



PN-HB651/751/851  
PN-HM651/751/851  
PN-B401/501  
PN-M401/501



Smart large format signage and meeting room displays

# Welcome to a whole new world of digital displays.

The innovative PN-B/HB and PN-M/HM series of smart large format displays give you everything you need to create eye-catching visual messaging in almost any environment, from corporate buildings and retail stores to public spaces and transport hubs.

Finding a way to present your content in a clear, concise and flexible way to an audience that is constantly bombarded with information can be a challenge. But with Sharp's new range of smart large format displays, you can rest assured that the relevant content – whether it's meeting room information, retail window displays, details of museum exhibitions or timetable data – will be hard to miss.

## Beautiful results, every time.

Showcase your content in the best possible way with superior display features.

No matter where you're installing the PN-B/HB and PN-M/HM series displays, you can rest assured your content will make maximum impact. Available in 40", 50", 65", 75" and 85" options, the PN-HB and PN-HM feature 3840 x 2160 4K resolution and the PN-M401/501 and PN-B401/501 feature 1920 x 1080 Full-HD resolution. The high brightness (500cd/m<sup>2</sup> PN-HM651/751/851, 450cd/m<sup>2</sup> PN-M401/501, 350cd/m<sup>2</sup> PN-HB651/751/851 and 300cd/m<sup>2</sup> PN-B401/501) provides a high impact even in brightly lit public areas. Added to that the contrast ratio of 5,000:1 across all ten models means you get deeper blacks and better colour reproduction for an impressive visual result.

DisplayPort allows you to broadcast the same digital content on a series of 'daisy-chained' displays, creating even more of a visual impact through consistent repeated content without the need for additional splitter equipment. This is ideal for environments such as restaurants, where you want to seamlessly display menu information, or in business offices when showing real-time performance indicators.



## Meeting Room 2

11:00 12:00	<b>Team Meeting</b> <i>by John Boyle</i>
13:00 14:00	<b>Finance Review</b> <i>by Mason Taylor</i>
14:30 16:00	<b>Marketing Budget</b> <i>by Mary Maddock</i>
17:00 18:00	<b>Web Conference</b> <i>by Henry Fisher</i>

### Company News

The annual summer barbecue will be held 4 pm to 6 pm on Friday, September 1.



*‘Manage office environments more efficiently. Ideal for presenting staff information, digital posters, highlighting points of interest and way-finding’*



*'Bring life to your retail stores, whether that's a stand-alone display in a single store operating 7 to 11 or multiple interconnected displays in 24/7 shopping centres.'*





# Displays that accommodate your every need.

Enjoy the flexibility of showcasing variable content at a time that suits you.

Different business environments require different display operating times, and that's not a problem. The PN-B/HB displays can operate 16/7 – ideal for shopping centres or large corporate offices that can accommodate some downtime – while the PN-M/HM displays offer 24/7 operation, perfect for transportation hubs or service station restaurants that need to provide information to customers all day, every day.

## Easy playback solutions

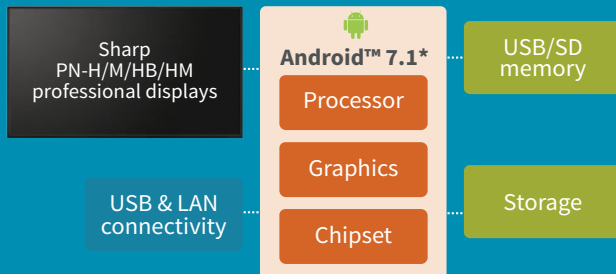
And for stand-alone signage, say outside of restaurants or for wayfinding purposes, the convenient integrated media player allows easy playback of .jpeg, .png, .mp4, .wmv, .ts and .mp3 files when a USB/SD card is inserted in the display and without the need for a PC or associated cable runs. This saves time and money, and simplifies management of digital signage systems. And the anti-theft covers on the displays mean that USB or SD cards cannot be removed by unauthorised people, reducing digital signage downtime and loss of ROI.

PN-HB/M models all have a metal cabinet which increases their durability and reduces fire loads for public space applications. The displays feature integrated speakers with 7+7 W on PN-B/M models and 10+10 W on PN-HB/HM for powerful audio without the need for external equipment. The 178° viewing angle means displayed content is more visible in a wide range of installation locations and when mounted at an angle.



# Flexible content handling.

Create the content you need and display it however you like.



With Sharp's innovative System on Chip (SoC) solution, users have full flexibility to display whatever content they want in a way that suits them. With the latest Android™ 7.1 (Nougat) for digital signage built-in\* to the SoC, it's possible to power any kind of signage software application and control multiple streams of complex video for media rich, bespoke signage requirements.

And with multiple operation choices, SoC gives you the flexibility to connect your displays in the most suitable way for you. For example, with a networked application, transport hub operators can ensure up-to-date timetable information is displayed in real time.

## Expert support from a partner eco-system.

Find the signage solution you need with our community of software providers.

No matter what kind of information you want to display, with Sharp Open Architecture Platform you are guaranteed to find a solution that suits you. The comprehensive eco-system of third-party professional signage software providers means you can download, store and play content directly on the PN-B/HB and PN-M/HM series displays. And with off-the-shelf, bespoke and wide ranging, specific customer signage content options available, you've got a flexible solution for all your display needs.

Sharp Open Architecture Platform allows you greater freedom when it comes to the design of your content on the displays, giving you more artistic licence to really create whatever you want. You can work with different channel partners who will be able to create a bespoke package of software solutions tailored to you. This is ideal for retail environments, for example, when you want to advertise your latest range of items in an eye-catching and innovative way.

Visit [sharp.co.uk](http://sharp.co.uk) for more information on Optimised Signage Solutions and Sharp Open Architecture Platform signage software providers.

\* Android™ 7.1 is featured on PN-HB/HM models. PN-B/M models feature Android™ 4.4.2.



Web-based HTML5 and USB/SD card applications for standalone operation are also available, giving you the utmost flexibility.

# Installation options to suit you.

Create exciting digital displays with our flexible mounting options.



*Flexible install options for PN-B/HB/M/HM displays includes; Wall Mount (Portrait, Landscape & Face-Up) plus for PN-B/M models Face-Up/Down, Tilted & Hanging.*

While conventional wall mounting of displays may be appropriate in transport hubs or meeting spaces, retail and leisure operators may be looking to create a more eye-catching display. And with Sharp's flexible mounting options, almost anything is possible.

Whether oriented in portrait or landscape you can mount PN-B/M displays flat, either face-up or face-down or tilted at any angle. You can also create suspended installations thanks to optional ceiling mounting brackets and integrated wire fixing points with PN-B/M models, giving users the option to create 'floating' displays among a retail display, shop window or in a corporate office reception area.

# Modular Mini OPS & connectivity options.

In a world full of devices, you want the flexibility to connect to them all.

Don't let wires restrict your creativity when it comes to where and how you install your displays.

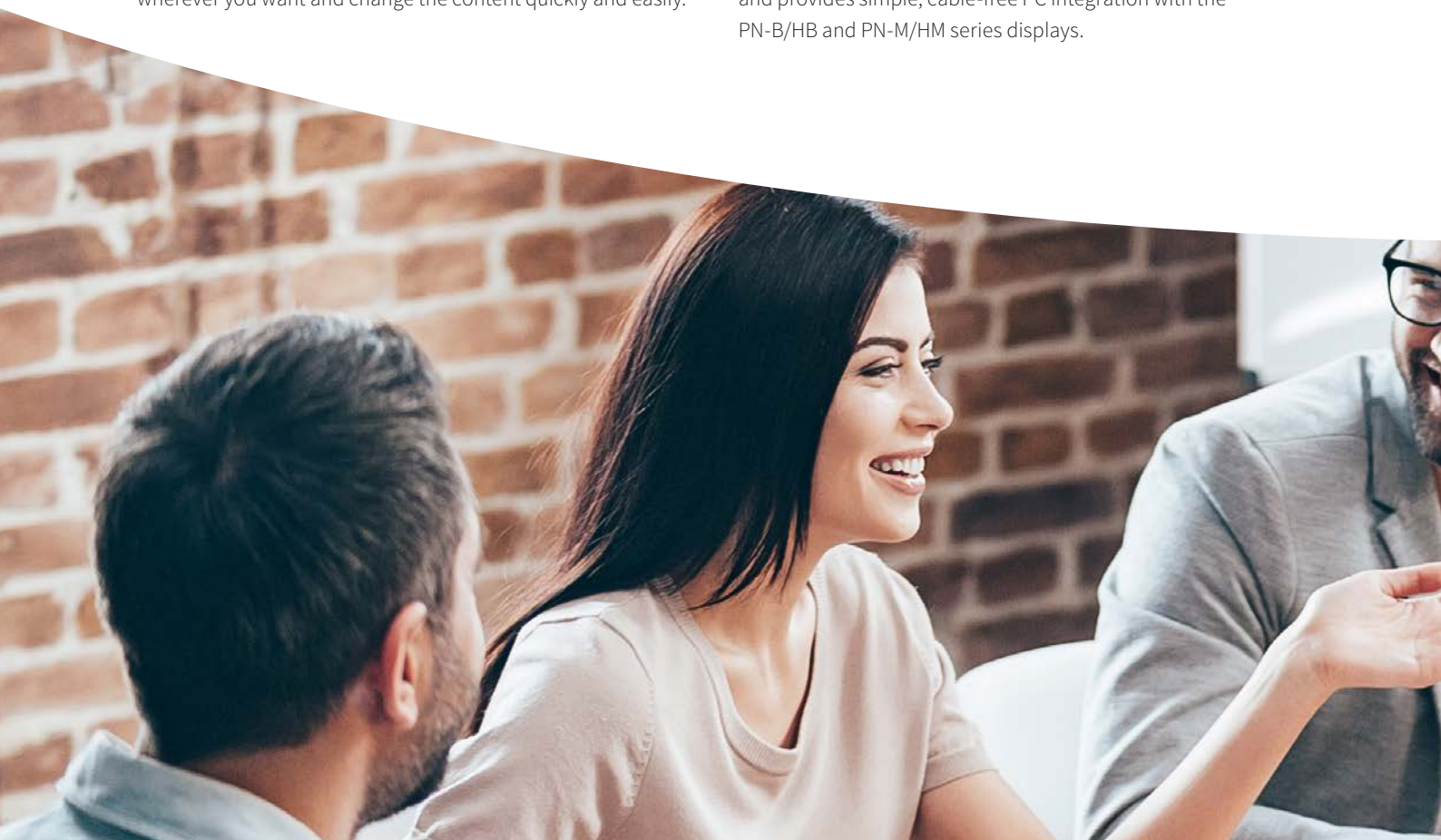
Integrated WiFi 802.11ac on PN-HB/M models or the optional PN-ZW01 USB wireless adaptor, provides an easy, cable free method of connecting a WiFi router to the displays. Ideal when you want to present information in several locations and where hardwire-networking isn't practical and, to make control and setup even easier when installed in difficult to reach places, Bluetooth provides convenient connection of keyboards, mouse and audio devices.

The optional PN-ZB03H Mini OPS HDBaseT Receiver allows you to transmit HDMI video and other signals over long distances with CAT6 cable plugged directly into the display. That means that no power cables, power supply or other external devices get in the way, giving you the flexibility to install the units wherever you want and change the content quickly and easily.

Installing the Mini OPS HDBaseT receiver, which can support up to 4K ultra-high definition video, offers the ideal solution for any Sharp display mounted a long way from the video source. Of course, any video source will need to be attached to a compatible HDBaseT transmitter.

You can also wirelessly connect to a variety of different smart and mobile devices, up to 10 via the PN-ZB03W, such as Mac, PC, smartphone or tablet, giving you the flexibility to share screens and show 4 devices in a split screen mode or one at full screen. This is ideal for office environments when you want to share a presentation on a bigger screen.

The optional Mini OPS PN-ZB03PC PC (by AOPEN) is a powerful single-board PC that runs quietly and reliably, thanks to a fanless design, and offers high-definition video output. It also offers further functional flexibility with two USB3.0 interfaces, and provides simple, cable-free PC integration with the PN-B/HB and PN-M/HM series displays.







#### PN-ZB03H Mini OPS HDBaseT HDMI Receiver

- Supported standard HDBaseT 2.0
- Max. resolution 4K 4,096 x 2,160 (30 Hz)
- Copy protection HDCP pass-through
- Transmission distance Up to 100 m
- Input/output terminals HDBaseT x 1, LAN x 1 (10Base-T/100Base-TX), USB x 1 (USB 2.0)
- Power supply From the display



#### PN-ZB03PC Mini OPS PC

- Processor Intel Celeron N3160
- Memory (GB) 4GB DDR3L-1600, dual channel, onboard/64GB M.2 SSD
- Clock Speed (GHz) 2.24
- Graphics Intel HD Graphics 400 (Integrated in Chipset)
- Input/output terminals LAN x 1 (RJ45), USB x 2 (USB 3.0)
- Power supply From the display



#### PN-ZB03W Mini OPS Wireless

- Max. resolution 1,920 x 1,080 (30 Hz)
- Wireless communication 2.4 GHz, IEEE802.11b/g/n, 5 GHz, IEEE802.11a/n
- Input/output terminals LAN x 1 (10Base-T/100Base-TX), Wireless adapter, USB x 1 (USB 2.0)
- Power supply From the display
- Input/output terminals LAN x 1 (RJ45), USB x 2 (USB 3.0)
- Power supply From the display



#### PN-ZW01 Wireless USB Module\*

- Easy and fast installation
- Reliable and long-life performance with all wireless networking benefits
- Supports wireless content distribution, display control and management
- Plugs discreetly in the rear of the display

\* Required for wireless features on PN-B/M models.



# Displays in action.

The displays can be used for a variety of applications, to meet your every need.

## Corporate environment

The PN-B/HB and PN-M/HM series displays are ideal for office environments when you want to showcase staff information digital posters, highlight points of interest or for building wayfinding. They're also great for displaying information in huddle spaces and for use in meeting rooms, boardrooms and training areas when you want to share presentations.



## Retail areas

Bring life to your retail areas, whether that's an individual store or a whole shopping centre, by using the PN-B/HB and PN-M/HM series displays for digital advertising and showcasing points of interest. The displays are also ideal for quick service restaurant menu boards thanks to the DisplayPort 'daisy-chaining' feature.

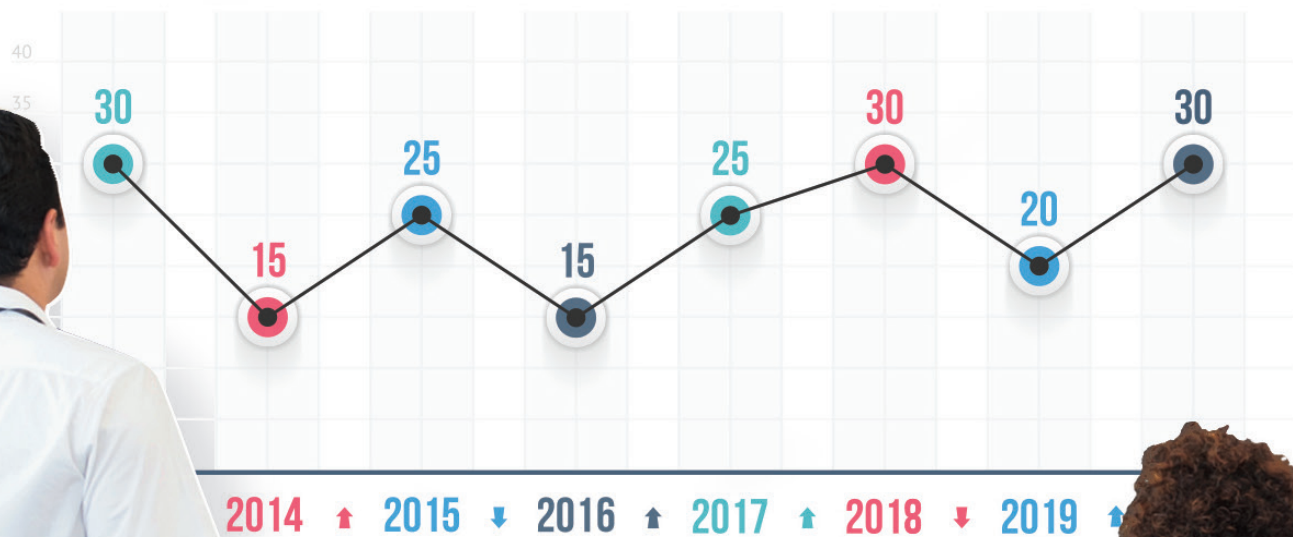
## Leisure/public spaces

The PN-B/HB and PN-M/HM series displays are perfect for timetable digital posters, point of sale areas and to direct people to points of interest. Museums and exhibition centres can also display important information using the smart displays.





## Social Media Results

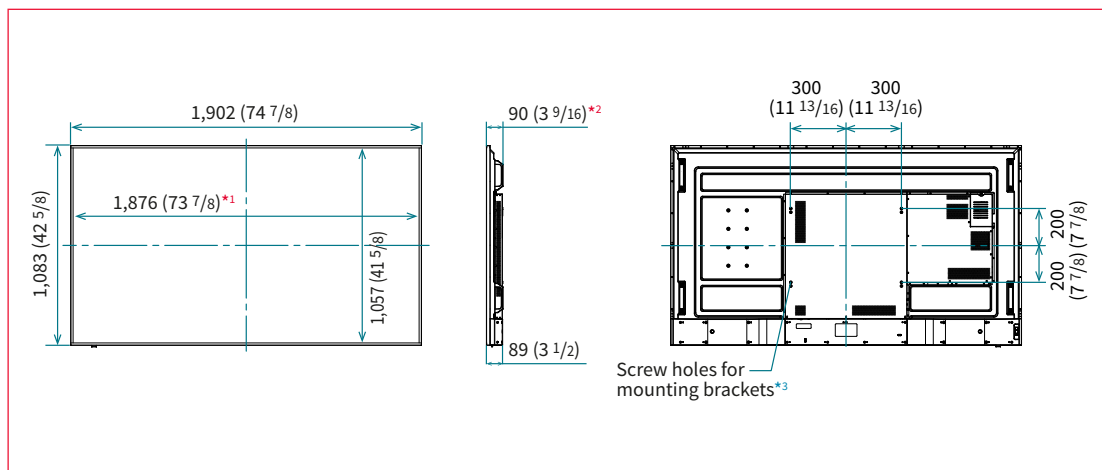




## Dimensions

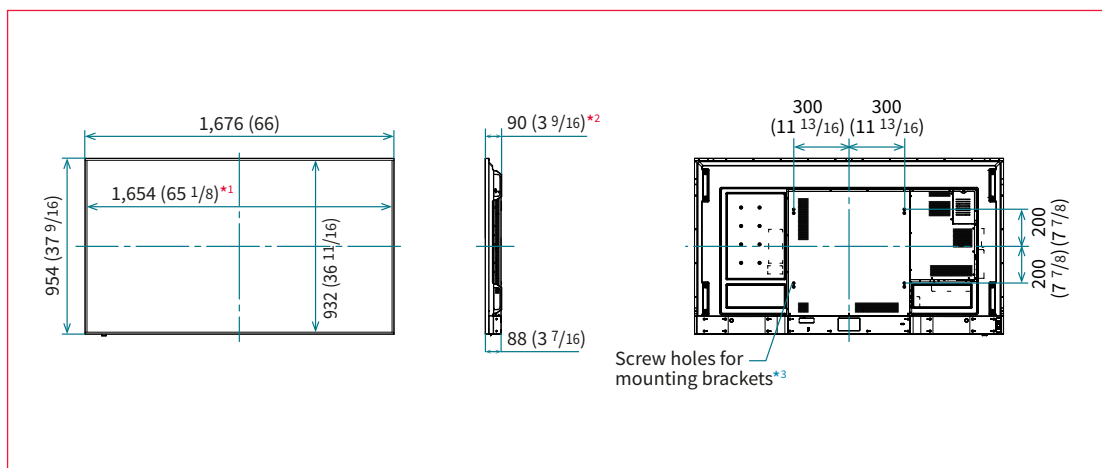
PN-HB851

PN-HM851



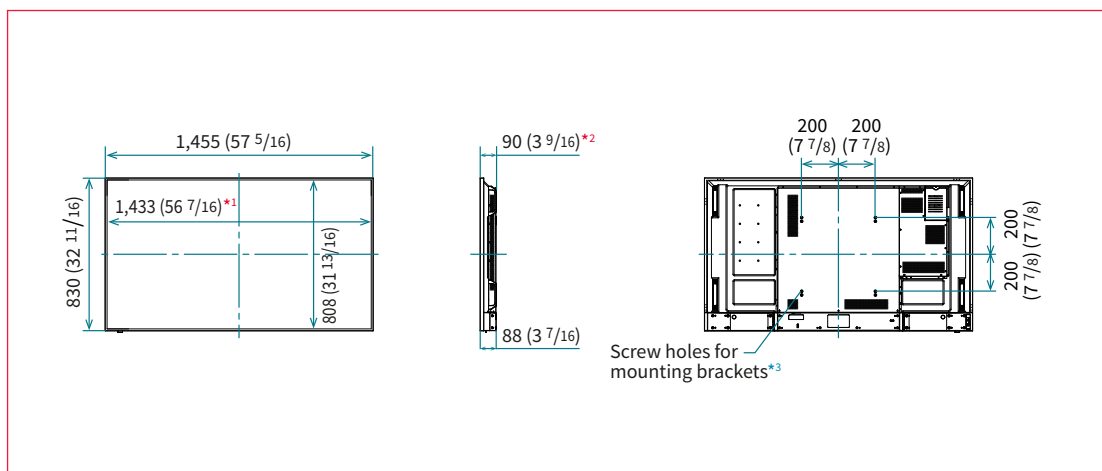
PN-HB751

PN-HM751



PN-HB651

PN-HM651



Units: millimetres, (inches)

\*<sup>1</sup> Screen dimensions. \*<sup>2</sup> Including detachable handle.

\*<sup>3</sup> To use the mounting bracket, use M6 screws that are 8 to 10 mm plus the thickness of the bracket.



# Specifications

Model name		PN-HB851	PN-HM851	PN-HB751	PN-HM751	PN-HB651	PN-HM651
Installation options		Landscape / Portrait / Face-up					
Display	LCD panel	85" Class		75" Class		65" Class	
	LCD type	TFT					
	LED backlight	Direct					
	Native resolution (pixels)	3840 x 2160					
	Max. display colour	10.7 billion					
	Colour processing	10 Bit					
	Brightness in cd/m <sup>2</sup> *1	350	500	350	500	350	500
	Static contrast ratio	5000:1					
	Viewing angle (horizontal x vertical) (CR ≥10)	178°/178°					
	Active screen area (W x H) in mm	1872x1053		1650.24x928,26		1428x803,52	
	Operating time (daily hours / weekly days)	16/7	24/7	16/7	24/7	16/7	24/7
	Response time in ms (grey to grey, avg.)	9.5					
	Pixel pitch (Horizontal x Vertical in mm)	0.488 x 0.488		0.430 x 0.430		0.372 x 0.372	
Inputs	Mini OPS slot	1					
	Analog PV (VGA)	1					
	HDMI2.0; HDMI CEC; HDCP2.2; HDR10	2					
	DisplayPort 1.2 *2	1					
	Audio input 3.5mm mini jack	1					
	Serial RS232C Sub-D 9 Pin *3	1					
Output	Audio out 3.5mm mini jack	1					
	Serial RS232C Sub-D 9 Pin	1					
Android SoC	SD/SDHC memory card slot	1					
	USB 2.0 Type A	3					
	LAN 10BASE-T/ 100BASE-TX/ 1000BASE-T	1					
	SoC System on Chip, CPU	Dual Core (Arm Cortex -A72) processor					
	Memory	4GB					
	Storage	32GB					
	Wireless	WiFi 802.11ac & Bluetooth (integrated)					
	OS	Android 7.1					
Environmental Operating Conditions	Ambient temperature (Landscape/Portrait) *4	0°C - 40°C					
	Ambient temperature Face-Up	0°C - 30°C					
	Ambient humidity (no condensation)	20% - 80%					
Power	Operating power consumption in W	370		320		260	
	Speaker output power in W	10 + 10					
	Plug & play	VESA DDC2B					
Other	Metal cabinet	✓					
	VESA mounting (mm / points / screw)	600 x 400 / 4 point / M6 screw				400 x 400 / 4 point / M6 screw	
	Bezel width in mm top/side/bottom	13/11/11					
	Dimensions (WxHxD) in mm	1902x1083x89		1676x954x88		1455x830x88	
	Weight in kg	45		37		29	
	Accessory kit *5	✓					



# Specifications

Model name		PN-B501		PN-M501		PN-B401		PN-M401	
Installation options		Landscape / Portrait / Face-up / Face-down / Tilted / Hanging							
Display	LCD panel	50" Class			40" Class				
	LCD type	TFT							
	LED backlight	Edge Lit							
	Native resolution (pixels)	1920 x 1080							
	Max. display colour	16.7 million							
	Colour processing	8 Bit							
	Brightness in cd/m <sup>2</sup> *1	300	450	300	450				
	Static contrast ratio	5000:1							
	Viewing angle (horizontal x vertical) (CR ≥10)	178°/178°							
	Active screen area (W x H) in mm	1095.84 x 616.41			878.112 x 485.352				
	Operating time (daily hours / weekly days)	16/7	24/7	16/7	24/7				
	Response time in ms (grey to grey, avg.)	9.5							
	Pixel pitch (Horizontal x Vertical in mm)	0.571 x 0.571			0.457 x 0.449		0.5708 x 0.5708		
Inputs	Mini OPS slot	1							
	Analog PV (VGA)	1							
	HDMI2.0; HDMI CEC; HDCP2.2; HDR10	2							
	DisplayPort 1.2 *2	1							
	Audio input 3.5mm mini jack	1							
	Serial RS232C Sub-D 9 Pin *3	1							
	Audio out 3.5mm mini jack	1							
	Serial RS232C Sub-D 9 Pin	1							
Output	SD/SDHC memory card slot	1							
	USB 2.0 Type A	3							
	LAN 10BASE-T/100BASE-TX/1000BASE-T	1							
Android SoC	SoC System on Chip, CPU	Quad Core (Arm Cortex-A17 processor)							
	Memory	2GB							
	Storage	8GB							
	Wireless	Optional PN-ZW01 (external)							
	OS	Android 4.4.2							
Environmental Operating Conditions	Ambient temperature (Landscape/Portrait) *4	0°C - 40°C							
	Ambient temperature Face-Up	0°C - 30°C							
	Ambient humidity (no condensation)	20% - 80%							
Power	Operating power consumption in W	120			92				
	Standby power in W	-							
	Speaker output power in W	7 + 7							
	Plug & play	VESA DDC2B							
Other	Metal cabinet	Rear side: Metal							
	VESA mounting (mm / points / screw)	400 x 200 / 4 point / M6 screw							
	Bezel width in mm top/side/bottom	11/11/15,2	12,2/12,8/16,2	11/11/15,2	12,2/12,8/16,2				
	Dimensions (WxHxD) in mm	1123x647x68			902x513x66				
	Weight in kg	22			15				
	Accessory kit *5	√							

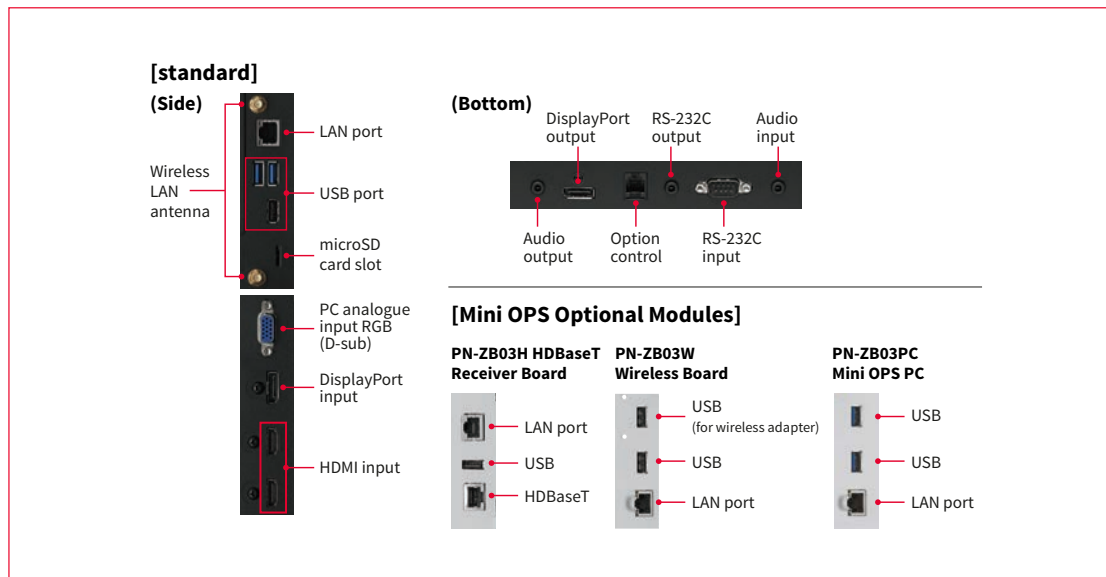


\*1 Brightness depends on input mode and other picture settings. Brightness level will decrease slightly over the lifetime of the product. Due to the physical limitations of the equipment, it is not possible to maintain a precisely constant level of brightness. \*2 Use a commercially available connection cable for PC and other video connections. Loops out to a maximum 4x PN-B/M/HB/HM models only within the range. \*3 Requires the bundled RS-232C conversion cable. \*4 When using the monitor laying flat on a surface (when the monitor is tilted more than 20 degrees upward or downward from the perpendicular in relation to a level surface), use the monitor at a temperature between 0°C and 30°C. Temperature condition may change when using the monitor together with the optional equipments recommended by SHARP. In such cases, please check the temperature condition specified by the optional equipments. \*5 Accessory kit includes; AC power cable, remote control, battery (AAA size x 2), CD-ROM, set-up manual USB flash drive/SD card cover, USB flash drive/SD card cover screw & logo sticker. Arm and Cortex are registered trademarks of ARM Limited (or its subsidiaries) in the US and/or elsewhere. Android is a trademark of Google LLC. The Android robot is reproduced or modified from work created and shared by Google and used according to terms described in the Creative Commons 3.0 Attribution License. Intel is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. MirrorOp is a registered trademark of Barco Limited. HDBaseT and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance. DisplayPort and the DisplayPort Compliance Logo are trademarks owned by the Video Electronics Standards Association in the United States and other countries. The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. Mac is a trademark of Apple Inc., registered in the U.S. and other countries. Windows is a registered trademark of Microsoft Corporation in the United States and other countries. All other brand names and product names may be trademarks or registered trademarks of their respective owners. All screen images appearing in this brochure are simulated. Design and specifications are subject to change without prior notice. Job No: 19076. ©Sharp Corporation. April 2018.

# Input/Output Terminals

PN-HB

PN-HM



PN-B

PN-M

