

# RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RZ*-A0116A/E	Rev.	1.00
Title	RZ/G1H, G1M, G1N and G1E Addition of Section 23. Video Input Module (VIN).		Information Category	Technical Notification		
Applicable Product	RZ/G Series RZ/G1H,RZ/G1M, RZ/G1N, RZ/G1E	Lot No.	Reference Document	RZ/G Series, User's Manual: Hardware Rev.1.00 (R01UH0543EJ0100)		
		All lots				

This technical update describes document correction of RZ/G Series product.

[Summary]

Added notes to pin configuration of VINn data enable(control) on the Table 23.4.

[Priority level]

Importance: "Normal"

Urgency: "Normal"

[Products]

RZ/G1H,

RZ/G1M,

RZ/G1N,

RZ/G1E

[Section number and title]

Section 23. Video Input Module (VIN)

“This is empty adjustment page to compare next Current (from) and Correction (to) on facing page. “

(By using two pages view of PDF readers this enables previously and prospectively view on odd and even pages.)

[Correction]

1. 23.1.3 Input/Output Pins, Page 23-6

Current (from):

23.1.3 Input/Output Pins

Table 23.4 Pin Configuration

Pin Name	Function	I/O	Description	RZ/G Series Products			
				RZ/G1H	RZ/G1M	RZ/G1N	RZ/G1E
VIN0 video clock (clock)	VI0_CLK	Input	External video clock in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface	√	√	√	√
VIN0 field signal (control)	VI0_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN0 vertical sync signal (control)	VI0_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN0 horizontal sync signal (control)	VI0_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN0 data enable (control)	VI0_CLKENB	Input	Data enable signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used. If the signal is not present in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface, connect the pin to a horizontal sync signal.	√	√	√	√
VIN0 video data (video data)	VI0_R7 to VI0_R0 VI0_G7 to VI0_G0 VI0_B7 to VI0_B0	Input	Data signals in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface Fix these pins high or low respectively when these pins are not used in whole or in part.	√	√	√	—
VIN1 video clock (clock)	VI1_CLK	Input	External video clock in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface	√	√	√	√
VIN1 field signal (control)	VI1_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN1 vertical sync signal (control)	VI1_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN1 horizontal sync signal (control)	VI1_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√

Correction (to):

23.1.3 Input/Output Pins

Table 23.4 Pin Configuration

Pin Name	Function	I/O	Description	RZ/G Series Products			
				RZ/G1H	RZ/G1M	RZ/G1N	RZ/G1E
VIN0 video clock (clock)	VI0_CLK	Input	External video clock in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface	√	√	√	√
VIN0 field signal (control)	VI0_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN0 vertical sync signal (control)	VI0_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN0 horizontal sync signal (control)	VI0_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN0 data enable (control)	VI0_CLKENB	Input	Data enable signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used. If the signal is not present in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface, connect the pin to a horizontal sync signal. <b>Note: When connecting data enable signal to this pin, horizontal sync signal should be negated after 8 cycles of last valid data input.</b> <b>This is from the restrictions specified for the electrical characteristics.</b>	√	√	√	√
VIN0 video data (video data)	VI0_R7 to VI0_R0 VI0_G7 to VI0_G0 VI0_B7 to VI0_B0	Input	Data signals in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface Fix these pins high or low respectively when these pins are not used in whole or in part.	√	√	√	—
VIN1 video clock (clock)	VI1_CLK	Input	External video clock in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface	√	√	√	√
VIN1 field signal (control)	VI1_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN1 vertical sync signal (control)	VI1_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√
VIN1 horizontal sync signal (control)	VI1_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	√

Current (from):

VIN1 data enable (control)	VI1_CLKENB	Input	Data enable signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface Fix this pin high or low when the pin is not used. If the signal is not present in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface, connect the pin to a horizontal sync signal.	√	√	√	√
VIN1 video data (video data)	VI1_R7 to VI1_R0 VI1_G7 to VI1_G0 VI1_B7 to VI1_B0 VI1_DATA7 to VI1_DATA0 VI1_DATA11 to VI1_DATA8 (VI1_G3_B to VI1_G0_B)	Input	Data signals in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface Fix these pins high or low respectively when these pins are not used in whole or in part.	√	√	√	—
VIN2 video clock (clock)	VI2_CLK	Input	External video clock in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface	√	√	√	—
VIN2 field signal (control)	VI2_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix these pins high or low when these pins are not used.	√	√	√	—
VIN2 vertical sync signal (control)	VI2_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	—
VIN2 horizontal sync signal (control)	VI2_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	√	√	—
VIN2 data enable (control)	VI2_CLKENB	Input	Data enable signal in the ITU-R BT.601, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface Fix this pin high or low when the pin is not used. If the signal is not present in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface, connect the pin to a horizontal sync signal.	√	√	√	—
VIN2 video data (video data)	VI2_R7 to VI2_R0 VI2_G7 to VI2_G0 VI2_B7 to VI2_B0	Input	Data signals in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface Fix these pins high or low respectively when these pins are not used in whole or in part.	√	√	√	—
VIN3 video clock (clock)	VI3_CLK	Input	External video clock in the ITU-R BT.601, ITU-R BT.656, or ITU-R BT.709 interface	√	—	—	—

Correction (to):

VIN1 data enable (control)	VI1_CLKENB	Input	<p>Data enable signal in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface</p> <p>Fix this pin high or low when the pin is not used.</p> <p>If the signal is not present in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface, connect the pin to a horizontal sync signal.</p> <p><b>Note: When connecting data enable signal to this pin, horizontal sync signal should be negated after 8 cycles of last valid data input.</b></p> <p><b>This is from the restrictions specified for the electrical characteristics.</b></p>	√	√	√	√
VIN1 video data (video data)	VI1_R7 to VI1_R0 VI1_G7 to VI1_G0 VI1_B7 to VI1_B0 VI1_DATA7 to VI1_DATA0 VI1_DATA11 to VI1_DATA8 (VI1_G3_B to VI1_G0_B)	Input	<p>Data signals in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358, or ITU-R BT.709 interface</p> <p>Fix these pins high or low respectively when these pins are not used in whole or in part.</p>	√	√	√	—
VIN2 video clock (clock)	VI2_CLK	Input	<p>External video clock in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface</p>	√	√	√	—
VIN2 field signal (control)	VI2_FIELD	Input	<p>Field signal in the ITU-R BT.601 or ITU-R BT.709 interface</p> <p>Fix these pins high or low when these pins are not used.</p>	√	√	√	—
VIN2 vertical sync signal (control)	VI2_VSYNC#	Input	<p>Vertical sync signal in the ITU-R BT.601, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface</p> <p>Fix this pin high or low when the pin is not used.</p>	√	√	√	—
VIN2 horizontal sync signal (control)	VI2_HSYNC#	Input	<p>Horizontal sync signal in the ITU-R BT.601, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface</p> <p>Fix this pin high or low when the pin is not used.</p>	√	√	√	—
VIN2 data enable (control)	VI2_CLKENB	Input	<p>Data enable signal in the ITU-R BT.601, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface</p> <p>Fix this pin high or low when the pin is not used.</p> <p>If the signal is not present in the ITU-R BT.601, ITU-R BT.1358, or ITU-R BT.709 interface, connect the pin to a horizontal sync signal.</p> <p><b>Note: When connecting data enable signal to this pin, horizontal sync signal should be negated after 8 cycles of last valid data input.</b></p> <p><b>This is from the restrictions specified for the electrical characteristics.</b></p>	√	√	√	—
VIN2 video data (video data)	VI2_R7 to VI2_R0 VI2_G7 to VI2_G0 VI2_B7 to VI2_B0	Input	<p>Data signals in the ITU-R BT.601, ITU-R BT.656, ITU-R BT.1358 (excluding RZ/G1M/N channel 2), or ITU-R BT.709 interface</p> <p>Fix these pins high or low respectively when these pins are not used in whole or in part.</p>	√	√	√	—
VIN3 video clock (clock)	VI3_CLK	Input	<p>External video clock in the ITU-R BT.601, ITU-R BT.656, or ITU-R BT.709 interface</p>	√	—	—	—

Current (from):				
VIN3 field signal (control)	VI3_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√ — — —
VIN3 vertical sync signal (control)	VI3_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√ — — —
VIN3 horizontal sync signal (control)	VI3_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√ — — —
VIN3 data enable (control)	VI3_CLKENB	Input	Data enable signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used. If the signal is not present in the ITU-R BT.601 or ITU-R BT.709 interface, connect the pin to a horizontal sync signal.	√ — — —
VIN3 video data (video data)	VI3_DATA7 to VI3_DATA0	Input	Data signals in the ITU-R BT.601, ITU-R BT.656, or ITU-R BT.709 interface Fix these pins high or low respectively when these pins are not used in whole or in part.	√ — — —

Correction (to):

VIN3 field signal (control)	VI3_FIELD	Input	Field signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	—	—	—
VIN3 vertical sync signal (control)	VI3_VSYNC#	Input	Vertical sync signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	—	—	—
VIN3 horizontal sync signal (control)	VI3_HSYNC#	Input	Horizontal sync signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used.	√	—	—	—
VIN3 data enable (control)	VI3_CLKENB	Input	Data enable signal in the ITU-R BT.601 or ITU-R BT.709 interface Fix this pin high or low when the pin is not used. If the signal is not present in the ITU-R BT.601 or ITU-R BT.709 interface, connect the pin to a horizontal sync signal. <b>Note: When connecting data enable signal to this pin, horizontal sync signal should be negated after 8 cycles of last valid data input. This is from the restrictions specified for the electrical characteristics.</b>	√	—	—	—
VIN3 video data (video data)	VI3_DATA7 to VI3_DATA0	Input	Data signals in the ITU-R BT.601, ITU-R BT.656, or ITU-R BT.709 interface Fix these pins high or low respectively when these pins are not used in whole or in part.	√	—	—	—

[Description]

Added note to Pin name “VINn data enable (control)” (Function name “VIn\_CLKENB”) in Table 23.4 “Pin Configuration”.  
(n = 0 to 3)

[Reason for Correction]

Limited by the electrical characteristics of the video sync signal.

- End of Document -