

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RA*-A0044A/E	Rev.	1.00
Title	RA2A1 Group, RA4M1 Group, RA4W1 Group, numbers of IO ports		Information Category	Technical Notification		
Applicable Product	RA2A1 Group RA4M1 Group RA4W1 Group	Lot No.	Reference Document	RA2A1 Group User's Manual Hardware Rev.1.00 RA4M1 Group User's Manual Hardware Rev.1.00 RA4W1 Group User's Manual Hardware Rev.1.00		
		All				

The numbers of IO ports are described in UM.

RA2A1

1. Overview

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Table I/O ports

Feature	Functional description
I/O ports	<ul style="list-style-type: none"> ● I/O ports for the 64-pin LQFP <ul style="list-style-type: none"> - I/O pins : 46 - Input pins : 3 - Pull-up resistors : 44 - N-ch open-drain outputs : 24 - 5-V tolerance : 9 ● I/O ports for the 48-pin QFN <ul style="list-style-type: none"> - I/O pins : 30 - Input pins : 3 - Pull-up resistors : 28 - N-ch open-drain outputs : 17 - 5-V tolerance : 6 ● I/O ports for the 40-pin QFN <ul style="list-style-type: none"> - I/O pins : 22 - Input pins : 3 - Pull-up resistors : 20 - N-ch open-drain outputs : 13 - 5-V tolerance : 3 ● I/O ports for the 36-pin BGA <ul style="list-style-type: none"> - I/O pins : 19 - Input pins : 3 - Pull-up resistors : 17 - N-ch open-drain outputs : 13 - 5-V tolerance : 3 ● I/O ports for the 32-pin LQFP <ul style="list-style-type: none"> - I/O pins : 19 - Input pins : 1 - Pull-up resistors : 19 - N-ch open-drain outputs : 15 - 5-V tolerance : 4

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Table Functional comparison

Part numbers		R7FA2A1AB3CFM	R7FA2A1AB3CNE	R7FA2A1AB3CNF	R7FA2A1AB2CBT	R7FA2A1AB3CFJ
I/O ports	I/O pins	46	30	22	19	19
	Input pins	3	3	3	3	1
	Pull-up resistors	44	28	20	17	19
	N-ch open-drain outputs	24	17	13	13	15
	5-V tolerance	9	6	3	3	4

RA4M1

1. Overview

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Table I/O ports

Feature	Functional description
I/O ports	<ul style="list-style-type: none"> ● I/O ports for the 100-pin LQFP, 100-pin LGA <ul style="list-style-type: none"> - I/O pins : 81 - Input pins : 3 - Pull-up resistors : 79 - N-ch open-drain outputs : 64 - 5-V tolerance : 9 ● I/O ports for the 64-pin LQFP, 64-pin QFN <ul style="list-style-type: none"> - I/O pins : 49 - Input pins : 3 - Pull-up resistors : 47 - N-ch open-drain outputs : 36 - 5-V tolerance : 7 ● I/O ports for the 48-pin LQFP, 48-pin QFN <ul style="list-style-type: none"> - I/O pins : 33 - Input pins : 3 - Pull-up resistors : 31 - N-ch open-drain outputs : 22 - 5-V tolerance : 4 ● I/O ports for the 40-pin QFN <ul style="list-style-type: none"> - I/O pins : 25 - Input pins : 3 - Pull-up resistors : 23 - N-ch open-drain outputs : 15 - 5-V tolerance : 2

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Table Functional comparison

Part numbers		R7FA4M1AB3CFP	R7FA4M1AB2CLJ	R7FA4M1AB3CFM/ R7FA4M1AB3CNB	R7FA4M1AB3CFL/ R7FA4M1AB3CNE	R7FA4M1AB3CNF
I/O ports	I/O pins	81		49	33	25
	Input pins	3		3	3	3
	Pull-up resistors	79		47	31	23
	N-ch open-drain outputs	64		36	22	15
	5-V tolerance	9		7	4	2

RA4W1

1. Overview

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Table I/O ports

Feature	Functional description
I/O ports	<ul style="list-style-type: none"> ● I/O ports for the 56-pin QFN <ul style="list-style-type: none"> - I/O pins : 32 - Input pins : 3 - Pull-up resistors : 30 - N-ch open-drain outputs : 25 - 5-V tolerance : 5

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Table Functional comparison

Part numbers		R7FA4W1AD2CNG
I/O ports	I/O pins	32
	Input pins	3
	Pull-up resistors	30
	N-ch open-drain outputs	25
	5-V tolerance	5