

微控制器			
通用型微控制器(16bit) ML62Q2000系列	P.100	通用型微控制器(16bit) ML62Q1000系列	P.102
低功耗微控制器(16bit)	P.106	USB接口及安全功能用微控制器(32bit)	P.106
低电压工作微控制器(8bit)	P.108	语音播放用微控制器(8bit)	P.110

通用型微控制器(16bit)

16bit ML62Q2000系列(搭载U16 Core)

标准型 ML62Q2500组 16bit微控制器(工业设备用)

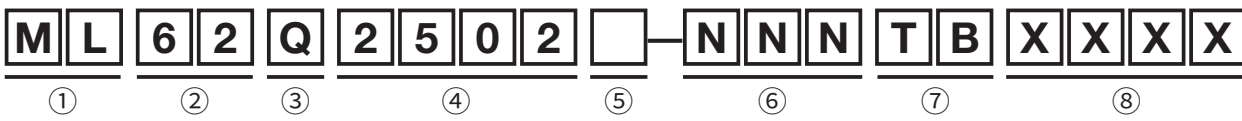
Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)
						Input	Output	Input/Output	High Speed	Low Speed			
☆ML62Q2502	1.8 to 5.5	Flash	64K	4K	8K	3	-	24	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ External oscillation)	41ns/ 30.5µs	(TBD)	-40 to +105
☆ML62Q2503			96K										
☆ML62Q2504			128K										
☆ML62Q2522	1.8 to 5.5	Flash	64K	4K	8K	3	-	32	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ External oscillation)	41ns/ 30.5µs	(TBD)	-40 to +105
☆ML62Q2523			96K										
☆ML62Q2524			128K										
☆ML62Q2532	1.8 to 5.5	Flash	64K	4K	8K	3	-	40	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ External oscillation)	41ns/ 30.5µs	(TBD)	-40 to +105
☆ML62Q2533			96K										
☆ML62Q2534			128K										

搭载LCD驱动器 段码式 ML62Q1700组 16bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)
						Input	Output	Input/Output	High Speed	Low Speed			
☆ML62Q2724	1.8 to 5.5	Flash	128K	4K	16K	3	-	51	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/ 30.5µs	(TBD)	-40 to +105
☆ML62Q2725			160K										
☆ML62Q2726			192K										
☆ML62Q2727			256K										
☆ML62Q2734	1.8 to 5.5	Flash	128K	4K	16K	3	-	65	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/ 30.5µs	(TBD)	-40 to +105
☆ML62Q2735			160K										
☆ML62Q2736			192K										
☆ML62Q2737			256K										
☆ML62Q2744	1.8 to 5.5	Flash	128K	4K	16K	3	-	85	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/ 30.5µs	(TBD)	-40 to +105
☆ML62Q2745			160K										
☆ML62Q2746			192K										
☆ML62Q2747			256K										

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。
 *2 工业设备用途的详情请垂询本公司。
 ☆: 开发中。本目录中的信息, 如遇产品更新等其他原因而发生变更, 恕不另行通知。

ML62Q1000系列品名构成说明



品名编号

- | | | |
|--|--|---|
| <p>①元件类型
ML: 逻辑产品</p> <p>②CPU内核类型
62: 16bit CPU nX-U16/100</p> <p>③ROM类型
Q: 闪存ROM</p> <p>④型号代码
25xx: ML62Q2500组
0x: 32针
2x: 40针
3x: 48针

x2: ROM 64KB
x3: ROM 96KB
x4: ROM 128KB</p> | <p>⑤选项代码
None~x: 对每个产品进行设定</p> <p>⑥ROM代码
NNN: 留空
001~xxx: 定制代码</p> <p>27xx: ML62Q2700 (内置LCD驱动器)
2x: 64针
3x: 80针
4x: 100针

x4: ROM 128KB
x5: ROM 160KB
x6: ROM 192KB
x7: ROM 256KB</p> | <p>⑦封装代码
GD: WQFN
TB: TQFP
GA: QFP</p> <p>⑧LAPIS Technology公司内部代码</p> |
|--|--|---|

(LAPIS Technology产品)

	16bit Timer	16bit Multi Functions Timer	WDT	ADC (method)	DAC	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
						IC	SSIO	UART									
	6 (8bitx12)	2 (TMR, PWM, IGBT, Capture)	1	12bitx14 (SA type)	-	Master/Slavex1, Masterx1	2	Full Duplex x3	VLSx1	-	8	Safety function, Multiplier/Divider	-	P-TQFP32-0707-0.80-ZK6 P-WQFN32-0505-0.50-A63 P-TQFP32-0707-0.80-ZK6 P-WQFN32-0505-0.50-A63 P-TQFP32-0707-0.80-ZK6 P-WQFN32-0505-0.50-A63	-	✓	✓
	6 (8bitx12)	2 (TMR, PWM, IGBT, Capture)	1	12bitx14 (SA type)	-	Master/Slavex1, Masterx1	2	Full Duplex x3	VLSx1	-	8	Safety function, Multiplier/Divider	-	P-WQFN40-0606-0.50-63 P-WQFN40-0606-0.50-63 P-WQFN40-0606-0.50-63	-	✓	✓
	6 (8bitx12)	2 (TMR, PWM, IGBT, Capture)	1	12bitx14 (SA type)	-	Master/Slavex1, Masterx1	2	Full Duplex x3	VLSx1	-	8	Safety function, Multiplier/Divider	-	P-TQFP48-0707-0.50-ZK6 P-WQFN48-0707-0.50-63 P-TQFP48-0707-0.50-ZK6 P-WQFN48-0707-0.50-63 P-TQFP48-0707-0.50-ZK6 P-WQFN48-0707-0.50-63	-	✓	✓
	8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	12bitx12 (SA type)	-	Master/Slavex1, Masterx2	7	Full Duplex x6	VLSx1	Max 280dot 35segx 8com	9	Safety function, Multiplier/Divider, Speech function/ADPCM2 decoder	-	P-QFP64-1414-0.80-ZK6 P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6 P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6 P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6 P-TQFP64-1010-0.50-ZK6	-	✓	✓
	8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	12bitx16 (SA type)	-	Master/Slavex1, Masterx2	7	Full Duplex x6	VLSx1	Max 360dot 45segx 8com	9	Safety function, Multiplier/Divider, Speech function/ADPCM2 decoder	-	P-QFP80-1414-0.65-ZK6 P-QFP80-1414-0.65-ZK6 P-QFP80-1414-0.65-ZK6	-	✓	✓
	8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	12bitx16 (SA type)	-	Master/Slavex1, Masterx2	7	Full Duplex x6	VLSx1	Max 480dot 60segx 8com	9	Safety function, Multiplier/Divider, Speech function/ADPCM2 decoder	-	P-QFP100-1420-0.65-BK6 P-TQFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6 P-TQFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6 P-TQFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6 P-TQFP100-1414-0.50-ZK6	-	✓	✓

微控制器

通用型微控制器 (16bit)

16bit ML62Q1000系列(搭载U16 Core)

标准型 ML62Q1300组 16bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)
						Input	Output	Input/Output	High Speed	Low Speed			
ML62Q1323	1.6 to 5.5	Flash	16K	2K	2K	-	-	12	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation)	41ns/30.5µs	4.3µA (Internal RC oscillation)	-40 to +105
ML62Q1324			24K										
ML62Q1325			32K										
ML62Q1333	1.6 to 5.5	Flash	16K	2K	2K	-	-	16	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation)	41ns/30.5µs	4.3µA (Internal RC oscillation)	-40 to +105
ML62Q1334			24K										
ML62Q1335			32K										
ML62Q1345	1.6 to 5.5	Flash	32K	2K	4K	-	-	20	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation)	41ns/30.5µs	4.3µA (Internal RC oscillation)	-40 to +105
ML62Q1346			48K										
ML62Q1347			64K										
ML62Q1365	1.6 to 5.5	Flash	32K	2K	4K	-	-	28	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation)	41ns/30.5µs	4.3µA (Internal RC oscillation)	-40 to +105
ML62Q1366			48K										
ML62Q1367			64K										

标准型 ML62Q1500组 16bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)
						Input	Output	Input/Output	High Speed	Low Speed			
ML62Q1530	1.6 to 5.5	Flash	32K	4K	8K	2	-	42	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.7/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1531			48K										
ML62Q1532			64K										
ML62Q1533			96K										
ML62Q1534			128K										
ML62Q1540	1.6 to 5.5	Flash	32K	4K	8K	2	-	46	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.7/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1541			48K										
ML62Q1542			64K										
ML62Q1543			96K										
ML62Q1544			128K										
ML62Q1550	1.6 to 5.5	Flash	32K	4K	8K	2	-	58	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.7/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1551			48K										
ML62Q1552			64K										
ML62Q1553			96K										
ML62Q1554			128K	16K	2	-	-	-	-	-	-	-	-
ML62Q1555			160K										
ML62Q1556			192K										
ML62Q1557			256K										
ML62Q1563	1.6 to 5.5	Flash	96K	4K	16K	2	-	72	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	5.5/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1564			128K										
ML62Q1565			160K										
ML62Q1566			192K										
ML62Q1567			256K										
ML62Q1573	1.6 to 5.5	Flash	96K	4K	16K	2	-	92	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	5.5/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1574			128K										
ML62Q1575			160K										
ML62Q1576			192K										
ML62Q1577			256K										
ML62Q1543C	1.6 to 5.5	Flash	96K	4K	8K	2	-	46	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.3/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1544C			128K										
ML62Q1553C	1.6 to 5.5	Flash	96K	4K	8K	2	-	58	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.3/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1554C			128K										
ML62Q1563C	1.6 to 5.5	Flash	96K	4K	8K	2	-	74	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.3/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1564C			128K										

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详细请垂询本公司。

16bit Timer	16bit Multi Functions Timer	WDT	ADC (method)	DAC	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
					PC	SSIO	UART									
4 (8bitx8)	4 (TMR, PWM, IGBT, Capture)	1	10bitx6 (SA type)	-	Master/Slavex1, Masterx1	UART Full Duplex/SSIOx2	VLSx1	-	8	Safety function, Multiplier/Divider, Comparatorx1, DMA	-	P-SSOP16-0225-0.65-TK6	-	✓	✓	
												P-WQFN16-0404-0.50-63	-	✓	✓	
												P-SSOP16-0225-0.65-TK6 P-WQFN16-0404-0.50-63	-	✓	✓	
4 (8bitx8)	4 (TMR, PWM, IGBT, Capture)	1	10bitx8 (SA type)	-	Master/Slavex1, Masterx1	UART Full Duplex/SSIOx2	VLSx1	-	8	Safety function, Multiplier/Divider, Comparatorx1, DMA	-	P-TSSOP20-0225-0.65-TK6	-	✓	✓	
												P-TSSOP20-0225-0.65-TK6	-	✓	✓	
												P-TSSOP20-0225-0.65-TK6	-	✓	✓	
6 (8bitx12)	4 (TMR, PWM, IGBT, Capture)	1	10bitx8 (SA type)	8bitx1	Master/Slavex1, Masterx1	UART Full Duplex/SSIOx2	VLSx1	-	8	Safety function, Multiplier/Divider, Comparatorx1, DMA	-	P-WQFN24-0404-0.50-A63	-	✓	✓	
												P-WQFN24-0404-0.50-A63	-	✓	✓	
												P-WQFN24-0404-0.50-A63	-	✓	✓	
6 (8bitx12)	4 (TMR, PWM, IGBT, Capture)	1	10bitx8 (SA type)	8bitx1	Master/Slavex1, Masterx1	UART Full Duplex/SSIOx2	VLSx1	-	8	Safety function, Multiplier/Divider, Comparatorx1, DMA	-	P-WQFN32-0505-0.50-A63	-	✓	✓	
												P-TQFP32-0707-0.80-ZK6	-	✓	✓	
												P-WQFN32-0505-0.50-A63 P-TQFP32-0707-0.80-ZK6	-	✓	✓	

16bit Timer	16bit Multi Functions Timer	WDT	ADC (method)	DAC	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
					PC	SSIO	UART									
6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx2	VLSx1	-	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP48-0707-0.50-ZK6	-	✓	✓	
												P-TQFP48-0707-0.50-ZK6	-	✓	✓	
												P-TQFP48-0707-0.50-ZK6	-	✓	✓	
												P-TQFP48-0707-0.50-ZK6	-	✓	✓	
												P-TQFP48-0707-0.50-ZK6	-	✓	✓	
6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx2	VLSx1	-	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP52-1010-0.65-ZK6	-	✓	✓	
												P-TQFP52-1010-0.65-ZK6	-	✓	✓	
												P-TQFP52-1010-0.65-ZK6	-	✓	✓	
												P-TQFP52-1010-0.65-ZK6	-	✓	✓	
												P-TQFP52-1010-0.65-ZK6	-	✓	✓	
6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx2	VLSx1	-	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP64-1010-0.50-ZK6	-	✓	✓	
												P-QFP64-1414-0.80-ZK6	-	✓	✓	
												P-TQFP64-1010-0.50-ZK6	-	✓	✓	
												P-QFP64-1414-0.80-ZK6	-	✓	✓	
												P-TQFP64-1010-0.50-ZK6	-	✓	✓	
												P-QFP64-1414-0.80-ZK6	-	✓	✓	
												P-TQFP64-1010-0.50-ZK6	-	✓	✓	
												P-QFP64-1414-0.80-ZK6	-	✓	✓	
												P-TQFP64-1010-0.50-ZK6	-	✓	✓	
												P-QFP64-1414-0.80-ZK6	-	✓	✓	
P-TQFP64-1010-0.50-ZK6	-	✓	✓													
8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	10bitx16 (SA type)	8bitx2	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx6	VLSx1	-	12	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-QFP80-1414-0.65-ZK6	-	✓	✓	
												P-QFP80-1414-0.65-ZK6	-	✓	✓	
												P-QFP80-1414-0.65-ZK6	-	✓	✓	
												P-QFP80-1414-0.65-ZK6	-	✓	✓	
												P-QFP80-1414-0.65-ZK6	-	✓	✓	
8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	10bitx16 (SA type)	8bitx2	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx6	VLSx1	-	12	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP100-1414-0.50-ZK6	-	✓	✓	
												P-QFP100-1420-0.65-BK6	-	✓	✓	
												P-TQFP100-1414-0.50-ZK6	-	✓	✓	
												P-QFP100-1420-0.65-BK6	-	✓	✓	
												P-TQFP100-1414-0.50-ZK6	-	✓	✓	
												P-QFP100-1420-0.65-BK6	-	✓	✓	
6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx3	VLSx1	-	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP52-1010-0.65-ZK6	-	✓	✓	
												P-TQFP52-1010-0.65-ZK6	-	✓	✓	
6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx4	VLSx1	-	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP64-1010-0.50-ZK6	-	✓	✓	
												P-QFP64-1414-0.80-ZK6	-	✓	✓	
6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/Slavex1, Masterx2	UART Full Duplex/SSIOx4	VLSx1	-	12	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-QFP80-1414-0.65-ZK6	-	✓	✓	
												P-QFP80-1414-0.65-ZK6	-	✓	✓	

微控制器

16bit ML62Q1000系列(搭载U16 Core)

搭载LCD驱动器 段码式 ML62Q1700组 16bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)
						Input	Output	Input/Output	High Speed	Low Speed			
ML62Q1700	1.6 to 5.5	Flash	32K	4K	8K	2	-	37	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.9/3.3µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1701			48K										
ML62Q1702			64K										
ML62Q1703			96K										
ML62Q1704			128K										
ML62Q1710	1.6 to 5.5	Flash	32K	4K	8K	2	-	41	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.9/3.3µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1711			48K										
ML62Q1712			64K										
ML62Q1713			96K										
ML62Q1714			128K										
ML62Q1720	1.6 to 5.5	Flash	32K	4K	8K	2	-	53	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.9/3.3µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1721			48K										
ML62Q1722			64K										
ML62Q1723			96K										
ML62Q1724			128K										
ML62Q1725			160K	16K	32K							6.0/4.5µA (Internal RC oscillation/ Crystal oscillation)	
ML62Q1726			192K										
ML62Q1727			256K										
ML62Q1728			384K										
ML62Q1729			512K										
ML62Q1733	1.6 to 5.5	Flash	96K	4K	16K	2	-	67	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	5.7/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1734			128K										
ML62Q1735			160K										
ML62Q1736			192K	8K	32K							6.0/4.5µA (Internal RC oscillation/ Crystal oscillation)	
ML62Q1737			256K										
ML62Q1738			384K										
ML62Q1739			512K										
ML62Q1743	1.6 to 5.5	Flash	96K	4K	16K	2	-	87	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	5.7/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1744			128K										
ML62Q1745			160K										
ML62Q1746			192K	8K	32K							6.0/4.5µA (Internal RC oscillation/ Crystal oscillation)	
ML62Q1747			256K										
ML62Q1748			384K										
ML62Q1749			512K										
ML62Q1713C	1.6 to 5.5	Flash	96K	4K	8K	2	-	41	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.3/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1714C			128K										
ML62Q1723C	1.6 to 5.5	Flash	96K	4K	8K	2	-	53	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.3/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1724C			128K										
ML62Q1733C	1.6 to 5.5	Flash	96K	4K	8K	2	-	69	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	4.3/3.0µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1734C			128K										

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详情请垂询本公司。

	16bit Timer	16bit Multi Functions Timer	WDT	ADC (method)	DAC	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
						IC	SSIO	UART									
	6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx2	VLSx1	Max 192dot 24segx 8com	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP48-0707-0.50-ZK6	-	✓	✓	
P-TQFP48-0707-0.50-ZK6													-	✓	✓		
P-TQFP48-0707-0.50-ZK6													-	✓	✓		
P-TQFP48-0707-0.50-ZK6													-	✓	✓		
P-TQFP48-0707-0.50-ZK6													-	✓	✓		
	6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx2	VLSx1	Max 216dot 27segx 8com	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP52-1010-0.65-ZK6	-	✓	✓	
P-TQFP52-1010-0.65-ZK6													-	✓	✓		
P-TQFP52-1010-0.65-ZK6													-	✓	✓		
P-TQFP52-1010-0.65-ZK6													-	✓	✓		
P-TQFP52-1010-0.65-ZK6													-	✓	✓		
	6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx2	VLSx1	Max 280dot 35segx 8com	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP64-1010-0.50-ZK6	-	✓	✓	
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
	8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	10bitx16 (SA type)	8bitx2	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx6	VLSx1	Max 360dot 45segx 8com	12	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-QFP80-1414-0.65-ZK6	-	✓	✓	
P-QFP80-1414-0.65-ZK6													-	✓	✓		
P-QFP80-1414-0.65-ZK6													-	✓	✓		
P-QFP80-1414-0.65-ZK6													-	✓	✓		
P-QFP80-1414-0.65-ZK6													-	✓	✓		
P-QFP80-1414-0.65-ZK6													-	✓	✓		
P-QFP80-1414-0.65-ZK6													-	✓	✓		
	8 (8bitx16)	8 (TMR, PWM, IGBT, Capture)	1	10bitx16 (SA type)	8bitx2	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx6	VLSx1	Max 480dot 60segx 8com	12	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP100-1414-0.50-ZK6	-	✓	✓	
P-QFP100-1420-0.65-BK6													-	✓	✓		
P-TQFP100-1414-0.50-ZK6													-	✓	✓		
P-QFP100-1420-0.65-BK6													-	✓	✓		
P-TQFP100-1414-0.50-ZK6													-	✓	✓		
P-QFP100-1420-0.65-BK6													-	✓	✓		
P-TQFP100-1414-0.50-ZK6													-	✓	✓		
P-QFP100-1420-0.65-BK6													-	✓	✓		
	6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx3	VLSx1	Max 216dot 27segx 8com	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP52-1010-0.65-ZK6	-	✓	✓	
P-TQFP52-1010-0.65-ZK6													-	✓	✓		
	6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx4	VLSx1	Max 280dot 35segx 8com	10	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-TQFP64-1010-0.50-ZK6	-	✓	✓	
P-QFP64-1414-0.80-ZK6													-	✓	✓		
P-TQFP64-1010-0.50-ZK6													-	✓	✓		
	6 (8bitx12)	6 (TMR, PWM, IGBT, Capture)	1	10bitx12 (SA type)	8bitx1	Master/ Slavex1, Masterx2	UART Full Duplex/ SSIOx4	VLSx1	Max 360dot 45segx 8com	12	Safety function, Multiplier/Divider, Comparatorx2, DMA	-	P-QFP80-1414-0.65-ZK6	-	✓	✓	
P-QFP80-1414-0.65-ZK6													-	✓	✓		

微控制器

16bit ML62Q1000系列(搭载U16 Core)

标准型 ML62Q1800组 16bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)
						Input	Output	Input/Output	High Speed	Low Speed			
ML62Q1858	1.6 to 5.5	Flash	384K	8K	32K	2	-	58	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	6.0/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1859			512K										
ML62Q1868	1.6 to 5.5	Flash	384K	8K	32K	2	-	72	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	6.0/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1869			512K										
ML62Q1878	1.6 to 5.5	Flash	384K	8K	32K	2	-	92	24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41ns/30.5µs	6.0/4.5µA (Internal RC oscillation/ Crystal oscillation)	-40 to +105
ML62Q1879			512K										

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详情请垂询本公司。

低功耗微控制器(16bit)

16bit ML620Q500系列(搭载U16 Core)

标准型 16bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)	Co-processor for Multiplication and Division	8bit Timer	16bit Multi Functions Timer
						Input	Output	Input/Output	High Speed	Low Speed						
ML620Q503H	1.8 to 5.5	Flash	32K	2K	2K	2	-	36	16MHz (Internal RC oscillation/ Crystal oscillation/ External input)	32.768kHz (Internal RC oscillation/ Crystal oscillation/ External input)	62.5ns/30.5µs	0.45µA (Crystal oscillation)	-40 to +85	✓	8 (16bitx4)	4
ML620Q504H			64K		6K											

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详情请垂询本公司。

USB接口及安全功能用微控制器 (32bit)

32bit ML630Q400(搭载ARM® Cortex® - M0+)

搭载LCD驱动器 点阵式 32bit微控制器(工业设备用)

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)	Co-processor for Multiplication and Division	8bit Timer	16bit Multi Functions Timer
						Input	Output	Input/Output	High Speed	Low Speed						
ML630Q464	1.8 to 3.6	Flash	64K	2K	8K	-	-	38	16MHz (Internal RC oscillation) 24MHz (PLL oscillation)	32.768kHz (Internal RC oscillation/ Crystal oscillation)	41.7ns/30.5µs	0.8µA (Crystal oscillation)	-40 to +85	32bit multiplier	8 (16bitx4)	4
ML630Q466			128K		16K											

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详情请垂询本公司。

(LAPIS Technology产品)

	16bit Timer	16bit Multi Functions Timer	WDT	ADC (method)	DAC	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
						I ² C	SSIO	UART									
	6 (8bit×12)	6 (TMR, PWM, IGBT, Capture)	1	10bit×12 (SA type)	8bit×1	Master/ Slave×1, Master×2	UART Full Duplex/ SSIO×2		VLS×1	—	10	Safety function, Multiplier/Divider, Comparator×2, DMA	—	P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6	—	✓	✓
														P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6	—	✓	✓
	8 (8bit×16)	8 (TMR, PWM, IGBT, Capture)	1	10bit×16 (SA type)	8bit×2	Master/ Slave×1, Master×2	UART Full Duplex/ SSIO×6		VLS×1	—	12	Safety function, Multiplier/Divider, Comparator×2, DMA	—	P-QFP80-1414-0.65-ZK6 P-QFP80-1414-0.65-ZK6	—	✓	✓
														P-QFP80-1414-0.65-ZK6 P-QFP80-1414-0.65-ZK6	—	✓	✓
	8 (8bit×16)	8 (TMR, PWM, IGBT, Capture)	1	10bit×16 (SA type)	8bit×2	Master/ Slave×1, Master×2	UART Full Duplex/ SSIO×6		VLS×1	—	12	Safety function, Multiplier/Divider, Comparator×2, DMA	—	P-TQFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6 P-QFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6	—	✓	✓
														P-TQFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6 P-QFP100-1414-0.50-ZK6 P-QFP100-1420-0.65-BK6	—	✓	✓

(LAPIS Technology产品)

	PWM	Capture	WDT	ADC (method)	Serial Port				Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
					I ² C	SSIO (SPI)	UART	USB									
	16bit×4 (use 16bit Timer)	16bit×4 (use 16bit Timer)	1	24bit×2 (RC type) 12bit×12 (SA type)	Master×2	2	Full Duplex×2	—	VLS×1, LLD×1	—	8	Low speed frequency correction, Analog comparator×2, Melody: Buzzer	—	P-TQFP48-0707-0.50-ZK6 P-TQFP48-0707-0.50-ZK6	✓	✓	✓
														P-TQFP48-0707-0.50-ZK6 P-TQFP48-0707-0.50-ZK6	✓	✓	✓

(LAPIS Technology产品)

	PWM	Capture	WDT	ADC (method)	Serial Port				Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
					I ² C	SSIO (SPI)	UART	USB									
	16bit×4 (use 16bit Timer)	16bit×4 (use 16bit Timer)	1	24bit×2 (RC type) 12bit×12 (SA type)	Master/ Slave×2	2	Full Duplex×2	1	VLS×1, LLD×1	Max 400dot 50seg×8com	8	AES 128bit HW accelerator (CBC, CTR, CTR), Random generator, DMA, RTC, Analog comparator×2, 1kHz Timer	—	P-TQFP100-1414-0.50-ZK6 P-TQFP100-1414-0.50-ZK6	—	✓	✓
														P-TQFP100-1414-0.50-ZK6 P-TQFP100-1414-0.50-ZK6	—	✓	✓

低电压工作微控制器(8bit)

8bit ML610400/ML610Q400(搭载U8 Core)

标准型 8bit微控制器

Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)	8bit Timer	1kHz Timer	PWM	Capture	WDT
						Input	Output	Input/Output	High Speed	Low Speed								
ML610Q482	1.1 to 3.6	Flash	64K	—	4K	6	4	22	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-20 to +70	4 (16bit×2)	—	16bit×1	—	1

标准型 8bit微控制器(工业设备用)

ML610Q482P	1.1 to 3.6	Flash	64K	—	4K	6	4	22	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-40 to +85	4 (16bit×2)	—	16bit×1	—	1
------------	------------	-------	-----	---	----	---	---	----	--------------------	------------------------------------	----------------------------	-------	------------	----------------	---	---------	---	---

搭载LCD驱动器 点阵式 8bit微控制器

ML610Q421	1.1 to 3.6	Flash	32K	—	2K	6	3	22	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-20 to +70	4 (16bit×2)	1	16bit×1	2	1
ML610Q422								14		32.768kHz (Crystal oscillation)								
ML610Q429	1.1 to 3.6	Flash	48K	—	4K	10	3	20	4.096MHz 2MHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-20 to +70	2 (16bit×1)	1	16bit×3	—	1
ML610Q431	1.1 to 3.6	Flash	64K	—	3K	6	3	22	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-20 to +70	4 (16bit×2)	1	16bit×1	2	1
ML610Q432								14										
ML610Q435	1.1 to 3.6	Flash	96K	—	3K	6	3	22	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-20 to +70	4 (16bit×2)	1	16bit×1	2	1
ML610Q436								14										
ML610Q438	1.1 to 3.6	Flash	128K	—	7K	10	3	20	4.096MHz 2MHz	32.768kHz (Crystal oscillation)	0.244µs/ 0.5µs/ 30.5µs	0.5µA	-20 to +70	4 (16bit×2)	1	16bit×3	2	1

搭载LCD驱动器 点阵式 8bit微控制器(工业设备用)

ML610Q421P	1.1 to 3.6	Flash	32K	—	2K	6	3	22	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.5µA	-40 to +85	4 (16bit×2)	1	16bit×1	2	1
ML610Q422P								14										
ML610Q439P								20										

搭载LCD驱动器 段码式 8bit微控制器

ML610Q407	1.25 to 3.6	Flash	16K	—	1K	5	12	22	2MHz	32.768kHz (Crystal oscillation)	0.5µs/ 30.5µs	0.9µA	-20 to +70	4 (16bit×2)	—	16bit×1	2	1
ML610Q407A								14										
ML610Q408	1.25 to 3.6	Flash	16K	—	1K	5	8	22	2MHz	32.768kHz (Crystal oscillation)	0.5µs/ 30.5µs	0.9µA	-20 to +70	4 (16bit×2)	—	16bit×1	2	1
ML610Q411	1.1 to 3.6	Flash	16K	—	1K	6	3	22	500kHz	32.768kHz (Crystal oscillation)	2µs/ 30.5µs	0.5µA	-20 to +70	4 (16bit×2)	1	16bit×1	2	1
ML610Q412								14										
ML610Q419	1.1 to 3.6	Flash	64K	4K	2K	6	3	18	4.096MHz 500kHz	32.768kHz (Crystal oscillation)	0.244µs/ 2µs/ 30.5µs	0.9µA	-20 to +70	4 (16bit×2)	—	16bit×1	2	1
ML610Q419C								26										

搭载LCD驱动器 段码式 8bit微控制器(工业设备用)

ML610Q407P	1.25 to 3.6	Flash	16K	—	1K	5	12	22	2MHz	32.768kHz (Crystal oscillation)	0.5µs/ 30.5µs	0.9µA	-40 to +85	4 (16bit×2)	—	16bit×1	2	1
ML610Q407PA								14										
ML610Q408P	1.25 to 3.6	Flash	16K	—	1K	5	8	22	2MHz	32.768kHz (Crystal oscillation)	0.5µs/ 30.5µs	0.9µA	-40 to +85	4 (16bit×2)	—	16bit×1	2	1
ML610Q411P	1.1 to 3.6	Flash	16K	—	1K	6	3	22	500kHz	32.768kHz (Crystal oscillation)	2µs/ 30.5µs	0.5µA	-40 to +85	4 (16bit×2)	1	16bit×1	2	1
ML610Q411PA								14										
ML610Q412P								14										

*1 带无卤素标记✓, 表示有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详情请垂询本公司。

(LAPIS Technology产品)

	ADC (method)	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
		PC	SSIO	UART									
	24bit×2 (RC type)	Master x1	1	Half Duplex x1	BLD×1	—	5	Low speed frequency correction/ Buzzer	—	P-TQFP48-0707-0.50-ZK6	✓	✓	—
	24bit×2 (RC type)	Master x1	1	Half Duplex x1	BLD×1	—	5	Low speed frequency correction/ Buzzer	—	P-TQFP48-0707-0.50-ZK6	✓	✓	✓
	24bit×2 (RC type) 12bit×2 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 400dot 50seg×8com	5	Low speed frequency correction/ Melody: Buzzer	—	P-TQFP120-1414-0.40-ZK6	✓	✓	—
									Low-speed scillation stop detect reset: enable	P-TQFP120-1414-0.40-ZK6	✓	✓	—
	24bit×2 (RC type)	Master x1	1	Half Duplex x1	BLD×1	Max 512dot 64seg×8com	9	Low speed frequency correction/ Melody: Buzzer	Selectable oscillation stop detection reset: function enable/ disable according to mask option	P-TQFP128-1414-0.40-ZK6	✓	✓	—
	24bit×2 (RC type) 12bit×2 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 1024dot 64seg×16com	5	RTC/ Low speed frequency correction/ Melody: Buzzer	Low-speed oscillation stop detect reset: enable	P-LQFP144-2020-0.50-QK6	✓	✓	—
									Low-speed oscillation stop detect reset: enable	P-LQFP144-2020-0.50-QK6	✓	✓	—
	24bit×2 (RC type) 12bit×2 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 1024dot 64seg×16com	5	RTC/ Low speed frequency correction/ Melody: Buzzer	Low-speed oscillation stop detect reset: enable	—	✓	✓	—
									Low-speed oscillation stop detect reset: enable	—	✓	✓	—
	24bit×2 (RC type) 12bit×2 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 1344dot 56seg×24com	9	Low speed frequency correction/ Melody: Buzzer	Selectable oscillation stop detection reset: function enable/ disable according to software	P-LQFP144-2020-0.50-QK6	✓	✓	—
	24bit×2 (RC type) 12bit×2 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 400dot 50seg×8com	5	Low speed frequency correction/ Melody: Buzzer	—	P-TQFP120-1414-0.40-ZK6	✓	✓	✓
									Low-speed scillation stop detect reset: enable	P-TQFP120-1414-0.40-ZK6	✓	✓	✓
									Selectable oscillation stop detection reset: function enable/ disable according to software	P-LQFP144-2020-0.50-QK6	—	✓	✓
	16bit×2 (RC type)	—	2	Half Duplex x1	—	Max 145dot 29seg×5com	13 (include 8bit-OR input)	Low speed frequency correction/ Melody: Buzzer	Low-speed scillation stop detect reset: enable LCD bias: 1/3	P-TQFP100-1414-0.50-ZK6	✓	✓	—
	16bit×2 (RC type)	—	2	Half Duplex x1	—	Max 165dot 33seg×5com	13 (include 8bit-OR input)	Low speed frequency correction/ Melody: Buzzer	Low-speed scillation stop detect reset: disable LCD bias: 1/2, 1/3	—	✓	✓	—
	24bit×2 (RC type) 12bit×2 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 144dot 36seg×4com	5	Low speed frequency correction/ Buzzer	Low-speed scillation stop detect reset: enable	TQFP120-1414-0.40-ZK6	✓	✓	—
									—	TQFP120-1414-0.40-ZK6	✓	✓	—
	24bit×2 (RC type) 12bit×4 (SA type)	Master x1	2	Half Duplex x1	BLD×1	Max 192dot 48seg×4com	5	Low speed frequency correction/ Melody: Buzzer	—	P-TQFP100-1414-0.50-ZK6	✓	✓	—
									—	P-TQFP100-1414-0.50-ZK6	✓	✓	—
	16bit×2 (RC type)	—	2	Half Duplex x1	—	Max 145dot 29seg×5com	13 (include 8bit-OR input)	Low speed frequency correction/ Melody: Buzzer	Low-speed scillation stop detect reset: enable LCD bias: 1/3	P-TQFP100-1414-0.50-ZK6	✓	✓	✓
									Low-speed scillation stop detect reset: disable LCD bias: 1/2, 1/3	—	✓	✓	✓
	16bit×2 (RC type)	—	2	Half Duplex x1	—	Max 165dot 33seg×5com	13 (include 8bit-OR input)	Low speed frequency correction/ Melody: Buzzer	Low-speed scillation stop detect reset: enable LCD bias: 1/3	P-TQFP100-1414-0.50-ZK6	✓	✓	✓
	24bit×2 (RC type) 12bit×4 (SA type)	Master x1	1	Half Duplex x1	BLD×1	Max 144dot 36seg×4com	5	Low speed frequency correction/ Buzzer	Low-speed oscillation stop detect reset: enable	TQFP120-1414-0.40-ZK6	✓	✓	✓
									Low-speed oscillation stop detect reset: disable	TQFP120-1414-0.40-ZK6	✓	✓	✓
									—	TQFP120-1414-0.40-ZK6	✓	✓	✓

微控制器

语音播放用微控制器(8bit)

8bit ML610Q300(搭载U8 Core)

标准型 8bit微控制器(工业设备用)

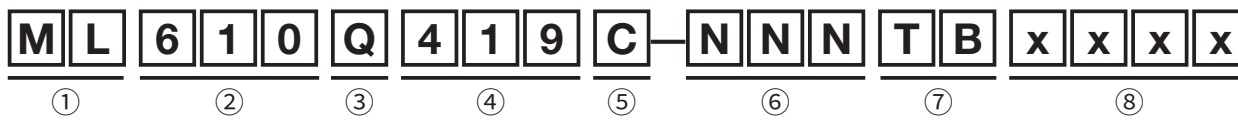
Part No.	Operating Voltage (V)	ROM type	ROM Capacity (Byte)	Data Flash Capacity (Byte)	Memory for Sound	RAM Capacity (Byte)	Port			Operating Frequency (Max)		Minimum Instruction Execution Time	Current Consumption (Typ@HALT)	Operating Temperature (°C)	
							Input	Output	Input/Output	High Speed	Low Speed				
New ML610Q305	2.0 to 5.5	Flash	96K	2K	Flash ROM	1K	1	3	12	8.192MHz	32.768kHz (Internal RC oscillation)	0.122μs/ 30.5μs	2.0μA	-40 to +85	
New ML610Q306															15
☆ ML610Q317	2.0 to 5.5	Flash	160K	2K	Flash ROM	4K	0 (TBD)	6 (TBD)	26 (TBD)	8.192MHz	32.768kHz (Internal RC oscillation)	0.122μs/ 30.5μs	(TBD)	-40 to +85	
☆ ML610Q318															30 (TBD)
☆ ML610Q327	2.0 to 5.5	Flash	192K	2K	Flash ROM	4K	0 (TBD)	6 (TBD)	26 (TBD)	8.192MHz	32.768kHz (Internal RC oscillation)	0.122μs/ 30.5μs	(TBD)	-40 to +85	
☆ ML610Q328															30 (TBD)
☆ ML610Q329															42 (TBD)
☆ ML610Q338	2.0 to 5.5	Flash	256K	2K	Flash ROM	4K	0 (TBD)	6 (TBD)	30 (TBD)	8.192MHz	32.768kHz (Internal RC oscillation)	0.122μs/ 30.5μs	(TBD)	-40 to +85	
☆ ML610Q339															42 (TBD)

*1 带无卤素标记✓, 表示备有无卤素产品。详细内容请咨询销售人员。

*2 工业设备用途的详情请垂询本公司。

☆: 开发中。本目录中的信息, 如遇产品更新等其他原因而发生变更, 恕不另行通知。

ML610/ML610Q/ML620Q/ML630Q品名构成说明



品名编号

①元器件类型

ML: 逻辑产品

②CPU内核类型

610: 8bit CPU nX-U8/100
620: 16bit CPU nX-U16/100
630: 32bit CPU ARM® Cortex®
M0+

③ROM类型

None: Mask ROM
Q: Flash ROM

④型号代码

3xx: 语音回放
4xx: 低功耗或低电压型
5xx: 低功耗

⑤选项代码

None~x: 对每个产品进行设定

⑥ROM代码

NNN: 留空
001~xxx: 定制代码

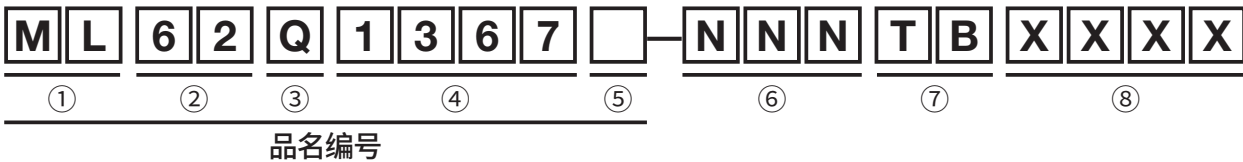
⑦封装代码

GD: VQFN, WQFN
MB: SSOP
TD: TSSOP
TB: TQFP
GA: QFP
WA: Chip

⑧LAPIS Technology公司内部代码

8bit Timer	PWM	WDT	ADC (method)	Serial Port			Supply Voltage Detection	LCD Driver	External Interrupt Sources	SP Amp Output (W)/ Class	Others	Notes	Package	Chip Support	Halogen Free Support*1	Industrial Grade*2
				PC	SSIO	UART										
4 (16bitx2)	-	1	10bitx3 (SA type)	Master/ Slave x1	2	Half Duplex x1	LLDx1	-	9	1.0 (@5V)/ D class	Speech function/ ADPCM2 HQ-ADPCM decoder/ Built-in speaker Amplifier	-	P-WQFN32-0505-0.50-A63	-	✓	✓
			10bitx4 (SA type)										P-TQFP32-0707-0.80-ZK6			
4 (16bitx2)	3	1	10bitx8 (SA type)	Master/ Slave x1	2	Half Duplex x1	LLDx1	-	8	1.0 (@5V)/ D class	Speech function/ ADPCM2 HQ-ADPCM decoder/ Built-in speaker Amplifier	-	P-TQFP48-0707-0.50-ZK6	-	✓	✓
			P-TQFP52-1010-0.65-ZK6													
4 (16bitx2)	3	1	10bitx8 (SA type)	Master/ Slave x1	2	Half Duplex x1	LLDx1	-	8	1.0 (@5V)/ D class	Speech function/ ADPCM2 HQ-ADPCM decoder/ Built-in speaker Amplifier	-	P-TQFP48-0707-0.50-ZK6	-	✓	✓
													P-TQFP52-1010-0.65-ZK6			
													P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6			
4 (16bitx2)	3	1	10bitx8 (SA type)	Master/ Slave x1	2	Half Duplex x1	LLDx1	-	8	1.0 (@5V)/ D class	Speech function/ ADPCM2 HQ-ADPCM decoder/ Built-in speaker Amplifier	-	P-TQFP52-1010-0.65-ZK6	-	✓	✓
													P-TQFP64-1010-0.50-ZK6 P-QFP64-1414-0.80-ZK6			

ML62Q1000系列品名构成说明



- ① 元器件类型
ML : 逻辑产品
 - ② CPU内核类型
62 : 16bit CPU nX-U16/100
 - ③ ROM类型
Q : 闪存ROM
 - ④ 型号代码
13xx : ML62Q1300组
2x : 16针
3x : 20针
4x : 24针
6x : 32针
x3 : ROM 16KB
x4 : ROM 24KB
x5 : ROM 32KB
x6 : ROM 48KB
x7 : ROM 64KB
 - ⑤ 选项代码
None~x : 对每个产品进行设定
 - ⑥ ROM代码
NNN : 留空
001~xxx : 定制代码
 - ⑦ 封装代码
GD : WQFN
MB : SSOP
TD : TSSOP
TB : TQFP
GA : QFP
 - ⑧ LAPIS Technology公司内部代码
- 15xx : ML62Q1500组
3x : 48针
4x : 52针
5x : 64针
6x : 80针
7x : 100针
x0 : ROM 32KB
x1 : ROM 48KB
x2 : ROM 64KB
x3 : ROM 96KB
x4 : ROM 128KB
x5 : ROM 160KB
x6 : ROM 192KB
x7 : ROM 256KB
 - 17xx : ML62Q1700组
(内置LCD驱动器)
0x : 48针
1x : 52针
2x : 64针
3x : 80针
4x : 100针
x0 : ROM 32KB
x1 : ROM 48KB
x2 : ROM 64KB
x3 : ROM 96KB
x4 : ROM 128KB
x5 : ROM 160KB
x6 : ROM 192KB
x7 : ROM 256KB
x8 : ROM 384KB
x9 : ROM 512KB
 - 18xx : ML62Q1800组
5x : 64针
6x : 80针
7x : 100针
x8 : ROM 384KB
x9 : ROM 512KB