



# PN-K321 Recommended Video Cards

<Rev1.0>

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Sharp Information and Imaging Company of America



# About this document

## About this document

- Please follow all manufacture's instructions when installing and configuring a particular video card.

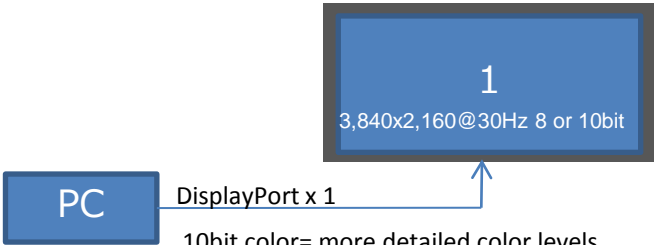
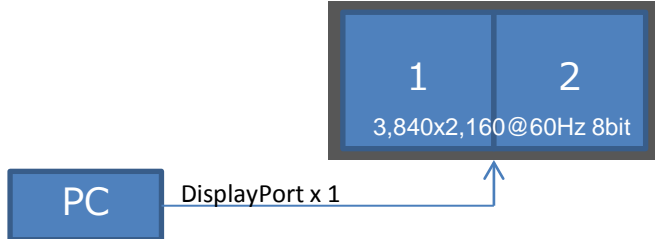
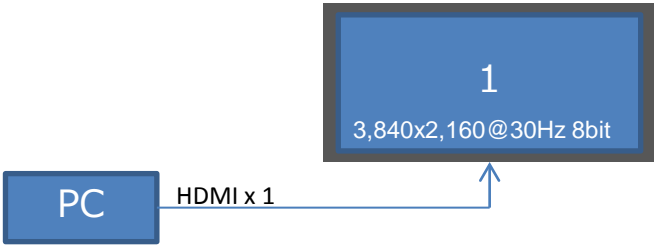
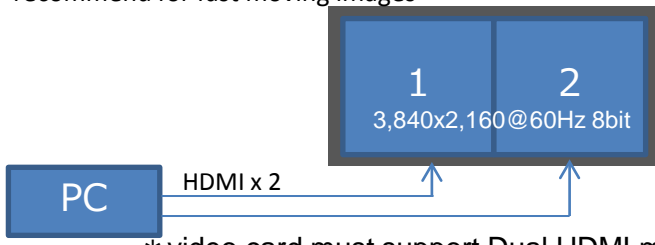
## 【Attention】

- Sharp can not guarantee that the recommended VideoCards described are compatible with the selected PC.
- This document is provided to guide the customer with the selection of compatible VideoCards for use with the Sharp PN-K321 Ultra-HD display.

Please don't pass this information to other manufacturers of similar products.

# → PN-K321 Connections

PN-K321 Ultra-HD(3,840×2,160) - There are two way to display this resolution.

	30Hz Mode (basic) *default mode	60Hz Mode (recommended for video )
Display Port	<p>Single Stream Mode 【SST】</p> <ul style="list-style-type: none"> <li>display the image at 30Hz via one cable</li> <li>10bit color is available but requires a 10bit video card</li> </ul>  <p>10bit color= more detailed color levels 8bit color =normal PC color levels</p>	<p>Multi Stream Mode 【MST】</p> <ul style="list-style-type: none"> <li>display the image at 60Hz via one cable</li> <li>recommended for fast moving images</li> </ul>  <p>* video card must support multi-stream mode</p>
HDMI	<p>HDMI Single 【HDMI DUAL : OFF】</p> <ul style="list-style-type: none"> <li>display the image at 30Hz via one cable</li> </ul> 	<p>HDMI DUAL 【HDMI DUAL : ON】</p> <ul style="list-style-type: none"> <li>display the image at 60Hz via two cables</li> <li>recommend for fast moving images</li> </ul>  <p>* video card must support Dual HDMI mode</p>



# DisplayPort Mode

Single Stream (SST) Mode or MultiStream (MST) mode can be selected

①Single Stream Mode (default) -resolutions up to 3,840×2,160 supported @30Hz

②Multi Stream Mode – resolutions up to 3,840×2,160 supported @60Hz

\*video card must support multi-stream mode

<How to set the PN-K321 for MultiStream Mode >

OSD MENU > DisplayPort Stream > [MST]



# PN-K321 Supported PC resolutions

## ■Compatible signal timing (PC)

Screen resolution		Vsync	DisplayPort	HDMI1 or HDMI2	HDMI DUAL <sup>*1</sup>
VESA	640×480	60Hz	Yes	Yes	-
		72Hz	Yes	Yes	-
		75Hz	Yes	Yes	-
	800×600	56Hz	Yes	Yes	-
		60Hz	Yes	Yes	-
		72Hz	Yes	Yes	-
		75Hz	Yes	Yes	-
	848×480	60Hz	Yes	Yes	-
	1024×768	60Hz	Yes	Yes	-
		70Hz	Yes	Yes	-
		75Hz	Yes	Yes	-
	1152×864	75Hz	Yes	Yes	-
	1280×768	60Hz	Yes	Yes	-
		75Hz	Yes	Yes	-
		60Hz	Yes	Yes	-
	1280×800	60Hz	Yes	Yes	-
	1280×960	60Hz	Yes	Yes	-
	1280×1024	60Hz	Yes	Yes	-
		75Hz	Yes	Yes	-
	1360×768	60Hz	Yes	Yes	-
	1400×1050	60Hz	Yes	Yes	-
	1600×1200	60Hz	Yes	Yes	-
	1680×1050	60Hz	Yes	Yes	-
	1920×1200	60Hz	Yes	-	-
	3840×2160 <sup>*2</sup>	24Hz	Yes	Yes	Yes <sup>*4</sup>
		25Hz	Yes	Yes	-
		30Hz	Yes	Yes	Yes <sup>*4</sup>
		50Hz	Yes <sup>*3</sup>	-	Yes <sup>*4</sup>
		60Hz	Yes <sup>*3</sup>	-	Yes <sup>*4</sup>
	4096×2160 <sup>*2</sup>	24Hz	-	Yes	Yes <sup>*5</sup>
Wide	1280×720	60Hz	Yes	Yes	-
	1920×1080	60Hz	Yes	Yes	-
US TEXT	720×400	70Hz	Yes	Yes	-

Recommended resolutions

<sup>\*1</sup> A single screen is created from simultaneous input of two systems using HDMI1 and HDMI2.

<sup>\*2</sup> Displays a reduced image, except in Dot by Dot In Dot by Dot, the image will be cut down to panel size then displayed.

<sup>\*3</sup> Displays using multi-streaming.

<sup>\*4</sup> The two HDMI input terminals both have 1920 x 2160 signals.

<sup>\*5</sup> The two HDMI input terminals both have 2048 x 2160 signals.

<sup>\*6</sup> The signals for the left and right screens are both 1920 x 2160 signals.

\* All are compliant only with non-interlaced.

\* Depending on the connected PC, images may not be displayed properly even if the compatible signal described above is input.

# → 3,840×2,160 Compatible Video Cards

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## Test configuration

PC-1: HP Z400 Windows 7 Professional SP1 32bit (driver NVIDIA: 310.90、AMD: 9.003.3)

PC-2: HP Z820 Windows 7 Professional SP1 64bit (driver NVIDIA: 307.74、AMD: 8.982.8.3)

PC-3: HP Z420 Windows 7 Professional SP1 64bit (driver NVIDIA: 307.74、AMD: 8.982.8.3)

PC-4: HP Z800 Windows 7 Professional SP1 64bit

\* currently testing the combination between FUJITSU Celsius PC and FirePro video card

		3,840x2,160						
		60Hz / 8bit Color			30Hz / 10bit Color		30Hz / 8bit Color	
		DisplayPort	HDMI dual	HDMI 1 or 2	DisplayPort	HDMI 1 or 2	DisplayPort	HDMI 1 or 2
NVIDIA	Quadro FX1800	×	×	/	◎	×	◎	×
	Quadro 2000	×	×		◎	×	◎	×
	Quadro 4000	×	×		◎	×	◎	×
	Quadro K5000	×※2	◎※4		◎	×	◎	◎※4
AMD	FirePro W600	△※3	×		◎※1	×	◎	×
	FirePro W5000	△※3	×		◎※1	×	◎	×
	FirePro W7000	△※3	×		◎※1	×	◎	×
	FirePro W8000	△※3	×		◎※1	×	◎	×
	FirePro W9000	△※3	×		◎※1	×	◎	×

※1: Windows AERO is not activated, but ok

※2: Does not power-on therefore this combination is not recommended

※3: Integrated Windows desktop is disabled when the cable is removed, monitor is power cycled, or recovery from stand by mode. Integrated Windows desktop must be re-enabled

※4: using DVI-HDMI adapter