

R7F7010223AFP

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	R7F7010223AFP	
Memory		
Program memory	384 KB Flash memory	
RAM	48 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	13
I/O Ports	81
Timers	
16-bit Timers	32 ch
32-bit Timers	8 ch
Watchdog Timers	2 ch
Other Timers	Timer for OS x 1ch
PWM Output	48
Analog	
A/D Converters	10-bit x 20 ch, 12-bit x 16 ch
AD CONVERCES	TO DIEX 20 CH, 12 DIEX TO CH
Interfaces	
CAN	3 ch
CSIs	1 ch
SPIs	4 ch
UARTS	4 ch
I2Cs	1 ch
LIN	7 ch
Serial Interface Remarks	UART: RLIN3, LIN: RLIN3 + RLIN2
Operating Conditions	
Operating Voltage	to 5.5 V
Operating Temperature	-40 to 105 ℃ (Ambient Temperature)
Remarks	
	400 pin 22 bit microcontroller with low
Remarks	100-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

Memo	ory
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 incl. ENC & TOP	1x OS Timer	
2 x 16ch 16-bit Timer	2x WDT	
2 x 4ch 32-bit Timer	RTC	
72 x 12-bit PWM incl. Diag & Delay		

Interfaces 6 x CAN (480 Msg) 2 x CSI 4 x QCSI 6 x UART/LIN 10 x LIN 1 x I²C

Analog 34ch A/D + ext. MUX 24ch A/D

150 x GPIO