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I/O Expander

I/O Expander

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Product Overview:

Renesas supports I/O expanders for both x80 compatible type and x68 compatible type MCU/MPU versatile S/P translation for I/O expanders as well as.

Key Features:

- ? 2-wire connection to MCU by adopting I²C bus. » Reduce the wiring space.
- ? Available serial/parallel conversion of data by I²C bus.
- ? I/O port enable the input and output setting to each I/O pin by board design
- ? Available an address setting of I²C bus and enable to tandem connection up to 8 pcs to the bus.

Key Applications:

- ? I/O port expansion of MCU systems
- ? Serial/parallel data conversion for peripheral of MCU

Product Information:

Datasheets are available by clicking the part No. on the product lineup at the bottom.

Product I/O	bit Supply voltage Output current	Features	Part No. (Package)	Applications
DAC+I/O Expander 3-wire Serial Bus	8 bit*1 3-5V 2.5mA	DAC: 4~12ch I/O: 4~12 bit	M62376 (36pin QFP)	Camcorder Projection TV OA equipment
Serial I/O Expander I ² C	8 bit 3-5V 5mA	8 bit serial in parallel out 8 bit parallel in serial out	M62320 (16pin DIP) (16pin SOP) (16pin SSOP)	PDP-TV, LCD-TV Video recorder
Serial I/O Expander	8 bit 2-6V 24mA	Available for anode comm connected LED drive 8 bit serial in parallel out 8 bit parallel in serial out	R8A66154 (16pin SOP)	Key input unit of OA equipment and audi Anode common connected LED driv
	12 bit 2-6V 3mA	12 bit serial in parallel out 12 bit parallel in serial out	R8A66150 (20pin SOP)	Key input unit of OA equipment and audi
	12 bit 2-6V 24mA	Available for anode comm connected LED drive 12 bit serial in parallel out 12 bit parallel in serial out	R8A66152 (20pin SOP)	Key input unit of OA equipment and audi Anode common connected LED driv
	16 bit 2-6V 24mA	Available for anode comm connected LED drive 16 bit serial in parallel out 16 bit parallel in serial out	R8A66155 (24pin SOP)	
	24 bit 2-6V 5mA	24 bit serial in parallel out 24 bit parallel in serial out	R8A66151 (32pin SOP)	Key input unit of OA equipment and audi
	24 bit 2-6V 24mA	Available for anode comm connected LED drive 24 bit serial in parallel out 24 bit parallel in serial out	R8A66156 (36pin SSOP)	Key input unit of OA equipment and audi Anode common connected LED driv
Parallel I/O Expander	8 bit*2 4.5-5.5V 2.5mA*3	Programmable I/O Expander	R8A66153 (64pin LQFP)	Key input unit of OA equipment and audi Voltage interface
Serial I/O Expander with address setting	8 bit 4.5-5.5V 8mA	I/O expander that have both echo back mode and normal mode	M66013 (20pin SOP)	Key input unit of OA equipment and audi Serial bus architect
I/O Expander for serial communication	8 bit 4.5-5.5V 16mA	I/O expander that converts 8 bit parallel data of MCU to 16 bit serial data.	M66014 (24pinSOP)	

- *1: Each 4 ports for DA output and I/O port are fixed. Other 8 ports enable to set by digital data.
- *2: 3 ports for 8 bit I/O, 2 ports for 8 bit high voltage output, 1 port for 4 bit input
- *3: High voltage port is 24V/24mA.

Product Lineup:

I/O Expander

[See more specifications](#)

Part No.	Package	Function	Family	Target application	Package Code
M64620FP	64P6N	High-speed parallel I/O Expander for Z80 CPU	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	64P6N
M64620P	64P4B	High-speed parallel I/O Expander for Z80 CPU	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PRDP0064BA-A (64P4B)
M64621FP	64P6N	High-speed parallel I/O Expander for 68 series CPU	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	64P6N
M64621P	64P4B	High-speed parallel I/O Expander for 68 series CPU	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PRDP0064BA-A (64P4B)
M66013FP	20P2N-A	8-bit I/O expander with address input	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PRSP0020DA-A (20P2N-A)
R8A66150SP	20P2X-C	12-bits I/O Expander	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PRSP0020DG-A (20P2X-C)
R8A66151SP	32P2X-A	24-bit I/O Expander	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PRSP0032DD-A (32P2X-A)
R8A66152SP	20P2X-C	12-bit I/O Expander with LED drive function	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PRSP0020DG-A (20P2X-C)
R8A66153FP	64P6X-B	Programmable buffered I/O Expander	BiCMOS and CMOS I/O Expanders	Peripheral for PC & MCU	PLQP0064KD-A (64P6X-B)
M62320FP	SOP	I ² C to 8 bit I/O expander	I ² C BUS I/O expander	MCU/MPU periferal	PRSP0016DE-A (16P2N-A)
M62320GP	SSOP	I ² C to 8 bit I/O expander	I ² C BUS I/O expander	MCU/MPU periferal	16P2Z-A
M62320P	DIP	I ² C to 8 bit I/O expander	I ² C BUS I/O expander	MCU/MPU periferal	PRDP0016AA-A (16P4)
M62376GP	SSOP	Built-in 8 bit 12ch D/A converter I/O expander	Built-in D/A I/O	MCU/MPU periferal	PLSP0024JA-A (24P2E-A)

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