



UPD60510BF1-HN4-M1-A

Product Spec



Star Product	-	12-bit A/D Converter (ch)	0
Price	-	Over 14-bit A/D Converter (ch)	0
Bit Size	32	Delta-Sigma A/D Converter	NO
Family	R-IN	8-bit D/A Converter (ch)	0
Series	R-IN32M3	10-bit D/A Converter (ch)	0
Group	R-IN32	12-bit D/A Converter (ch)	0
Program Memory (KB)	768	Over 14-bit D/A Converter (ch)	0
RAM (KB)	512	CAN (ch)	2
Data Flash (KB)	0	Ethernet	YES
Program Memory Type	ROMless	Ethernet Remarks	2ch
Cache Memory	NO	USB Host	-
Cache Memory Remarks	-	USB Peripheral	-
Pin Count	324	USB Ports (ch)	-
CPU	Cortex-M3	USB Hi-Speed Support	-
Max. Freq (MHz)	100	USB Endpoints	-
Sub-clock (32.768 kHz)	NO	USB Isochronous Transfer Support	-
On-chip Oscillator	YES	USB Remarks	-
On-chip Oscillator Freq. (MHz)	100	USB MCU/ USB ASSP	-
PLL	YES	Clocked Serial Interface (ch)	2
RTC	NO	SPI (ch)	0
Power-On Reset	-	UART (ch)	2
Low Voltage Detection	-	I2C (ch)	2
Memory Management Unit	-	LIN (ch)	0
Floating Point Unit	NO	IEBus (ch)	0
DMA	YES	Serial Interface Remarks	-
DMA Remarks	DMAC x 4 ch	LCD Segment Count	0
External Bus Expansion	NO	LCD Remarks	0
External Interrupt Pins	29	Display Function	NO



I/O Ports	96	Display Function Remarks	-
8-bit Timer (ch)	0	Operating Voltage Max (V)	1.1
16-bit Timer (ch)	0	Operating Voltage Min (V)	0.9
32-bit Timer (ch)	1	Power Supply	"VDD = 0.9 to 1.1 V, VDDIO = 3.0 to 3.6V"
Watchdog Timer (ch)	1	Operating Temperature Max (°C)	85
Other Timers	-	Operating Temperature Min (°C)	-40
PWM Output	0	Operating Temperature Remarks	-
3-phase PWM Output Function	NO	Remarks	"Industrial communication, include CC-Link IE Field slave IP"
8-bit A/D Converter (ch)	0	Production Status	Under Development
10-bit A/D Converter (ch)	0		

Order Information**Contact**

Please inquire.

Package & Packing

Package	
Renesas code	PRBG0324FB-A
Previous code	P324F1-100-HN4-1
JEITA code	P-BGA324-19x19-1.00
Name	BGA
Terminal count	324
Terminal pitch (mm)	1
Dimensions (mm)	19x19
Mass (g)[TYP,]	1.28
Mounting height (mm)[MAX]	1.95
Terminal material - Base	Sn-Ag-Cu
Terminal material - Surface	-
Drawing Link	 p324f1-100-hn4
Mount pad	 fig0013e
Remarks	B-PBGA,PWB:0.53t

Packing	
Container	JEDEC tray  H8027
Packing	JEDEC Tray Complete dry pack  H8513

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