2020

昂寶電子

MCU 產品選型清單

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2020 – Oct.

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MCU 產品區分

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8051 Based 8-bit for Easy Use

- 8-bit Flash MCU With Touch Key
- 8-bit Cost Effective MCU with Touch Key
- 8-bit Flash MCU With ADC
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- 8-bit Flash MCU With LCD Driver
- 8-bit Flash Standard MCU & USB Function

8-bit MCU Product Category

8051 Based 8-bit for Easy Use

不斷精進演化的超性能內核

先進工藝高集成度週邊模組

高速單週期8051 MCU

OB59 Series: Flash-ROM
OB39 Series: Flash-ROM
OB38 Series: MTP-ROM
OB37 Series: OTP-ROM

標準封裝系列
OB59xxxx

工控，安防

低管脚系列
OB39/38/37xxxx

小家電，消費性電子

記憶體空間

- 4KB ~ 128KB Flash
- 4KB/8K16KB MTP ROM
- 4KB OTP-ROM
- 128B ~ 6KB SRAM
- EEPROM
- ISP/IAP/ICP
- 最新工藝技術
- 最高保密性

高性能模擬模組

- 10-bit ADC,900Ksps
- 12-bit ADC, 24-bit ADC
- OPA /比較器
- RC振盪器
- LED/LCD, Touch-key
- 穩壓器與參考電壓源
- 上電復位/掉電檢測

集成週邊

- UART/I2C/SPI/USB
- PCA/PWM
- RTC
- WDT
- 16x16硬體乘除器
- 硬體即時時鐘
- 片內模擬功能

超高可靠度

- 高抗靜電ESD
- 高抗干擾EMI/EFT
- 寬電壓操作
  1.8~5.5V
- 工業溫度規格
  -40 ~ +85℃

封裝

- 最小至10-MSOP
- 最大至80-LQFP
- 標準型：
  DIP/SOP
  PLCC/QFP/LQFP
- 符合RoHS規範

8-bit Flash MCU With Touch Key

8051 Based 8-bit for Easy Use

On-Bright
Brighten Your Life

Part No.	Package	I/O	Flash (KB)	RAM (B)	IRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Touch Key	Max. Speed (MHz)	LED Driver	
						16bit	PCA	UART	I2C	CH	Bits			CH	Bits				COM	SEG
OB39R32T1W20SP	SOP20	18	40	1024	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	6	25	3	8
OB39R32T1W24SP	SOP24	22	40	1024	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	7	12
OB39R32T1W24GP	SSOP24	22	40	1024	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	7	12
OB39R32T1W28SP	SOP28	26	40	1024	22	3	v	2	2	9	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	5	13
OB39R32T1W32VP	LQFP32	30	40	1024	22	3	v	2	2	9	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	7	16
OB39R62T1W20SP	SOP20	18	62	1024	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	6	25	3	8
OB39R62T1W24SP	SOP24	22	62	1024	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	7	12
OB39R62T1W24GP	SSOP24	22	62	1024	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	7	12
OB39R62T1W28SP	SOP28	26	62	1024	22	3	v	2	2	9	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	5	13
OB39R62T1W32VP	LQFP32	30	62	1024	22	3	v	2	2	9	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	8	25	7	16
OB39R32T2W20SP	SOP20	18	40	1408	22	3	v	2	2	6	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	17	25	4	13
OB39R32T2W24SP	SOP24	22	40	1408	22	3	v	1	2	6	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	21	25	6	15
OB39R32T2W24GP	SSOP24	22	40	1408	22	3	v	2	2	6	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	21	25	6	15
OB39R32T2W28SP	SOP28	26	40	1408	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	24	25	7	16
OB39R32T2W32VP	LQFP32	30	40	1408	22	3	v	2	2	9	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	24	25	7	16
OB39R62T2W20SP	SOP20	18	62	1408	22	3	v	2	2	6	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	17	25	4	13
OB39R62T2W24SP	SOP24	22	62	1408	22	3	v	1	2	6	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	21	25	6	15
OB39R62T2W24GP	SSOP24	22	62	1408	22	3	v	2	2	6	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	21	25	6	15
OB39R62T2W28SP	SOP28	26	62	1408	22	3	v	2	2	8	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	24	25	7	16
OB39R62T2W32VP	LQFP32	30	62	1408	22	3	v	2	2	9	12	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	24	25	7	16

8-bit Cost Effective MCU with Touch Key

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Touch Key	Max. Speed (MHz)	LED Driver		EEPROM (B)
						16bit	PCA	UART	I2C	CH	Bits			CH	Bits				COM	SEG	
OB38A04T1W10MP	MSOP10	8	5	320	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	7	16	-	-	128
OB38A04T1W14OP	SOP14	12	5	320	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	9	16	-	-	128
OB38A04T1W16OP	SOP16	14	5	320	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	10	16	-	-	128
OB38A04T1W20BP	QFN20	18	5	320	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	9	16	-	-	128
OB38A08T1W10MP	MSOP10	8	8	512	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	7	16	-	-	128
OB38A08T1W14OP	SOP14	12	8	512	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	9	16	-	-	128
OB38A08T1W16OP	SOP16	14	8	512	16	2	-	1	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ISP, ICP	10	16	-	-	128

8-bit Cost Effective MCU with Touch Key

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Touch Key	Max. Speed (MHz)	LED Driver		EEPROM (B)
						16bit	PCA	UART	I2C	CH	Bits			CH	Bits				COM	SEG	
OB38A08T2W14OP	SOP14	11	9	640	16	3	v	1	2	7	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	7	16	3	7	128
OB38A08T2W16OP	SOP16	13	9	640	16	3	v	1	2	7	12	2.4 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	7	16	5	7	128
OB38A08T2W20EP	TSSOP20	17	9	640	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38A08T2W20SP	SOP20	17	9	640	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38A08T2W24EP	TSSOP24	21	9	640	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38A08T2W24SP	SOP24	21	9	640	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38A08T2W28EP	TSSOP28	25	9	640	16	3	v	1	2	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38A08T2W28SP	SOP28	25	9	640	16	3	v	1	2	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38A16T2W14OP	SOP14	11	16	1280	16	3	v	1	2	7	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	7	16	3	7	128
OB38A16T2W16OP	SOP16	13	16	1280	16	3	v	1	2	7	12	2.4 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	7	16	5	7	128
OB38A16T2W20EP	TSSOP20	17	16	1280	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38A16T2W20SP	SOP20	17	16	1280	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38A16T2W24EP	TSSOP24	21	16	1280	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38A16T2W24SP	SOP24	21	16	1280	16	3	v	1	2	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38A16T2W28EP	TSSOP28	25	16	1280	16	3	v	1	2	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38A16T2W28SP	SOP28	25	16	1280	16	3	v	1	2	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128

8-bit Cost Effective MCU with Touch Key

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Touch Key	Max. Speed (MHz)	LED Driver		EEPROM (B)
						16bit	PCA	UART	I2C	CH	Bits			CH	Bits				COM	SEG	
OB38R08T1W10GP	MSOP10	8	9	432	16	2	v	1	1	2	12	2.4 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	5	16	3	3	128
OB38R08T1W14OP	SOP14	12	9	432	16	2	v	1	1	7	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	7	16	3	7	128
OB38R08T1W16OP	SOP16	14	9	432	16	2	v	1	1	7	12	2.4 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	7	16	5	7	128
OB38R08T1W20EP	TSSOP20	18	9	432	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38R08T1W20SP	SOP20	18	9	432	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38R08T1W20DP	QFN20	18	9	432	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	11	16	5	11	128
OB38R08T1W24EP	TSSOP24	22	9	432	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38R08T1W24SP	SOP24	22	9	432	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38R08T1W28EP	TSSOP28	26	9	432	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38R08T1W28SP	SOP28	26	9	432	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38R16T1W10GP	MSOP10	8	16	768	16	2	v	1	1	2	12	2.4 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	5	16	3	3	128
OB38R16T1W14OP	SOP14	12	16	768	16	2	v	1	1	7	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	7	16	3	7	128
OB38R16T1W16OP	SOP16	14	16	768	16	2	v	1	1	7	12	2.4 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	7	16	5	7	128
OB38R16T1W20EP	TSSOP20	18	16	768	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38R16T1W20SP	SOP20	18	16	768	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	3	13	128
OB38R16T1W20DP	QFN20	18	16	768	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	11	16	5	11	128
OB38R16T1W24EP	TSSOP24	22	16	768	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38R16T1W24SP	SOP24	22	16	768	16	2	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	13	16	7	13	128
OB38R16T1W28EP	TSSOP28	26	16	768	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38R16T1W28SP	SOP28	26	16	768	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	16	16	7	16	128
OB38S013W20EP	TSSOP20	18	16	768	16	2	v	1	1	9	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	11	16	5	11	128

8-bit Flash MCU With ADC

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	Flash (KB)	RAM (B)	IRC (MHz)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	Max. Speed (MHz)
						16bit	PCA	UART	SPI	I2C	CH	Bits			CH	Bits			
OB39R08A5U10MP	MSOP10	8	8	256	22	2	-	1	-	1	8	10	1.8 ~ 5.5	-40 ~ +85	4	10	ICP	1	25
OB39R08A3U14OP	SOP14	12	8	512	22	2	v	1	1	1	2	10	1.8 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	1	25
OB39R08A3U16OP	SOP16	14	8	512	22	2	v	1	-	1	5	10	1.8 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	1	25
OB39R08A3U20GP	SSOP20	18	8	512	22	2	v	1	1	1	7	10	1.8 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25
OB39R08A3U20EP	TSSOP20	18	8	512	22	2	v	1	1	1	7	10	1.8 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25
OB39R08A3U20BP	QFN20	18	8	512	22	2	v	1	1	1	7	10	1.8 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25
OB39R16A3U10MP	MSOP10	8	16	512	22	2	v	1	-	1	2	10	1.8 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	-	25
OB39R16A3U14OP	SOP14	12	16	512	22	2	v	1	1	1	2	10	1.8 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	1	25
OB39R16A3U16OP	SOP16	14	16	512	22	2	v	1	-	1	5	10	1.8 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	1	25
OB39R16A3U20GP	SSOP20	18	16	512	22	2	v	1	1	1	7	10	1.8 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25
OB39R16A3U20EP	TSSOP20	18	16	512	22	2	v	1	1	1	7	10	1.8 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25
OB39R16A3U20BP	QFN20	18	16	512	22	2	v	1	1	1	7	10	1.8 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25
OB39R16A6U24SP	SOP24	22	16	1280	22	2	v	1	1	1	8	10	1.8 ~ 5.5	-40 ~ +85	4	14	ISP, ICP	-	25
OB39R16A6U28SP	SOP28	26	16	1280	22	2	v	1	1	1	8	10	1.8 ~ 5.5	-40 ~ +85	4	14	ISP, ICP	-	25
OB39R16A6U32VP	LQFP32	30	16	1280	22	2	v	1	1	1	8	10	1.8 ~ 5.5	-40 ~ +85	4	14	ISP, ICP	-	25

8-bit Cost Effective MCU With ADC & General-purpose

8051 Based 8-bit for Easy Use

8-bit Cost Effective MCU With ADC & General-purpose

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	OPA	Max. Speed (MHz)	EEPROM (B)
						16bit	PCA	UART	I2C	CH	Bits			CH	Bits					
OB38A08A1W08OP	SOP8	6	8	256	8	4	v	1	1	3	12	2.4 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	-	-	8	128
OB38A08A1W16OP	SOP16	14	8	256	8	4	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	1	1	8	128
OB38A08A1W20EP	TSSOP20	18	8	256	8	4	v	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	2	1	8	128

8-bit Cost Effective MCU With ADC & General-purpose

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	Max. Speed (MHz)	EEPROM (B)
						16bit	PCA	UART	SPI	I2C	CH	Bits			CH	Bits				
OB38R08A1W10MP	MSOP10	8	8	512	16	2	v	1	-	1	4	12	2.4 ~ 5.5	-40 ~ +85	1	10	ISP, ICP	1	16	128
OB38R08A1W14OP	SOP14	12	8	512	16	2	v	1	-	1	3	12	2.4 ~ 5.5	-40 ~ +85	2	10	ISP, ICP	1	16	128
OB38R08A1W16OP	SOP16	14	8	512	16	2	v	1	-	1	5	12	2.4 ~ 5.5	-40 ~ +85	3	10	ISP, ICP	1	16	128
OB38R08A1W20SP	SOP20	18	8	512	16	2	v	1	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	16	128
OB38R08A1W20GP	SSOP20	18	8	512	16	2	v	1	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	16	128
OB38R08A1W20BP	QFN20	18	8	512	16	2	v	1	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	16	128
OB38S003W20EP	TSSOP20	18	8	512	16	2	v	1	1	1	8	12	2.4 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	16	128

8-bit OTP MCU With ADC & General-purpose

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	Max. Speed (MHz)
						16bit	PCA	UART	SPI	I2C	CH	Bits			CH	Bits			
OB37R04G1W10MP	MSOP10	8	4	128	24	2	-	-	-	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ICP	2	24
OB37R04G1W14OP	SOP14	12	4	128	24	2	-	-	-	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ICP	4	24
OB37R04G1W16OP	SOP16	14	4	128	24	2	-	-	-	1	-	-	2.4 ~ 5.5	-40 ~ +85	-	-	ICP	4	24
OB37R04A1W10MP	MSOP10	8	4	128	24	2	v	-	-	1	4	10	2.4 ~ 5.5	-40 ~ +85	-	-	ICP	3	24
OB37R04A1W14OP	SOP14	12	4	128	24	2	v	-	-	1	6	10	2.4 ~ 5.5	-40 ~ +85	-	-	ICP	3	24
OB37R04A1W16OP	SOP16	14	4	128	24	2	v	-	-	1	8	10	2.4 ~ 5.5	-40 ~ +85	-	-	ICP	4	24

8-bit Flash MCU With LCD Driver

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	Flash (KB)	RAM (B)	IRC (MHz)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	Max. Speed (MHz)	RTC	LCD
						16bit	PCA	UART	SPI	I2C	CH	Bits			CH	Bits					
OB39A16D1W48VP	LQFP48	41	16	512	22	2	v	-	1	1	7	10	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	1	25	v	4x27
OB39A16D2W48VP	LQFP48	41	16	512	22	2	v	1	1	1	7	10	2.2 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	1	25	v	4x27

8-bit Flash Standard MCU & USB Function

8051 Based 8-bit for Easy Use

Part No.	Package	I/O	Flash (KB)	RAM (B)	IRC (MHz)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	Max. Speed (MHz)	RTC	USB
						16bit	PCA	UART	SPI	I2C	CH	Bits			CH	Bits					
OB59A16U1U48VP	LQFP48	38	64	6400	22	2	v	2	1	1	8	10	2.2 ~ 5.5	-40 ~ +85	8	14	ISP, ICP	2	25	-	2.0
OB59R16G6W44QP	QFP44	42	64	1280	22	2	v	1	1	1	-	-	2.7 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	-	25	-	-
OB59R16G6W48VP	LQFP48	46	64	1280	22	2	v	1	1	1	-	-	2.7 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	-	25	-	-
OB59R16A5L44QP	QFP44	42	64	2304	24	2	v	2	1	1	8	10	2.7 ~ 3.6	-40 ~ +85	4	10	ISP, ICP	2	25	v	-
OB59R16A5L48VP	LQFP48	46	64	2304	24	2	v	2	1	1	8	10	2.7 ~ 3.6	-40 ~ +85	4	10	ISP, ICP	2	25	v	-
OB59R16A5C44QP	QFP44	42	64	2304	24	2	v	2	1	1	8	10	4.5 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25	v	-
OB59R16A5C48VP	LQFP48	46	64	2304	24	2	v	2	1	1	8	10	4.5 ~ 5.5	-40 ~ +85	4	10	ISP, ICP	2	25	v	-

02

ARM® Cortex®-M0 32-bit for Smart

- 32-bit Flash MCU With ADC

32-bit MCU Product Category

ARM® Cortex®-M0 32-bit for Smart

不断精进演化的超性能内核

先进工艺高集成度外围模块

ARM Cortex-M0

系统方案芯片
OB662x

高性能泛用芯片
OB90xxxx

内存空间

- 32KB ~ 256KB Flash
- 4KB ~ 32KB SRAM
- EEPROM
- ISP/IAP/ICP
- 最新工艺技术
- 最高保密性

高性能模拟模块

- 12-bit ADC,1Msps
- 16-bit Sigma-delta ADC
- OPA /比较器
- RC 振荡器
- PLL
- 稳压器与参考电压源
- 上电复位/掉电检测

集成外围

- UART/I2C/SPI
- Timer/PWM/RTC
- LED/LCD Driver
- CORDIC
- DMA
- MDU硬件乘除器
- 片内仿真功能

超高可靠度

- 高抗静电ESD
- 高抗干扰EMI/EFT
- 宽电压操作 1.8~5.5V
- 工业温度规格 -40 ~ +105℃

封装形态

- 最小至20-TSSOP
- 最大至64-LQFP
- 标准型：TSSOP/QFN/LQFP
- 符合RoHS规范

32-bit Flash MCU With ADC

ARM® Cortex®-M0 32-bit for Smart

Part No.	Package	I/O	Flash (KB)	RAM (KB)	Max. Speed (MHz)	Timer			Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM-M		Int. Vref	Comparator	MDU
						32bit	16bit	RTC	UART	SPI	I2C	CH	Bits			CH	Bits			
OB90R32A1U20EP	TSSOP20	17	32	4	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R32A1U20SP	SOP20	17	32	4	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R32A1U32CP	QFN32	29	32	4	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R32A1U32VP	LQFP32	29	32	4	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R64A1U20EP	TSSOP20	17	64	8	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R64A1U20SP	SOP20	17	64	8	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R64A1U32CP	QFN32	29	64	8	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R64A1U32VP	LQFP32	29	64	8	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R32A2U20EP	TSSOP20	18	32	4	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R32A2U20SP	SOP20	18	32	4	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R32A2U32CP	QFN32	30	32	4	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R32A2U32VP	LQFP32	30	32	4	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R64A2U20EP	TSSOP20	18	64	8	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R64A2U20SP	SOP20	18	64	8	50	2	2	-	2	1	2	4	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	2	v
OB90R64A2U32CP	QFN32	30	64	8	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v
OB90R64A2U32VP	LQFP32	30	64	8	50	2	2	-	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	v

32-bit Flash MCU With ADC

ARM® Cortex®-M0 32-bit for Smart

Part No.	Package	I/O	Flash (KB)	RAM (KB)	Max. Speed (MHz)	Timer			Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM-M		Int. Vref	Comparator	MDU	CORDIC	QEI
						32bit	16bit	RTC	UART	SPI	I2C	CH	Bits			CH	Bits					
OB90A128A1U48VP	LQFP48	43	128	16	50	2	2	v	2	1	2	16	12	1.8 ~ 5.5	-40 ~ +105	12	16	v	4	v	v	v
OB90A128A1U64VP	LQFP64	58	128	16	50	2	2	v	2	1	2	16	12	1.8 ~ 5.5	-40 ~ +105	12	16	v	4	v	v	v

03

Motor Control for Anywhere

- Pure Motor Controller
- BLDC/PMSM Solution

Pure Motor Controller

Motor Control for Anywhere

On-Bright
Brighten Your Life

8-bit Flash BLDC/PMSM Controller

Part No.	Package	I/O	Flash (KB)	RAM (B)	IRC (MHz)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		ISP/ICP	Comparator	Max. Speed (MHz)
						16bit	PCA	UART	SPI	I2C	CH	Bits			CH	Bits			
OB39A16M1U16SP	SOP16	14	16	1280	22	2	v	1	1	1	2	10	1.8 ~ 5.5	-40 ~ +85	6	14	ISP, ICP	3	25
OB39A16M1U20SP	SOP20	18	16	1280	22	2	v	1	1	1	6	10	1.8 ~ 5.5	-40 ~ +85	6	14	ISP, ICP	3	25
OB39A16M1U32VP	LQFP32	30	16	1280	22	2	v	1	1	1	8	10	1.8 ~ 5.5	-40 ~ +85	8	14	ISP, ICP	3	25

32-bit Flash BLDC/PMSM Controller with FOC Algorithm

Part No.	Package	I/O	Flash (KB)	RAM (KB)	IRC (MHz)	Timer			Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM-M		Int. Vref	Comparator	OPA	CORDIC	QEI
						16bit	32bit	RTC	UART	SPI	I2C	CH	Bits			CH	Bits					
OB90A32M1U48VP	LQFP48	46	32	4	50	2	2	v	2	1	2	12	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	4	4	v	v
OB90A64M1U48VP	LQFP48	46	64	8	50	2	2	v	2	1	2	12	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	4	4	v	v
OB90A32M2U32VP	LQFP32	30	32	4	50	2	2	v	2	1	2	5	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	4	v	v
OB90A32M3U32VP	LQFP32	30	32	4	72	2	1	-	1	1	1	13	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	3	v	-

8-bit MCU BLDC/PMSM Control Solution

Motor Control for Anywhere

8-bit BLDC/PMSM Controller

V Build-in LV Gate driver, Up to DC 65V, Application for BLDC Motor

Part No.	Package	I/O	Flash (KB)	RAM(B)	IRC (MHz)	Timer	Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM-M		Build-In			HW Protection
						16bit	UART	SPI	I2C	CH	Bits			CH	Bits	LDO	Gate Driver	Comparator	
OB6610VP	TSSOP16	14	16	1280	22	3	-	-	1	2	10	1.8 ~ 5.5	-40 ~ +85	6	14	-	-	1	-
OB6610CIP	SOP20	18	16	1280	22	3	-	1	1	6	10	1.8 ~ 5.5	-40 ~ +85	6	14	-	-	1	-
OB6610GNP	LQFP32	30	16	1280	22	3	1	1	1	8	10	1.8 ~ 5.5	-40 ~ +85	8	14	-	-	3	-
OB6615FP	QFN52	20	16	1280	22	3	1	1	1	7	10	4.6 ~ 19	-40 ~ +85	6	14	v	v	3	OCP/SCP/OVP/ULVP
OB6616GP	LQFP44	20	16	1280	22	3	1	1	1	7	10	10 ~ 17	-40 ~ +85	6	14	v	v	3	OCP/SCP/OVP/ULVP
OB6617LGQP	LQFP48	20	16	1280	22	3	1	1	1	7	10	4.6 ~ 17	-40 ~ +85	6	14	v	v	3	OCP/SCP/OVP/ULVP
OB6617GP	LQFP48	20	16	1280	22	3	1	1	1	7	10	10 ~ 17	-40 ~ +85	6	14	v	v	3	OCP/SCP/OVP/ULVP

32-bit MCU BLDC/PMSM Control Solution

Motor Control for Anywhere

On-Bright
Brighten Your Life

32-bit BLDC/PMSM Controller with FOC Algorithm

V Build-in LV Gate driver, Up to DC 85V, Application for BLDC Motor

Part No.	Package	I/O	Flash (KB)	RAM (KB)	Timer		Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	MDU	Build-In				HW Protection
					16bit	32bit	UART	SPI	I2C	CH	Bits				LDO	OPA	Gate Driver	Comparator	
OB6625VIP	TSSOP20	10	32	4	2	1	1	1	1	5	12	10 ~ 17	-40 ~ +105	v	v	1	v	2	OCP/SCP/OVP/ULVP
OB6625VKP	TSSOP24	14	32	4	2	1	1	1	1	6	12	10 ~ 17	-40 ~ +105	v	v	3	v	3	OCP/SCP/OVP/ULVP
OB6626GQP	QFN64	31	64	8	2	2	2	1	1	8	12	10 ~ 17	-40 ~ +105	v	v	4	v	4	OCP/SCP/OVP/ULVP
OB6627GQP	LQFP48	23	32	4	2	2	1	1	1	8	12	10 ~ 17	-40 ~ +105	v	v	3	v	4	OCP/SCP/OVP/ULVP
OB6628FOP	QFN40	18	32	4	2	1	1	1	1	5	12	10 ~ 17	-40 ~ +105	v	v	3	v	2	OCP/SCP/OVP/ULVP

32-bit BLDC/PMSM Controller with FOC Algorithm

V Application for High or Low voltage BLDC Motor

Part No.	Package	I/O	Flash (KB)	RAM (KB)	Max. Speed (MHz)	Timer			Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM-M		Int. Vref	Comparator	OPA	CORDIC	QEI
						32bit	16bit	RTC	UART	SPI	I2C	CH	Bits			CH	Bits					
OB6620VLP	TSSOP28	26	32	4	50	2	2	v	2	1	2	8	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	4	2	-	-
OB6621GNP	LQFP32	30	32	4	50	2	2	v	2	1	2	7	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	4	4	v	-
OB6622GQP	LQFP48	46	32	4	50	2	2	v	2	1	2	12	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	4	4	v	v
OB6623GNP	LQFP32	30	32	4	72	2	1	-	1	1	1	13	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	3	3	v	-
OB6624FPP	QFN44	42	32	4	50	2	2	v	2	1	2	12	12	1.8 ~ 5.5	-40 ~ +105	6	16	v	4	4	v	v

04

OB Solution & Applications

- 2.4G RF Wireless Controller & Module Board
- Li-Ion Power Bank Controller
- Ultra Voltage Home Appliance 8-bit Flash Controller

2.4G RF Wireless Controller & Module Board

Home Appliance for Your Life

On-Bright
Brighten Your Life

2.4G RF Wireless Controller

Part No.	Package	I/O	Flash (KB)	RAM (B)	IRC (MHz)	Timer	Peripheral			ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		Operating Frequency (MHz)	Transmisson rate (bps)
						16bit	UART	RSSI	I2C	CH	Bits			CH	Bits		
OB6121VP	TSSOP20	2	8	256	22	2	-	v	1	2	10	2.0 ~ 3.6	-40 ~ +85	2	10	2400 ~ 2483	250K/2M
OB6122VP	TSSOP20	8	16	512	22	3	1	v	1	4	10	2.0 ~ 3.6	-40 ~ +85	2	10	2400 ~ 2483	250K/2M
OB6122LVP	TSSOP20	12	16	512	22	3	1	v	1	7	10	2.0 ~ 3.6	-40 ~ +85	3	10	2400 ~ 2483	250K/2M
OB6123VP	TSSOP24	9	16	1280	22	2	1	v	1	-	-	2.0 ~ 3.6	-40 ~ +85	3	10	2400 ~ 2483	250K/2M
OB6125VP	TSSOP24	9	64	1280	22	3	1	v	1	-	-	2.0 ~ 3.6	-40 ~ +85	4	10	2400 ~ 2483	250K/2M

2.4G RF Wireless Module Board

产品型号	封装	发射功耗 (mA)	应用方案	接收灵敏度 (dBm)	数据速率 (bps)	频带范围 (MHz)	最大发射功率	接收功耗 (mA)	电压范围 (V)	温度范围 (˚C)
OBM6121	TSSOP20	32 @8dbm	2.4G 遥控器	-88 @1Mbps	250K/2M	2400 ~2483	8 dBm	20	2.0 ~ 3.6	-40 ~ +85
OBM6122L	TSSOP20	32 @8dbm	2.4G 无线调光	-88 @1Mbps	250K/2M	2400 ~2483	8 dBm	20	2.0 ~ 3.6	-40 ~ +85

Li-Ion Power Bank Controller

Home Appliance for Your Life

Li-Ion Power Bank Controller

Part No.	Package	I/O	Output Power	Buck/Boost Efficiency	Sleep Current (uA)	Timer	Peripheral		Operating Voltage (V)	Operating Temp. (˚C)	Buck/Boost Frequency (KHz)	Build-In		HW Protection
						16bit	UART	I2C				LDO	Buck/Boost Driver	
OB2112UP	TSSOP20	5	2.4A @ 5V	91%	50	3	1	1	2.6 ~ 6	-40 ~ +85	300/600	v	v	OCP/SCP/OVP/OTP/ULVP
OB2112VP	TSSOP28	12	2.4A @ 5V	91%	50	3	1	1	2.6 ~ 6	-40 ~ +85	300/600	v	v	OCP/SCP/OVP/OTP/ULVP
OB2112FP	QFN28	12	2.4A @ 5V	91%	50	3	1	1	2.6 ~ 6	-40 ~ +85	300/600	v	v	OCP/SCP/OVP/OTP/ULVP

Ultra Voltage Home Appliance 8-bit Flash Controller

Home Appliance for Your Life

Induction Cooker Controller

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	Build-In				HW Protection
						16bit	PCA	UART	I2C	CH	Bits			LDO	ZDI	HV-MOSFET	IGBT Driver	
OB6652CKP	SOP24	5	16	256	22	3	-	1	1	5	10	13 ~ 24	-40 ~ +85	v	v	3	v	Surge/OCP/OVP/OTP/ULVP
OB6653CIP	SOP20	5	16	256	22	3	-	1	1	5	10	13 ~ 24	-40 ~ +85	v	v	-	v	Surge/OCP/OVP/OTP/ULVP

Electric Heating Controller

Part No.	Package	I/O	ROM (KB)	RAM (B)	HIRC (MHz)	Timer		Peripheral		ADC		Operating Voltage (V)	Operating Temp. (˚C)	PWM		Build-In				LED Driver	
						16bit	PCA	UART	I2C	CH	Bits			CH	Bits	LDO	ZDI	Touch Key	30V MOSFET	COM	SEG
OB5512KP	SOP20	13	8	512	22	2	1	-	1	5	10	10.8 ~ 30	-40 ~ +85	3	10	-	v	-	3	-	-
OB5513CP	SOP28	13	8	1280	22	2	1	1	1	8	10	10.8 ~ 30	-40 ~ +85	-	-	-	v	-	3	-	-
OB5531CLP	SOP28	19	15	768	16	2	1	1	1	7	12	10.8 ~ 30	-40 ~ +85	3	10	v	v	12	3	6	11
OB5532CP	SOP28	21	32	1024	22	3	1	2	1	8	12	10.8 ~ 30	-40 ~ +85	3	10	v	v	8	3	7	13
OB5533GP	LQFP33	25	32	1024	22	3	1	2	1	8	12	10.8 ~ 30	-40 ~ +85	4	10	v	v	8	3	7	16

05

Development Tools

- MSM9068 For 32-Bit ISP/ICP/ICE
- MSM9066 For 8-Bit ISP/ICP/ICE
- SMAP 烧录工具软件
- ChipWatcher 仿真工具软件

MSM9066 & MSM9068 系統開發工具

Development Tools

MSM9068
For 32-Bit ISP/ICP/ICE

燒錄/模擬一體機

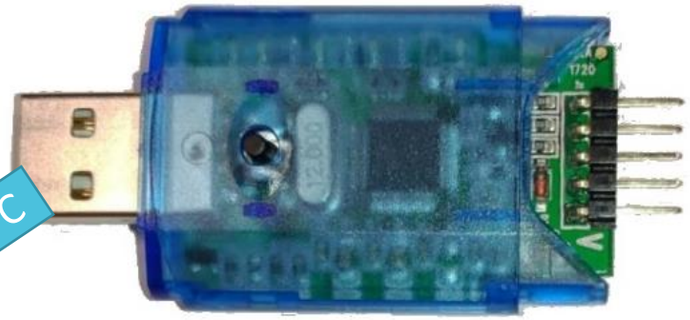
MSM9066
For 8-Bit ISP/ICP/ICE

MSM9068 & MSM9066 功能:

- ✓線上燒錄 (ISP/ICP)
- ✓離線燒錄 (ISP/ICP)
- ✓線上模擬 (ICE)

Target Board

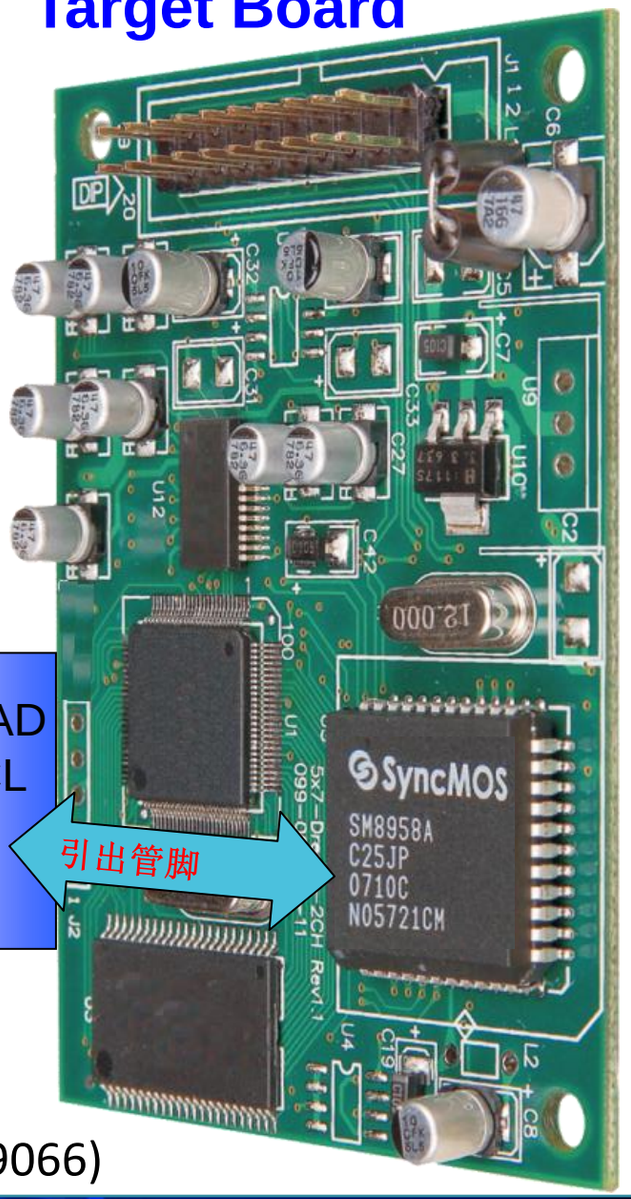
USB to NB & PC



TXD
RXD
GND
VCC

OCI_SDAD
OCI_SCL
GND
VDD

引出管脚



- 燒錄工具: 軟體(SMAP)搭配硬體(MSM9068 & MSM9066)
- 模擬工具: 軟體(Chipwatcher)搭配硬體(MSM9068 & MSM9066)

燒錄工具 (SMAP) 及模擬工具 (Chipwatcher) 下載

Development Tools

下載燒錄工具 (SMAP)

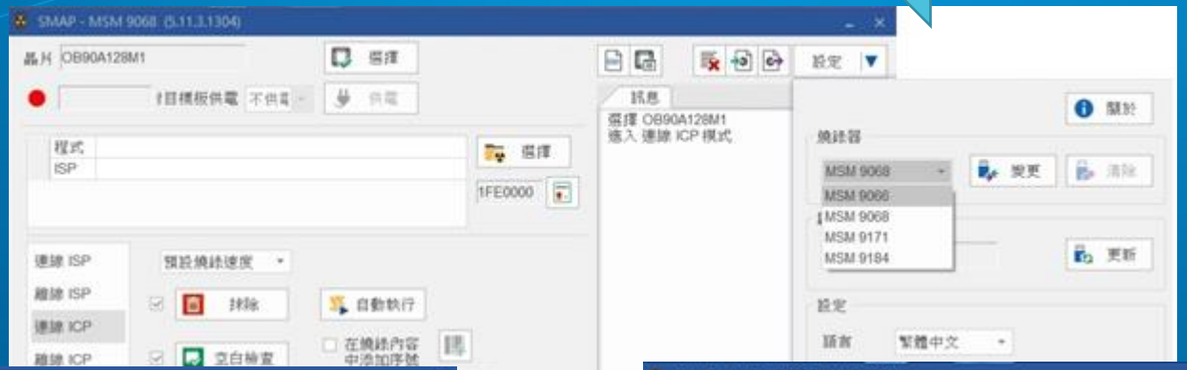
下載模擬工具 (Chipwatcher)

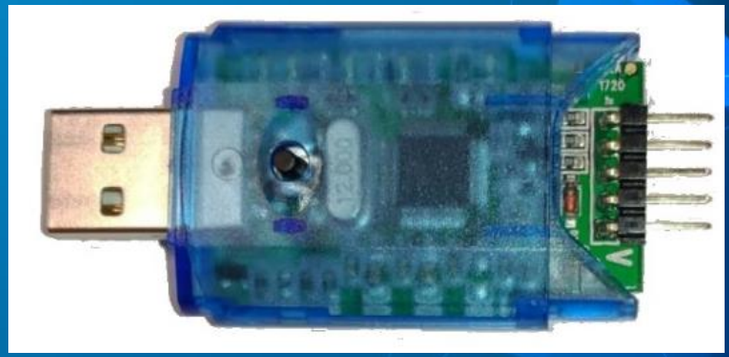
燒錄工具: 軟體(SMAP)搭配硬體(MSM9068 & MSM9066)

Development Tools

選擇搭配硬體

切換搭配硬件





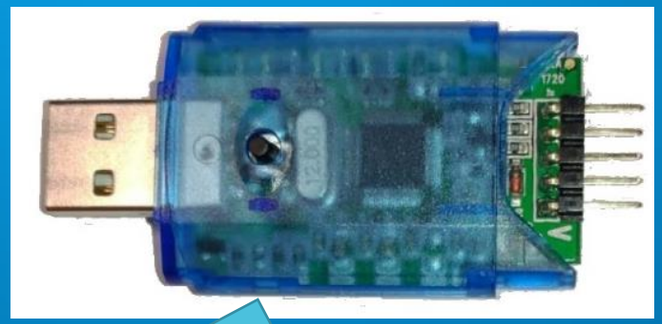
MSM9068 操作介面

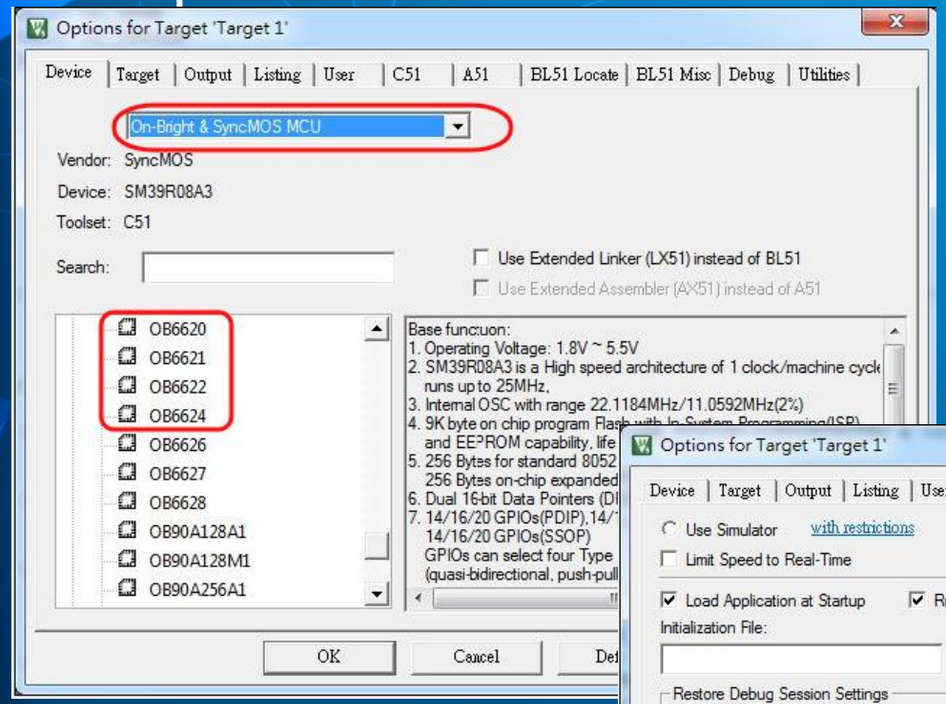
MSM9066 操作介面

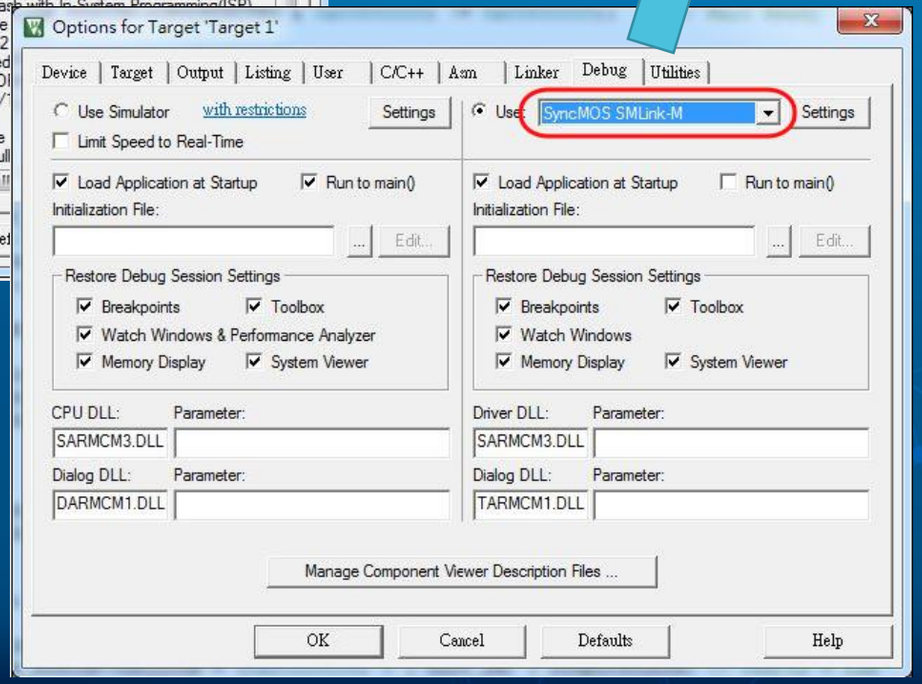
模擬工具: 軟體(Chipwatcher)搭配硬體(MSM9068 & MSM9066)

Development Tools

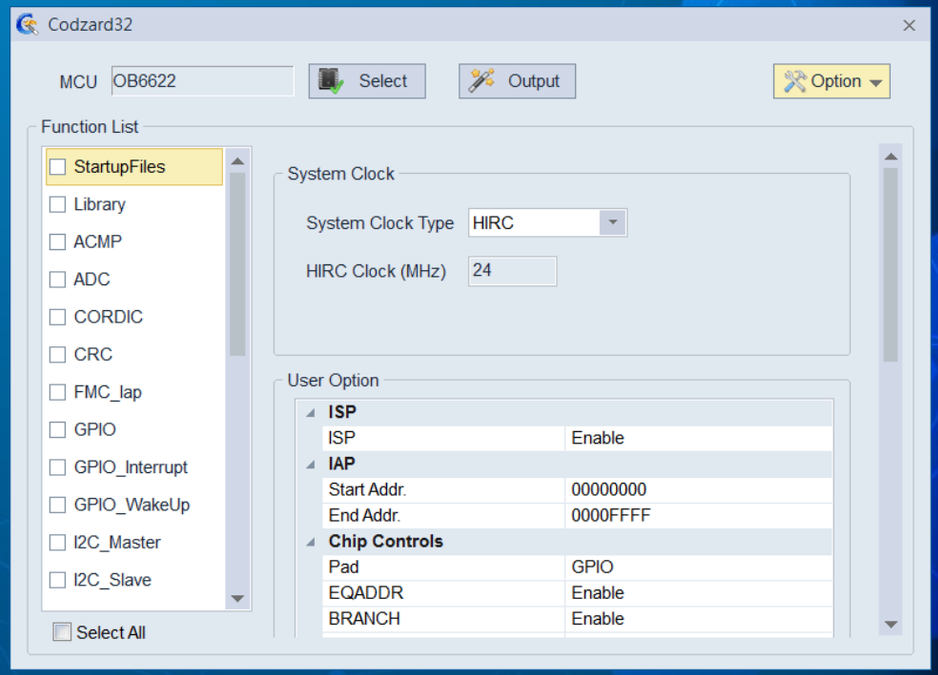
Chipwatcher and SMLinkM :







Codzard32:



THANK YOU

Q & A