

# SHARP®

Be Original.

**PNHB851**  
**PNHB751**  
**PNHB651**  
Professional LCD Monitors

## Versatile Ultra-HD Monitors with Built-in Smart Signage Controller



**4K**  
3840 × 2160 Pixels

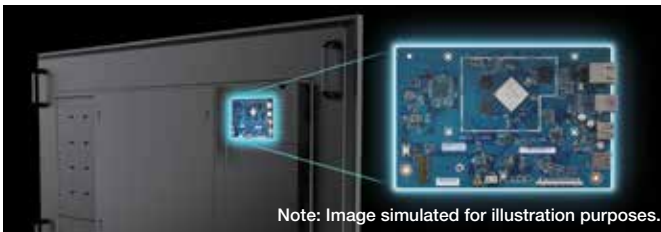


You can completely trust the 85" Class (84 9/16" diagonal) PNHB851, 75" Class (74 9/16" diagonal) PNHB751 and 65" Class (64 1/2" diagonal) PNHB651 monitors to get your message out there. What sets these products apart is a built-in System-on-a-Chip (SoC) controller that allows it to deliver digital signage straight out-of-the-box. Daily operation is a breeze, thanks to on-board content distribution software. Also, SHARP e-Signage S allows you to create and manage professional-grade content. And optional upgrades give the monitors even more flexibility to interact with external devices. It all adds up-to a powerful signage solution that's built to engage.

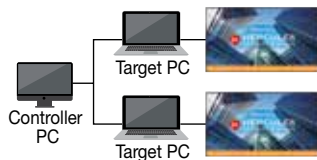
## Out-of-the-Box Digital Signage Solution

### Built-in SoC (System on a Chip)

The PNHB851/HB751/HB651 displays have a powerful integrated SoC controller driven by an Arm® Cortex® hexa-core processor. The SoC comes with 4 GB of memory, 32 GB of storage and integrated Android™ OS (7.1). These monitors are ready to display signage right out-of-the-box.

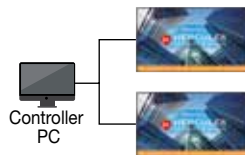


Monitors with no built-in SoC controller



Requires a target PC for each monitor

Monitors with a built-in SoC controller



No target PCs required

### Support for H.265/HEVC

PNHB851/HB751/HB651 monitors support not only H.264/AVC but also H.265/HEVC. The latter is a next-generation high-efficiency video codec that reduces the communication burden during video transmission. Your content takes on a new level of depth and presence, thanks to the sheer scale and precision of these screens.

### SHARP Open Architecture Platform

This platform allows third-party software developers to create custom signage applications. This opens up rich possibilities for digital signage in retail, office and other settings. Certification under The Google® Compatibility Test Suite (CTS) assures compatibility with third-party Android™ apps.

Note: For details, please consult with your local authorized Sharp dealer or representative.

### Smart Connectivity

The PNHB851/HB751/HB651 displays support high-speed wireless LAN and feature built-in Bluetooth® connectivity. This lets you deliver content—and connect equipment—wirelessly.

## Ready for Versatile Signage Support

### Autoplay with Media Player

Displaying still images or videos as signage content couldn't be easier. When the monitor is powered on, the built-in media player automatically starts playing content stored in internal storage or on a USB memory device or microSD card. A simple schedule function allows you to pre-register seven patterns for when to start/stop the content playback. In a slideshow, you can add visual effects between the still images. You can also make playlists that combine still images and videos. The PNHB851/HB751/HB651 displays let you enjoy the benefits of simple digital signage without any extra software, special skills, or even a PC.

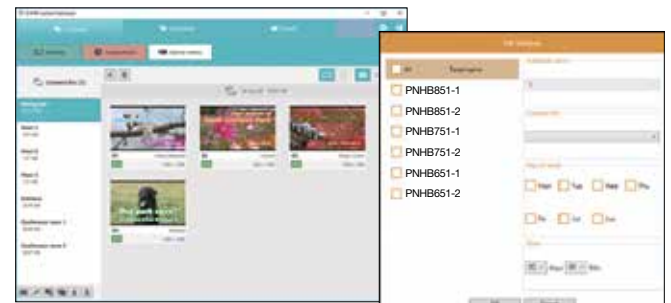
### Web-Based Signage

The PNHB851/HB751/HB651 displays feature a pre-installed HTML5 browser on the SoC as well as built-in support for Bluetooth and a high-speed wireless LAN. This makes it easy to show web content on the monitor as signage content.

Note: Web-based content can be displayed at up-to 1080p resolution.

### SHARP Content Distributor

This software makes it easy to update the content to be displayed on multiple LCD monitors. Through simple and intuitive PC operation, you can schedule **what** content gets distributed, **when** it gets delivered, and **which** monitors show it. Take advantage of a convenient signage solution that lets you distribute content in a timely manner to multiple monitors.



Intuitive drag-and-drop operation with thumbnail view

Easy editing of distribution schedules

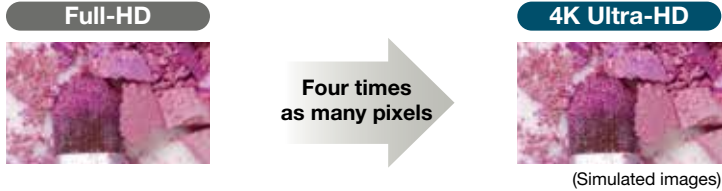
Note: SHARP Content Distributor is available via the downloader on the bundled CD-ROM.

# Flexibility and Expandability

## Superb 4K LCD Panel

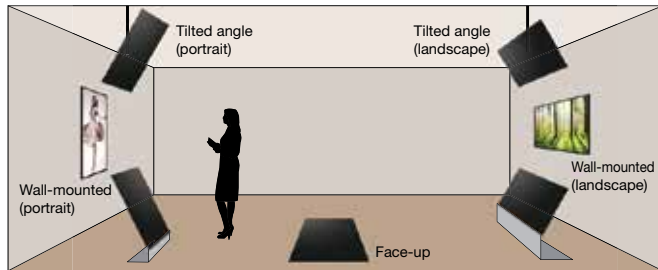
The PNHB851/HB751/HB651 displays supports 4K Ultra-HD (3,840 x 2,160) pixel resolution and is equipped with a variety of inputs to support up-to 4K60p playback\*. These monitors can express all the detail and visual impact of your selected content. A brightness of 350 cd/m<sup>2</sup> supports them in their digital signage functions.

\* 4K playability depends on PC and system configuration.



## Flexible Settings

The PNHB851/HB751/HB651 displays are designed for easy installation. You can install them in a landscape or portrait orientation or even face up. And you can tilt it too—either backward up-to 90 degrees or forward up-to 20 degrees. Such flexibility gives you more freedom to meet today’s demanding signage needs.



Note: Please consult with your local authorized Sharp dealer or representative regarding tiltable angles and other installation conditions.

## 16-Hour Daily Operation

The PNHB851/HB751/HB651 displays can run 16 hours a day, 7 days a week. Whether in an office, retail, or other location, you’ll get ultra-reliable daily performance.

Notes:

1. Rebooting the OS once a day is highly recommended to maintain stable operation.
2. When POWER SAVE MODE is set to OFF, the integrated SoC controller stays on even in standby mode.

## SHARP e-Signage S

This versatile signage software provides total support for creating, scheduling, distributing and managing a wide range of signage programs on Sharp LCD monitors in a variety of locations. You can make and edit signage programs easily through simple drag-and-drop operation. In addition to laying out diverse content, you can create display schedules and monitor the operational status of designated LCD monitors. The PNHB851/HB751/HB651 displays come bundled with the Standalone Edition of SHARP e-Signage S. It also includes a signage player pre-installed on the integrated Android OS.

	Product name	No. of target PCs (Players)	No. of operators	Distribution network
Standalone Edition	Bundled	1	1	No
Player	Pre-installed			

Notes:

1. SHARP e-Signage S content can be displayed at up-to 1080p resolution.
2. SHARP e-Signage S (Standalone Edition) is available via the downloader on the bundled CD-ROM.

## DisplayPort™ Daisy Chain

Up-to four PNHB851/HB751/HB651 monitors can be set up in a daisy chain configuration by connecting their DisplayPort terminals. This lets you display the same content simultaneously on all screens.

## HDBaseT™ Receiver Board (PNZB03H) (Option)

HDMI™ video\*<sup>1</sup>/audio and control signals can be received via a single LAN cable\*<sup>2</sup> from up-to 100 metres away. Compatibility with HDBaseT 2.0 allows you to remotely operate a PC from a USB device connected to this board\*<sup>3</sup>.

\*<sup>1</sup> Video signals up-to 4K30p can be transferred.

\*<sup>2</sup> Category 6 or higher shielded cable (available commercially).

\*<sup>3</sup> Requires an HDBaseT 2.0-compatible transmitter (available commercially). Not all USB devices are supported.

## Wireless Board (PNZB03W) (Option)

This allows up-to 10 devices—including Mac® or Windows® computers, smartphones, and tablets—to be connected simultaneously to the monitor without any cable hassles. Input from four devices can be displayed in a 2 x 2 split screen, with images displayed at up-to 1080p resolution. Enabling such wireless collaboration is a great way to enhance productivity in work or educational environments.

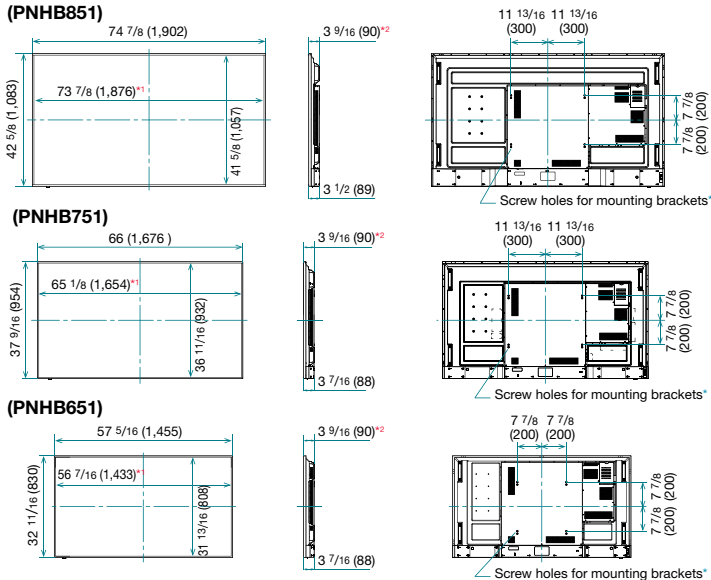
Note: Transferred screen images can be displayed at up-to 1080p resolution.



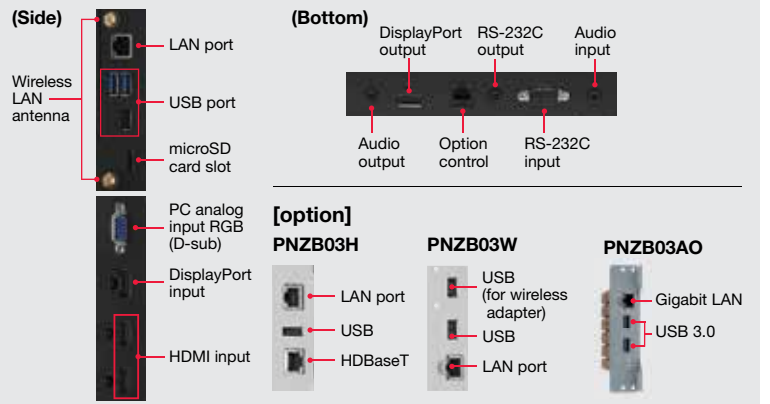
Model Name	PNHB851	PNHB751	PNHB651
Installation	Landscape / Portrait / Face-up		
LCD Panel	85" Class (84 9/16" diagonal) TFT LCD	75" Class (74 9/16" diagonal) TFT LCD	65" Class (64 1/2" diagonal) TFT LCD
Max. Resolution	3,840 × 2,160 pixels		
Max. Display Colours (approx.)	1,070 million colours		
Pixel Pitch (H × V)	0.488 × 0.488 mm	0.430 × 0.430 mm	0.372 × 0.372 mm
Max. Brightness*1	350 cd/m <sup>2</sup>		
Contrast Ratio	5,000 : 1		
Viewing Angle (H/V)	178°/178° (CR ≥ 10)		
Active Screen Area (W × H)	73 11/16" × 41 7/16"	65" × 36 9/16"	56 1/4" × 31 5/8"
Response Time	9.5 ms (grey to grey, avg.)		
Backlight	LED, direct lit		
Computer Input	Analog RGB (0.7 Vp-p) [75Ω], DisplayPort 1.2, HDMI		
Synchronization	Horizontal/vertical separation (TTL: positive/negative)		
Plug & Play	VESA DDC2B		
Input Terminals*2	DisplayPort × 1, Mini D-sub 15-pin × 1, HDMI × 2, RS-232C × 1, 3.5 mm-diameter mini stereo jack × 1		
Output Terminals*2	DisplayPort × 1, RS-232C × 1*3, 3.5 mm-diameter mini stereo jack × 1		
Android	Android 7.1		
OS	Android 7.1		
CPU	Hexa Core [Arm Cortex-A72 processor (dual core) + Arm Cortex-A53 processor (quad core)]		
Memory	4 GB		
Storage	32 GB		
External Interface	LAN port (10Base-T/100Base-TX/1000Base-T), microSD card slot (microSD/microSDHC/microSDXC*4) × 1, USB port (3.0-compliant) × 2, USB port (2.0-compliant) × 1		
Wireless LAN	Compliant with IEEE802.11ac/n/a/g/b		
Bluetooth	Compliant with version 4.1 (A2DP/AVRCP/GATT/GAP/HID/HOGP)		
Expansion Slot	12 V, 2.5 A (power supplied when expanding the functions with an optional part)		
Speaker Output	10 W + 10 W		
Mounting	4 points, 600 × 400 mm pitch, M6 screw		4 points, 400 × 400 mm pitch, M6 screw
Power Supply	100 V – 240 V AC, 50/60 Hz		
Power Consumption*5	370 W	320 W	260 W
Environmental Conditions	Operating Temperature*6: 0°C to 40°C Operating Humidity: 20% to 80% RH (no condensation)		
Dimensions (W × D × H) (approx.) (display only)	74 7/8" × 3 1/2" × 42 5/8"	66" × 3 7/16" × 37 9/16"	57 5/16" × 3 7/16" × 32 11/16"
Weight (approx.)*5	105.9 lbs	81.6 lbs	64 lbs
Main Accessories	AC power cord, remote control unit, battery (AAA size) × 2, CD-ROM, set-up manual, cable clamp (insertion type) × 2, cable clamp (stick-on type) × 3, USB flash drive/microSD card cover, USB flash drive/microSD card cover fixing screw, logo sticker, wireless LAN antenna × 2, RS-232C conversion cable × 1		

\*1 Brightness depends on input mode and other picture settings. Brightness level will decrease slightly over the lifetime of the product. Due to the physical limitations of the equipment, it is not possible to maintain a precisely constant level of brightness. \*2 Use a commercially available connection cable for PC and other video connections. \*3 Requires the bundled RS-232C conversion cable. \*4 exFAT is not supported. \*5 Power consumption and weight may vary from specified levels. \*6 When using the monitor lying flat on a surface (or when the monitor is tilted more than 20 degrees upward or downward from the perpendicular in relation to a level surface) the ambient temperature must be within the range of 0°C to 30°C. Temperature conditions may change when using the monitor together with optional equipment. In such cases, check the temperature conditions specified by the optional equipment.

Dimensions



Input/Output Terminals [standard]



Options

- PNZB03H: HDBaseT Receiver Board
- PNZB03W: Wireless Board
- PNZB03AO: Computing Board

PNZB03H HDBaseT Receiver Board	PNZB03W Wireless Board	PNZB03AO Computing Board
Supported standard	HDBaseT 2.0	Max. resolution 1,920 × 1,080 (30 Hz)
Max. resolution	4,096 × 2,160 (30 Hz)	Wireless communication method 2.4 GHz, IEEE802.11b/g/n 5 GHz, IEEE802.11a/n
Copy protection	HDCP pass-through	Input/output terminals LAN × 1 (10Base-T/100Base-TX), USB × 1 (USB 2.0), Wireless adapter × 1 (USB 2.0)
Transmission distance	Up-to 328 feet / 100 m	Power supply From the monitor
Input/output terminals	HDBaseT × 1, LAN × 1 (10Base-T/100Base-TX), USB × 1 (USB 2.0)	PNZB03AO Computing Board
Power supply	From the monitor	Max. resolution 3,840 × 2,160 (30 Hz)



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