

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*-A0047A/E | Rev. | 1.00 |
| Title | RA6M1 Group, RA6M2 Group, RA6M3 Group, RA6T1 Group, numbers of IO ports | | Information Category | Technical Notification | | |
| Applicable Product | RA6M1 Group RA6M2 Group RA6M3 Group RA6T1 Group | Lot No. | Reference Document | RA6M1 Group User's Manual Hardware Rev.1.00 RA6M2 Group User's Manual Hardware Rev.1.10 RA6M3 Group User's Manual Hardware Rev.1.10 RA6T1 Group User's Manual Hardware Rev.1.00 | | |
| | | All | | | | |

The numbers of IO ports are described in UM.

RA6M1

1. Overview

1.1 Function Outline page 55

Table I/O ports

| Feature | Functional description |
|-----------|---|
| I/O ports | <ul style="list-style-type: none"> ● I/O ports for the 100-pin LGA, 100-pin LQFP <ul style="list-style-type: none"> - I/O pins : 67 - Input pins : 9 - Pull-up resistors : 68 - N-ch open-drain outputs : 67 - 5-V tolerance : 14 ● I/O ports for the 64-pin LQFP, 64-pin QFN <ul style="list-style-type: none"> - I/O pins : 35 - Input pins : 5 - Pull-up resistors : 36 - N-ch open-drain outputs : 35 - 5-V tolerance : 9 |

1.4 Function Comparison page 62

Table Functional comparison

| Function | | Part numbers | | | |
|-----------|-------------------------|---------------|---------------|---------------|---------------|
| | | R7FA6M1AD2CLJ | R7FA6M1AD3CLP | R7FA6M1AD3CFM | R7FA6M1AD3CNB |
| I/O ports | I/O pins | 67 | | 35 | |
| | Input pins | 9 | | 5 | |
| | Pull-up resistors | 68 | | 36 | |
| | N-ch open-drain outputs | 67 | | 35 | |
| | 5-V tolerance | 14 | | 9 | |

RA6M2

1. Overview

1.1 Function Outline page 58

Table I/O ports

| Feature | Functional description |
|-----------|--|
| I/O ports | <ul style="list-style-type: none"> ● I/O ports for the 145-pin LGA, 144-pin LQFP <ul style="list-style-type: none"> - I/O pins : 109 - Input pins : 1 - Pull-up resistors : 110 - N-ch open-drain outputs : 109 - 5-V tolerance : 21 ● I/O ports for the 100-pin LQFP <ul style="list-style-type: none"> - I/O pins : 75 - Input pins : 1 - Pull-up resistors : 76 - N-ch open-drain outputs : 75 - 5-V tolerance : 14 |

1.4 Function Comparison page 66

Table Functional comparison

| Function | | Part numbers | | |
|-----------|-------------------------|---------------------------------|---------------------------------|---------------------------------|
| | | R7FA6M2AF2CLK/ R7FA6M2AD2CLK | R7FA6M2AF3CFB/ R7FA6M2AD3CFB | R7FA6M2AF3CFP/ R7FA6M2AD3CFP |
| I/O ports | I/O pins | 109 | | 75 |
| | Input pins | 1 | | 1 |
| | Pull-up resistors | 110 | | 76 |
| | N-ch open-drain outputs | 109 | | 75 |
| | 5-V tolerance | 21 | | 14 |

RA6M3

1. Overview

1.1 Function Outline page 72

Table I/O ports

| Feature | Functional description |
|-----------|---|
| I/O ports | <ul style="list-style-type: none"> ● I/O ports for the 176-pin BGA, 176-pin LQFP <ul style="list-style-type: none"> - I/O pins : 124 - Input pins : 9 - Pull-up resistors : 125 - N-ch open-drain outputs : 124 - 5-V tolerance : 17 ● I/O ports for the 145-pin LGA, 144-pin LQFP <ul style="list-style-type: none"> - I/O pins : 101 - Input pins : 9 - Pull-up resistors : 102 - N-ch open-drain outputs : 101 - 5-V tolerance : 21 ● I/O ports for the 100-pin LQFP <ul style="list-style-type: none"> - I/O pins : 67 - Input pins : 9 - Pull-up resistors : 68 - N-ch open-drain outputs : 67 - 5-V tolerance : 14 |

1.4 Function Comparison page 82

Table Functional comparison

| Function | | Part numbers | | | | |
|-----------|-------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| | | R7FA6M3AH2CBG/ R7FA6M3AF2CBG | R7FA6M3AH3CFC/ R7FA6M3AF3CFC | R7FA6M3AH2CLK/ R7FA6M3AF2CLK | R7FA6M3AH3CFB/ R7FA6M3AF3CFB | R7FA6M3AH3CFP/ R7FA6M3AF3CFP |
| I/O ports | I/O pins | 124 | | 101 | | 67 |
| | Input pins | 9 | | 9 | | 9 |
| | Pull-up resistors | 125 | | 102 | | 68 |
| | N-ch open-drain outputs | 124 | | 101 | | 67 |
| | 5-V tolerance | 17 | | 21 | | 14 |

RA6T1

1. Overview

1.1 Function Outline page 39

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 : 67 - Input pins : 9 - Pull-up resistors : 68 - N-ch open-drain outputs : 67 - 5-V tolerance : 14 ● I/O ports for the 64-pin LQFP <ul style="list-style-type: none"> - I/O pins : 35 - Input pins : 5 - Pull-up resistors : 36 - N-ch open-drain outputs : 35 - 5-V tolerance : 9 |

1.4 Function Comparison page 45

Table Functional comparison

| Function | | Part numbers | | | |
|-----------|-------------------------|---------------|---------------|---------------|---------------|
| | | R7FA6T1AD3CFP | R7FA6T1AB3CFP | R7FA6T1AD3CFM | R7FA6T1AB3CFM |
| I/O ports | I/O pins | 67 | | 35 | |
| | Input pins | 9 | | 5 | |
| | Pull-up resistors | 68 | | 36 | |
| | N-ch open-drain outputs | 67 | | 35 | |
| | 5-V tolerance | 14 | | 9 | |