/spaces/DOC/pages/1502085170/HD5+Hardware+Interfaces

Power in: CN1: DC 12V Molex 4 pin input

Ethernet: RJ45 ethernet. POE+ power input on applicable screens up to 19.5". POE++ power input on applicable screens up to 32.0"

Micro SD: Micro SD card slot. Protective cover on Finished units.

USB: 1x USB 2.0 host port

SVC, PS_ON, RST: Service, Power Signal, Reset

Wi-Fi / Bluetooth: M.2 (E) Keyed Wi-Fi/Bluetooth connector, optional

Audio: 3.5mm Audio Out (Analog and Digital)

Power out /LED

J10: DC 12V 6 pin output

NO.	DEFINATION	DESCRIPTION
1	GND	GND
2	GND	GND
3	GND	GND
4	VDD12V	VDD12V
5	VDD12V	VDD12V
6	VDD12V	VDD12V

Update: Update port for LCD chipset

GPIO: CON4: general input and output with power supply

PIN1-6 from left to right have the following definition.

NO.	DEFINATION	DESCRIPTION
1	GND	GND
2	3.3V	3.3V

3	GPIO	GPIOX0
4	GPIO	GPIOX1
5	GPIO	GPIOX2
6	GPIO	GPIOX3

Serial port: 3.5mm RS-232 Serial Port

IR: BrightSign infrared remote-control input

SPK L / R: Amplified audio L / R output to 3W Bluefin speaker.

Player Specifications

Video Engine Decoder: Single 4K video decoding

Media Formats:
Video Codecs: H.265, H.264 (MPEG-4, Part 10) MPEG-2, MPEG-1
Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, .wmv
Images: BMP, JPEG, PNG
Audio: MP2, MP3, AAC, WAV (AC3 Pass Through)
HTML5: Mainstream Support

Hardware Capable Interfaces:
External micro SD Slot. SDHC up to 32GB, SDXC up to 2TB
USB 2.0 High Speed Host Port
Phoenix GPIO Port (4-pin bi-directional terminal block)
RS-232 Serial Port
IR In/Out
Audio Out (Analog and Digital)
Ethernet
M.2 (E) Keyed Wi-Fi/Bluetooth Connector (For Optional Wi-Fi Module)
Status LEDs: Power, Error, Busy, Update
Reset and Service Buttons
Real Time Clock

Absolute maximum ratings

Parameters	Value	Unit
Power supply	12/24*	Voltage
Storage temperature	-10~+60	Degree C
Operating temperature	0~+40	Degree C
Humidity	20~80	%RH

*See unit specification for exact power requirements

Installation and Safety

Choosing a Location

Do not install the display in a location where a door or object could hit it.

Do not install the display in an area where it will be subjected to strong vibrations or dust.

Do not install the display near strong light sources such as sunlight or strong overhead lighting.

Do not install the display near the entry of the building's main power supply.

Ensure adequate ventilation and climate. See "Safe Operating Temperature" for details.

Mounting

This product does not ship with mounting accessories. Only use commercially manufactured mounting accessories which meet the specifications of the screen and follow the manufacturer's installation instructions.

To prevent damage to the screen surface while installing mounting equipment, place the screen face-down on a clean, cushioned surface.

Do not install the monitor near any heat sources such as radiators, heat registers, stoves, amplifiers, or other devices which produce heat.

Do not place the monitor in areas exposed to direct sunlight, humidity, grease, dust, rain, smoke or steam.

The screen may be rotated 90 degrees clockwise or counterclockwise as desired for I/O placement.

Do not position the screen at an angle exceeding 15 degrees, as illustrated:
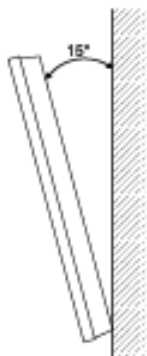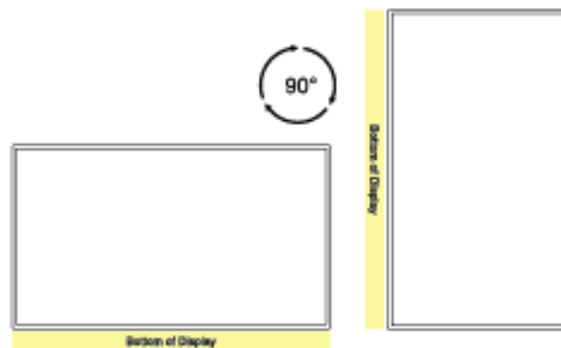

Figure 1.1

Figure 1.2

Safe Operating Temperature

BrightSign Built-In Screens require airflow in order to cool the HS124 chipset. Failure to provide enough airflow can cause the unit to reach temperatures above 50 degrees Celsius, which may cause areas of permanent LCD discoloration.
To maintain a safe operating temperature:
Provide a minimum of 6.35mm (.25") Figure A between the back of the unit and the wall it is mounted to.
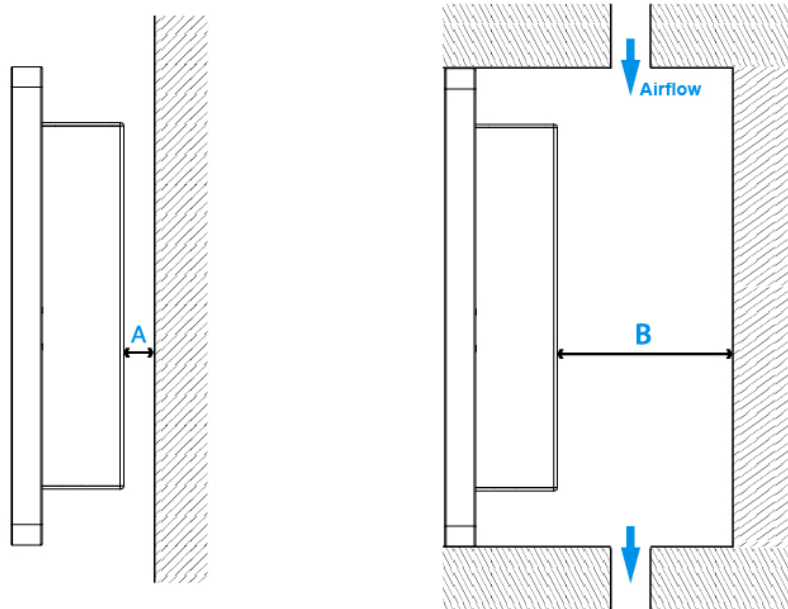Do not install the monitor near any heat sources including but not limited to: radiators, heat registers, stoves, amplifiers, or other devices which produce heat.
Ensure the ambient temperature of the room containing the unit is kept below 35 degrees Celsius (95 degrees Fahrenheit)

Recessed Mounting

This item's warranty does not cover damage resulting from improper ventilation resulting in damage to the LCD.
Maintain a minimum of 10cm (4") Figure B of space between the unit and the recessed wall to enable ventilation. Ensure there is enough airflow to prevent the unit from exceeding 50 degrees Celsius.

Support

For information and support, contact support@thebluefin.com

BrightAuthor Support

For more information, troubleshooting, or support regarding BrightSign, BrightAuthor, presentations, or content management, visit https://www.brightsign.biz

Limited Warranty

There are no warranties, which extend beyond the description on the face hereof. Bluefin warrants products to be free of defects in material and workmanship for the specified warranty period of 1 year from date of shipment from Bluefin. During this period, Bluefin will at its option, repair or replace this product at no additional charge to the purchaser except as set forth below.

Bluefin, will, at its option, repair or replace products at no additional charge to the purchaser, if the defect is related to the Bluefin manufactured product, such as Power Supplies, Disk Drives, CPU Boards, Backplanes, Video Cards and other Peripheral Boards.

Bluefin warrants that the product is free from defects in material or workmanship under normal operation.

Replacement parts that are furnished at no-charge to the purchaser in completion of this warranty are warranted only for the unexpired time portion of the original warranty. Any repairs or services outside the scope of this limited warranty policy shall be at Bluefin normal rates with standard terms and conditions applicable.

Bluefin is unable to provide loaner units or advance replacements.

Repair parts and replacement products will be furnished on an exchange basis and will be either reconditioned or new. All replacement parts and products become the property of Bluefin.

Bluefin is not responsible for damages outside of Bluefin's control including, but not limited to, physical damage, modifications to products, or improper packaging and handling.

If items have been returned for warranty service and found not to be defective a nominal service expense will be charged to cover diagnoses, testing, return shipping and other related costs.

This limited warranty does not include service to repair damage to product resulting from accident, disaster, misuse, abuse, modification, alteration, or if unauthorized repairs have been attempted.

It is the customer's responsibility to back up the contents of their hard drive, including any data you have stored or software you have installed on the hard drive. Bluefin shall not be responsible for i) any loss of data due to storage media failure, ii) for any software programs, data or other information stored or used on any media or part of any product returned to Bluefin for warranty and non-warranty servicing. If during servicing the contents of the hard disk or any other data storage media are altered, deleted, modified or lost, Bluefin will not be held responsible. It is solely the customers/purchaser's responsibility to back up any software programs, data, or information stored on any storage media or any part of a product returned for servicing.

Limited warranty service may be obtained by returning the product during warranty period to Bluefin along with proof of purchase and a Returned Material Authorization (RMA) number. The RMA number is obtained in advance from Bluefin and is valid for 30 days. The RMA number should be clearly marked on the exterior of the shipping container or equivalent.

The customer or Purchaser prepays all inbound freight charges for both Warranty and Non-Warranty repairs. Bluefin is not responsible for damage during shipment. It is recommended that you either insure the product or assume full liability for loss or damage during transit.

Bluefin will cover the return freight via ground/surface service only to the original ship to address for warranty repairs within North America. If you require overnight, expedited or overseas shipments, this service will be extra and at the purchaser's expense. You may pay freight by issuing a purchase order, credit card or wire transfer. Return freight can also be covered by offering your own carrier account number (freight collect) with your specified services.

In no event will Bluefin be liable for any damages, including lost profits, lost business, lost savings, downtime, or delay, labor, repair or material cost, injury to person, property, or other incidental or consequential damages arising out of use of or inability to use such product, even if Bluefin has been advised of the possibility of such damages or losses, or for any claim by any other party. The above warranty is the only warranty authorized by Bluefin and is in lieu of any implied warranties, including implied warranty of merchant-ability and fitness for a particular purpose. Bluefin reserves the right to waive its warranty policy if the customer fails to pay invoice in full and/or on a timely basis as set out on the face of the invoice. How to Return Products for Servicing: To return products, you must obtain a valid RMA number. RMA numbers can be obtained by calling 770-205-6636 or email us at support@thebluefin.com.