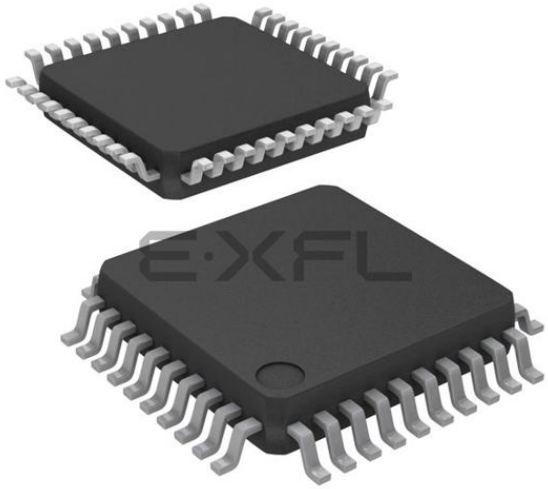
# Renesas Electronics America Inc - R5F10RBAAFP#V0 Datasheet



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## What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

## Applications of "Embedded - Microcontrollers"

| Details | |
|---|---|
| Product Status | Obsolete |
| Core Processor | RL78 |
| Core Size | 16-Bit |
| Speed | 24MHz |
| Connectivity | CSI, I²C, LINbus, UART/USART |
| Peripherals | DMA, LCD, LVD, POR, PWM, WDT |
| Number of I/O | 20 |
| Program Memory Size | 16KB (16K x 8) |
| Program Memory Type | FLASH |
| EEPROM Size | 2K x 8 |
| RAM Size | 1K x 8 |
| Voltage - Supply (Vcc/Vdd) | 1.6V ~ 5.5V |
| Data Converters | A/D 4x8/10b |
| Oscillator Type | Internal |
| Operating Temperature | -40°C ~ 85°C (TA) |
| Mounting Type | Surface Mount |
| Package / Case | 32-LQFP |
| Supplier Device Package | 32-LQFP (7x7) |
| Purchase URL | https://www.e-xfl.com/product-detail/renesas-electronics-america/r5f10rbaafp-v0 |

## 2.3.2 Supply current characteristics

($T_A$ = Š40 to +85°C, 1.6 V EV$_{DD}$ = V$_{DD}$ 5.5 V, V$_{SS}$ = EV$_{SS}$ = 0 V) (1/3)

| Parameter | Symbol | Conditions | | | | | MIN. | TYP. | MAX. | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| Supply current Note 1 | $I_{DD1}$ | Operating mode | HS (high-speed main) mode Note 5 | $f_{IH}$ = 24 MHz Note 3 | Basic operation | $V_{DD}$ = 5.0 V | | 1.5 | | mA |
| | | | | | | $V_{DD}$ = 3.0 V | | 1.5 | | mA |
| | | | | | Normal operation | $V_{DD}$ = 5.0 V | | 3.3 | 5.0 | mA *DDD2DDD2DDD2* |