

SyncMOS MCU Selection Guide

SM59RXX 系列 (RISC 1T/2T)																						
Part No.	VCC	Speed	FLASH	RAM Size	I/O Pin	Package	EEPROM	SPI	IIC	UART	ISP&ICP	WDT	Power Down Wake-Up	OPA	PCA	PWM	ADC	EEl&KBI	RTC&MDU	IRC	ICE	Function
SM59R02A1	3.0/5	25MHZ	8KByte	256+1KB	36/40/44	P/J/Q/V	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes		Dual DPTR
SM59R03A1	3.0/5	25MHZ	12KByte	256+1KB	36/40/44	P/J/Q/V	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes		Dual DPTR
SM59R04A1	3.0/5	25MHZ	16KByte	256+1KB	36/40/44	P/J/Q/V	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes		Dual DPTR
SM59R04A2	3.0/5	25MHZ	16KByte	256+1KB	36/40/44	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes	Yes	Dual DPTR
SM59R08/16A2	3.0/5	25MHZ	32/64KB	256+2KB	48	W/U	Yes	Yes	Yes	X2	ISP/ICP	Yes(2)	Reset/INT/ KBI	Yes	16bit	4ch 12/16bit	4ch10bit	8ch EEI	MDU	Yes	Yes	Dual DPTR
SM59R05A3	3.0/5	25MHZ	20KByte	256+2KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes	Yes	Dual DPTR
SM59R09A3	3.0/5	25MHZ	36KByte	256+2KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes	Yes	Dual DPTR
SM59R16A3	3.0/5	25MHZ	64KByte	256+2KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI		16bit	4ch 10/16bit	8ch10bit	8ch KBI	MDU	Yes	Yes	Dual DPTR
SM59R05A5	3.0/5	25MHZ	20KByte	256+2KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/INT/ WDT/ KBI/ LVI/ RTC	Yes	16bit	4ch 10/16bit	8ch10bit	8ch KBI	RTC/MDU	Yes	Yes	Dual DPTR
SM59R09A5	3.0/5	25MHZ	36KByte	256+2KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/INT/ WDT/ KBI/ LVI/ RTC	Yes	16bit	4ch 10/16bit	8ch10bit	8ch KBI	RTC/MDU	Yes	Yes	Dual DPTR
SM59R16A5	3.0/5	25MHZ	64KByte	256+2KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X2	ISP/ICP	Yes	RST/INT/ WDT/ KBI/ LVI/ RTC	Yes	16bit	4ch 10/16bit	8ch10bit	8ch KBI	RTC/MDU	Yes	Yes	Dual DPTR
SM59R05G6	2.7~5.5	25MHZ	20KByte	256+1KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI		16bit	4ch 10/16bit				Yes	Yes	Dual DPTR
SM59R09G6	2.7~5.5	25MHZ	36KByte	256+1KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI		16bit	4ch 10/16bit				Yes	Yes	Dual DPTR
SM59R16G6	2.7~5.5	25MHZ	64KByte	256+1KB	38/42/46	P/J/Q/V	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI		16bit	4ch 10/16bit				Yes	Yes	Dual DPTR
SM59R02G1	2.7~5.5	25MHZ	8KByte	256Byte	38/42	P/J/Q/V	Yes			X1	ISP	Yes	RST/ INT/ WDT/ LVR		16bit	4ch 16bit				Yes		Dual DPTR
SM39RXX 系列 (RISC 1T~8T , Low Pin Count)																						
Part No.	VCC	Speed	FLASH	RAM Size	I/O Pin	Package	EEPROM	SPI	IIC	UART	ISP&ICP	WDT	Power Down Wake-Up	OPA	PCA	PWM	ADC	KBI	IRC	ICE	Function	
SM39R02G1	2.7~5.5	25MHZ	2KByte	256Byte	12	N(14)/O	Yes		Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI						Yes	Yes		Dual DPTR
SM39R04G1	2.7~5.5	25MHZ	4KByte	256Byte	8/12	N(14)/O/M	Yes		Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI						Yes	Yes		Dual DPTR
SM39R2051	2.7~5.5	25MHZ	2KByte	256Byte	18	20(N/S)	Yes		Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI						Yes	Yes		Dual DPTR/
SM39R4051	2.7~5.5	25MHZ	4KByte	256Byte	18	20(N/S)	Yes		Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ LVI						Yes	Yes		Dual DPTR/
SM39R08A2	2.7~5.5	25MHZ	8KByte	256Byte	18~26	N/S/K/G	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI	Yes	16bit	2ch 10/16bit	8ch10bit	4-ch KBI	Yes	Yes		Dual DPTR
SM39R12A2	2.7~5.5	25MHZ	12KByte	256Byte	18~26	N/S/K/G	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI	Yes	16bit	2ch 10/16bit	8ch10bit	4-ch KBI	Yes	Yes		Dual DPTR
SM39R16A2	2.7~5.5	25MHZ	16KByte	256Byte	18~26	N/S/K/G	Yes	Yes	Yes	X1	ISP/ICP	Yes	RST/ INT/ WDT/ KBI/ LVI	Yes	16bit	2ch 10/16bit	8ch10bit	4-ch KBI	Yes	Yes		Dual DPTR
SM59XX 系列 (12T)																						
Part No.	VCC	Speed	FLASH	RAM Size	I/O Pin	Package	TWSI	UART	ISP	WDT	Power Down Wake-Up	SPWM	PWM	ADC	RTC	Function						
SM5964A	3.3/5	25/40MHZ	64KByte	256+768 Byte(1)	32/36	P/J/Q	Yes	X1	ISP		Reset/ INT		2-ch (5,8)bit			VESA DDC/CI						
SM5964	5	40MHZ	64KByte	256+768 Byte	32/36	P/J/Q		X1	ISP	Yes(2)	Reset		5-ch (5,8)-bit									
SM59264	5	40MHZ	64+64KB(D)	256+768 Byte(1)	32/36	P/J/Q	Yes	X1	ISP	Yes	Reset		4-ch (5,8)-bit			VESA DDC/CI						
SM59128	5	40MHZ	128KByte	256+768 Byte(1)	32/36	P/J/Q	Yes	X1	ISP	Yes	Reset		4-ch (5,8)-bit			VESA DDC/CI						
SM79XX 系列 (12T)																						
Part No.	VCC	Speed	FLASH	RAM Size	I/O Pin	Package	UART	WDT	Power Down Wake-Up	SPWM	PWM	ADC	RTC	Function								
SM79108	3.3/5	40MHZ	8KByte	256Byte	32/36	P/J/Q	X1	Yes	Reset		1-ch (5,8)-bit	1-ch (5,8)bit	4-ch 8bit	LCDD 4X14								
SM79164	3.3/5	25/40MHZ	64KByte	256+3840B(1)	32/36	P/J/Q	X1	Yes	Reset		8-ch (5,8)bit											
SM89XX 系列 (12T)																						
Part No.	VCC	Speed	FLASH	RAM Size	I/O Pin	Package	UART	WDT	Power Down Wake-Up	SPWM	PWM	ADC	RTC	Function								
SM894051	3.3/5	25MHZ	4KByte	128Byte	15	20(P/S)	X1	Yes(2)	Reset					LED Drive sink 20mA								
SM8951A/52A	3.3/5	40MHZ	4/8KByte	256Byte	32/36	P/J/Q	X1	Yes(2)	Reset													
SM8954A/58A/516A	3.3/5	40MHZ	16/32/64KB	256+768 Byte(1)	32/36	P/J/Q	X1	Yes	Reset		5-ch (5,8)-bit											
SM89516	3.3/5	25MHZ	64KByte	256+768 Byte	32/36	P/J/Q	X1	Yes(2)	Reset													
SM89S16R1	3.3/5	40MHZ	64KByte	256+768 Byte(1)	32/36	P/J/Q	X1		Reset/ RTC/ INT		2-ch (5,8)bit	4-ch 6bit	RTC									

(1): Expanding RAM is default disable
 (2): WDT Clock is from External X'tal
 WDT Clock is from Internal X'tal define 250KHz (without (2))
 IIC =TWSI =Two-Wire Series Interface
 EX_INT=External Interrupt Wake-Up

ADC = Analog and Digital Converter (類比數位轉換器)
 KBI=Keyboard Interface=EEl (擴充外部中斷)
 RTC = Real Time Clock (時鐘裝置)
 MDU=Multiplication-Division unit (硬件乘除法器)
 PCA=Programmable Counter Array (16bit Timer 2)
 =capture、compare、clock out、16bit PWM

SM59R16A5ihhkl
 yyymm (yy: year ,mm: month ,v: version)
 i: process (L: 3.3V C: 5V W:2.7~5.5)
 hh: Max Speed (Before SM59RxxG6) or Pin Count (After SM39R & SM59RxxG6)
 k: package type { J:44(PLCC) M:10(MSOP-118mil) N:14/20/24/28(PDIP-300mil) O:14(SOP-150mil)
 {P:40(PDIP) Q:44(QFP) U:64(LQFP) V:48(LQFP) W:64(TQFP) S:20/24/28(SOP-300mil)}
 {K:24/28(Skinny PDIP-300mil) G:20(SSOP-150mil) }
 L:PB Free (No text is Non-PB Free, "P" is PB Free)

Specifications subject to change without notice, contact your sales representatives for the most recent information.