

16-bit Microcontrollers

KLCS-900/L Series

Low power consumption design ideal for high-performance portable equipment

Features

- **Successive KLCS-900 architecture**
 - : Instruction compatible with KLCS-900 series
 - : General purpose 32-bit register
 - : Register bank format
- **Operative on a low power consumption**
 - : Clock gear function/Dual clock function
 - : Four standby modes
 - : Power consumption : 7mA(3V, 12.5MHz, typ.)
- **Operative on a low voltage 4.5V+0.55V @20MHz**
 - : Power supply voltage : 2.7V to 5.5V @12.5MHz
- **Minimum instruction execution time**
 - : 200nS (at 20MHz)
- **Linear address space**
 - : Program : 64k byte/16M bytes
 - : Data : 16M bytes

Additional functions

- Built-in ROM
- 10-bit A/D converter
- Interrupt controllers
 - : 6 external interrupts, 14 internal interrupts
 - : 7-level priority can be set
- General purpose serial interface : 2channels
 - : Usable with a synchronous/an asynchronous transmission for both channels

Application

- Digital movie cameras
- Portable MD players
- Cellular phones

KLCS-900/L1 Series

Next-generation 16-bit microprocessors offering both high performance and low-power operation

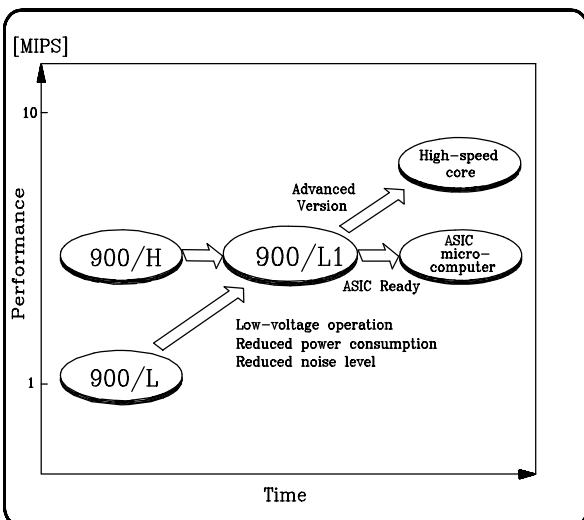
Features

- **Low-voltage operation: 1.8V to 5.5V**
- **Low-power consumption:**
 - 3.0mA (when operating at 3V and 16MHz)
- **Low-noise (EMC register)**
 - EMI: reduced by 30%
 - EMS: noise filter, protection register

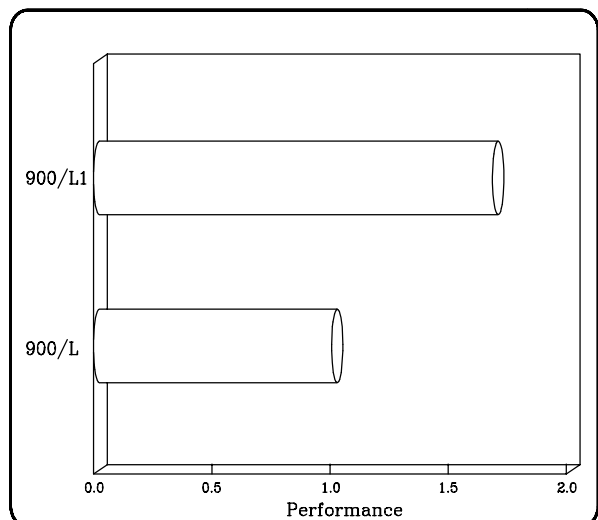
Application

- DSCS
- DVCs
- Portable communication

Core expansion



Comparison of core performance(with 900/L)



16-bit Microcontrollers

900 series Selection Guide

ROM (byte)	RAM (byte)	Product No.	Minimum Instruction Execution Time (μs)		SIO/UART	Synchronous SIO	I ² C Bus / SIO	DRAM Controller	A/D Converter		8-bit DA Converter	LCD Driver	VFL Driver	Timer/Counter	16-bit Channels	8-bit Channels	Clock Timer	Time Base Counter	Pattern Generator	Stepping Motor Controller	8-bit PWM Timer	14-bit PWM Timer	CS/Wait Controller	VCR Servo Controller	Watchdog Timer	Dual Clock	Clock Gear	I/O Port	Operating Temperature (°C)	Built-in OTP	Package
			5V±10%	3V±10%																											

900 Series

NA	NA	Product No.	Note2	200	-	2	-	-	-	4	-	-	-	2	2	-	-	2	-	2	-	3	-	-	-	47	-	-	QFP80 (14×20mm)	
																														32K
		KMP96C041BF																												
		KMP96C031ZF																												
		KMP96C141BF																												
		KMP96CM40F																												

900/L Series

NA	2K	Product No.	320	-	2	-	-	-	8	-	-	-	2	2	-	-	2	-	2	-	3	-	-	-	61	-	-	QFP100 (14×14mm)	
																													8K
		*KMP93CS41F/DF																											
		KMP93CS45F																											
		KMP93CW41DF																											
		KMP93C071F																											
		*KMP93C852F																											
		KMP93CM40F																											
		*KMP93CS20F																											
		KMP93CS32F																											
		KMP93CS40F/DF																											
		KMP93CS42AF																											
		KMP93CS44F																											
		KMP93CT75F																											
		KMP93CW40DF																											
		KMP93CW46AF																											
		*KMP93CW44DF																											

900/H Series

NA	NA	Product No.	160	-	2	-	-	-	4	-	-	-	4	2	-	-	2	-	2	-	4	-	-	-	56	-	-	QFP100 (14×14mm)	
																													64K
		KMP95C001F																											
		KMP95C061BF																											
		KMP95C063F																											
		KMP95C265F																											
		KMP95CS64F																											
		*KMP95FW86F																											
		*KMP95CW64F																											
		*KMP95FW64F																											

900/L1 Series

96K	3K	Product No.	-	250	3	-	-	-	8	-	-	8	2	-	-	-	-	3	-	-	-	-	-	80	-	-	KMP91PW10F	QFP100 (14×14mm)	
																													128K
		KMP91CU10F																											
		KMP91CW11F																											
		*KMP91CW12F																											

900/H2 Series

NA	2K	Product No.	50	-	2	-	2	-	8	2	-	4	4	-	-	-	-	6	-	-	-	-	-	64	-20~70	-	QFP160 (28×28mm)
		KMP94C241F																									

*: Under development ★: Samples available

Note 1: The suffix F in a product number denotes a quade flat package(QFP)

Note 2: Guaranteed minimum instruction execution time is 200ns when operating at temperatures of -20°C to 70°C, or 250ns when operating at temperatures of -40°C to 85°C.

Note 3: Flash E²PROM(USP 4,382,279 owned by BULL CP8)