

RENESAS TECHNICAL UPDATE

TOYOSU FORESIA, 3-2-24, Toyosu, Koto-ku, Tokyo 135-0061, Japan
Renesas Electronics Corporation

Product Category	MPU/MCU		Document No.	TN-RA*-A0048A/E	Rev.	1.00
Title	RA2L1 Group, RA2E1 Group, RA2E2 Group, numbers of IO ports		Information Category	Technical Notification		
Applicable Product	RA2L1 Group RA2E1 Group RA2E2 Group	Lot No.	Reference Document	RA2L1 Group User's Manual Hardware Rev.1.10 RA2E1 Group User's Manual Hardware Rev.1.10 RA2E2 Group User's Manual Hardware Rev.1.00		
		All				

The numbers of IO ports are described in UM.

RA2L1

1. Overview

1.1 Function Outline page 40

Table I/O ports

Feature	Functional description
I/O ports	<ul style="list-style-type: none"> ● I/O ports for the 100-pin LQFP <ul style="list-style-type: none"> - I/O pins : 82 - Input pins : 3 - Pull-up resistors : 82 - N-ch open-drain outputs : 65 - 5-V tolerance : 5 ● I/O ports for the 80-pin LQFP <ul style="list-style-type: none"> - I/O pins : 66 - Input pins : 3 - Pull-up resistors : 66 - N-ch open-drain outputs : 51 - 5-V tolerance : 5 ● I/O ports for the 64-pin LQFP <ul style="list-style-type: none"> - I/O pins : 50 - Input pins : 3 - Pull-up resistors : 50 - N-ch open-drain outputs : 37 - 5-V tolerance : 5 ● I/O ports for the 48-pin LQFP / HWQFN <ul style="list-style-type: none"> - I/O pins : 34 - Input pins : 3 - Pull-up resistors : 34 - N-ch open-drain outputs : 23 - 5-V tolerance : 4

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Table1.13 Function comparison

Part number		R7FA2L1A B3CFP	R7FA2L1A 93CFP	R7FA2L1A B3CFN	R7FA2L1A 93CFN	R7FA2L1A B3CFM	R7FA2L1A 93CFM	R7FA2L1A B3CFL R7FA2L1A B3CNE	R7FA2L1A 93CFL R7FA2L1A 93CNE
I/O ports	I/O pins	82		66		50		34	
	Input pins	3		3		3		3	
	Pull-up resistors	82		66		50		34	
	N-ch open-drain outputs	65		51		37		23	
	5-V tolerance	5		5		5		4	

RA2E1

1. Overview

1.1 Function Outline page 37

Table I/O ports

Feature	Functional description
I/O ports	<ul style="list-style-type: none"> ● I/O ports for the 64-pin LQFP / BGA <ul style="list-style-type: none"> - I/O pins : 53 - Input pins : 3 - Pull-up resistors : 53 - N-ch open-drain outputs : 40 - 5-V tolerance : 3 ● I/O ports for the 48-pin LQFP / HWQFN <ul style="list-style-type: none"> - I/O pins : 37 - Input pins : 3 - Pull-up resistors : 37 - N-ch open-drain outputs : 26 - 5-V tolerance : 3 ● I/O ports for the 36-pin LGA <ul style="list-style-type: none"> - I/O pins : 27 - Input pins : 3 - Pull-up resistors : 27 - N-ch open-drain outputs : 17 - 5-V tolerance : 1 ● I/O ports for the 32-pin LQFP / HWQFN <ul style="list-style-type: none"> - I/O pins : 23 - Input pins : 3 - Pull-up resistors : 23 - N-ch open-drain outputs : 15 - 5-V tolerance : 1 ● I/O ports for the 25-pin WLCSP <ul style="list-style-type: none"> - I/O pins : 20 - Input pins : 1 - Pull-up resistors : 20 - N-ch open-drain outputs : 14 - 5-V tolerance : 3

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Table1.13 Function Comparison

Part number		R7FA2E1A93CFM	R7FA2E1A93CFK	R7FA2E1A93C8U	R7FA2E1A73CFM	R7FA2E1A73CFK	R7FA2E1A73C8U	R7FA2E1A93CFL	R7FA2E1A93CNE	R7FA2E1A73CFL	R7FA2E1A73CNE	R7FA2E1A53CFL	R7FA2E1A53CNE	R7FA2E1A93CLM	R7FA2E1A73CLM	R7FA2E1A53CLM	R7FA2E1A93CFJ	R7FA2E1A93GNH	R7FA2E1A73CFJ	R7FA2E1A73GNH	R7FA2E1A53CFJ	R7FA2E1A53GNH	R7FA2E1A93CBV	R7FA2E1A73CBV	R7FA2E1A53CBV
I/O ports	I/O pins	53			37			27			23			20											
	Input pins	3			3			3			3			1											
	Pull-up resistors	53			37			27			23			20											
	N-ch open-drain outputs	40			26			17			15			14											
	5-V tolerance	3			3			1			1			3											

RA2E2

2. 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 24-pin HWQFN <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 : 2 ● I/O ports for the 20-pin HWQFN <ul style="list-style-type: none"> - I/O pins : 15 - Input pins : 1 - Pull-up resistors : 15 - N-ch open-drain outputs : 12 - 5-V tolerance : 2

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Table1.13 Function Comparison

Part number		R7FA2E2A74CNK R7FA2E2A73CNK R7FA2E2A72DNK	R7FA2E2A54CNK R7FA2E2A53CNK R7FA2E2A52DNK	R7FA2E2A34CNK R7FA2E2A33CNK R7FA2E2A32DNK	R7FA2E2A74CNJ R7FA2E2A73CNJ R7FA2E2A72DNJ	R7FA2E2A54CNJ R7FA2E2A53CNJ R7FA2E2A52DNJ	R7FA2E2A34CNJ R7FA2E2A33CNJ R7FA2E2A32DNJ
I/O ports	I/O pins	19			15		
	Input pins	1			1		
	Pull-up resistors	19			15		
	N-ch open-drain outputs	15			12		
	5-V tolerance	2			2		