

R7F7010163AFP

The in-vehicle high-end microcomputer which was the best for body application and had the lineup which can respond to a variety of Systems

OVERVIEW

The RH850/F1L is a product line in Renesas' RH850/F1x series of single chip microcontrollers designed for automotive body applications. The embedded flash memory will range from 256 KB to 2 MB and packages will be covered from small package 48 pin to 176 pin.

Product Status: Product Inquiry

Family: RH850

Series: RH850/F1x

Group: RH850/F1L

PARAMETRICS

Parameters	R7F7010163AFP
Memory	
Program memory	256 KB Flash memory
RAM	32 KB
Data Flash	32 KB

CPU (Bit, Clock, DMA, External Bus etc)	
CPU	RH850G3K (32-bit)
Max. Frequency	80 MHz
On-chip Oscillator Freq.	8 MHz, Low Speed: 240 kHz
PLL	YES
Power-On Reset	YES
Low Voltage Detection	YES
DMA Remarks	DMAC x 16ch
External Interrupt Pins	12
I/O Ports	65
Timers	
16-bit Timers	16 ch
32-bit Timers	4 ch
Watchdog Timers	2 ch
Other Timers	Timer for OS x 1ch
PWM Output	24
Analan	
Analog	And his was a fine fine fine fine fine fine fine fine
A/D Converters	10-bit x 14 ch, 12-bit x 11 ch
Interfaces	
CAN	3 ch
CSIs	1 ch
SPIs	3 ch
UARTS	3 ch
12Cs	1 ch
LIN	5 ch
Serial Interface Remarks	UART: RLIN3, LIN: RLIN3 + RLIN2
Operating Conditions	
Operating Voltage	to 5.5 V
Operating Temperature	-40 to 105 ℃ (Ambient Temperature)
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Remarks	
Remarks	80-pin 32-bit microcontroller with low

power RH850G3K core suitable for car

body control (R850/F1L)

BLOCK DIAGRAM

System 16 x DMA Interrupt Controller ext. Memory Int. SPF: MPU, SRP On-Chip debug Main OSC 2 x IntOSC Sub OSC Power on Clear Clock Monitor CRC ICU-S

32-bit CPU RH850 Core 80 MHz 3.0 - 5.5 V (single voltage) -40 to +125°C 176pin QFP Memory 2048KB Program Flash 192KB RAM 1536KB Program Flash 160KB RAM 1024KB Program Flash 128KB RAM 768KB Flash 96KB RAM 32KB Data Flash **Timers** 1 x 16ch 16-bit Timer 1x OS Timer incl. ENC & TOP 2x WDT 2 x 16ch 16-bit Timer 2 x 4ch 32-bit Timer RTC 72 x 12-bit PWM

Interfaces	
6 x CAN (480 Msg)	
2 x CSI	
4 x QCSI	
6 x UART/LIN	
10 x LIN	
1 x I ² C	
150 x GPIO	
Analog	
34ch A/D + ext. MUX	
24ch A/D	

incl. Diag & Delay