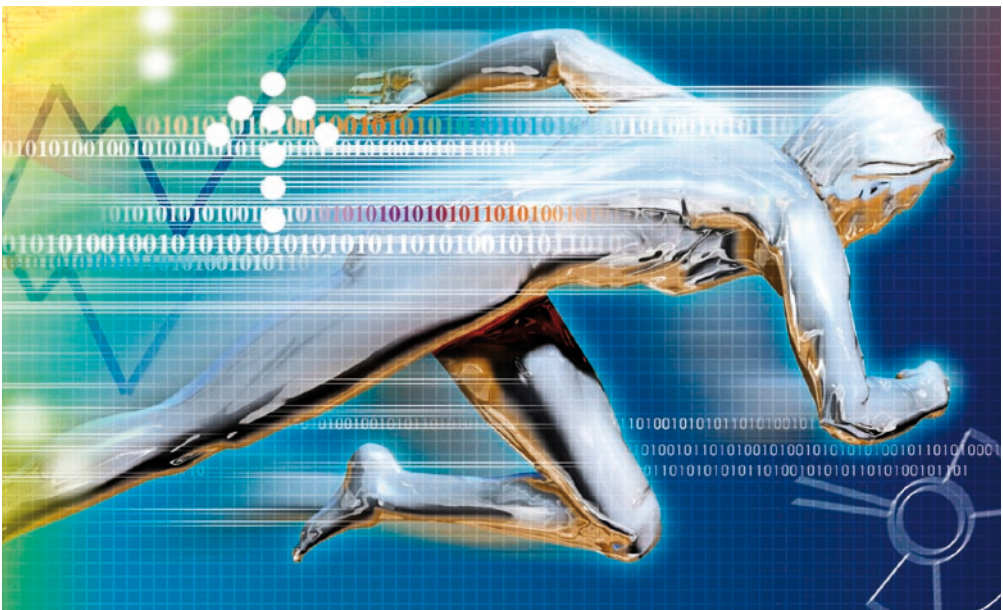


8-, 16- and 32-bit microcontrollers

Product and tool selection guide



February 2008

8-, 16- and 32-bit microcontroller families

Part number	Program memory type		Prog. (Kbytes)	RAM (bytes)	Data E ² PROM (bytes)	A/D inputs	Timer functions			Serial interface	LVD levels	I/Os (high current ²)	Packages	Supply voltage	Special features
	Flash	ROM					12 or 16-bit (IC/OC/ PWM)	8-bit (IC/OC/ PWM)	Others						

32-bit ARM® RISC CPU microcontrollers

STM32 (ARM Cortex™-M3) - 32-bit microcontrollers

36 pins	STM32F101T6	●		32	6 K		10x12-bit	2x16-bit (8/8/8)		2xWDG, RTC (except 36-pin devices), 24-bit down counter	1xSPI/1xPC/2xUSART (IrDA/ISO7816)		26(26)	QFN36	2 to 3.6 V	Access line: 36 MHz CPU speed, V _{bat} pin (except 36-pin devices), low-power features, embedded POR, PDR and PVD, internal 8 MHz RC, internal 32 kHz RC, 4 to 16 MHz main oscillator, dedicated 32 kHz oscillator, 3 low-power modes, -40 to 85 °C
	STM32F101T8	●		64	10 K		10x12-bit	3x16-bit (12/12/12)					26(26)	QFN36		
48 pins	STM32F101C6	●		32	6 K		10x12-bit	2x16-bit (8/8/8)		2xSPI/2xPC/3xUSART (IrDA/ISO7816)		36(36)	LQFP48			
	STM32F101C8	●		64	10 K		10x12-bit	3x16-bit (12/12/12)				36(36)	LQFP48			
64 pins	STM32F101CB	●		128	16 K		10x12-bit					36(36)	LQFP48			
	STM32F101R6	●		32	6 K		16x12-bit	2x16-bit (8/8/8)				51(51)	LQFP64			
100 pins	STM32F101R8	●		64	10 K		16x12-bit					51(51)	LQFP64			
	STM32F101RB	●		128	16 K		16x12-bit	3x16-bit (12/12/12)				51(51)	LQFP64			
36 pins	STM32F101V8	●		64	10 K		16x12-bit					80(80)	LQFP100			
	STM32F101VB	●		128	16 K		16x12-bit					80(80)	LQFP100			
48 pins	STM32F103T6	●		32	10 K		10x12-bit	3x16-bit (12/12/14)		1xSPI/1xPC/2xUSART (IrDA/ISO7816)/USB/CAN		26(26)	QFN36		Performance line: 72 MHz CPU speed, V _{bat} pin (except 36-pin devices), low-power features, embedded power-on reset, power-down reset and programmable voltage detector, internal 8 MHz RC, internal 32 kHz RC, 4 to 16 MHz main oscillator, dedicated 32 kHz oscillator, 1x 4.5 Mbps high-speed USART, 1x 18 MHz high-speed master/slave SPI, 18 MHz I/O toggling, motor control oriented PWM, 2x ADC (dual sample and hold capability). -40 to +85 °C	
	STM32F103T8	●		64	20 K		10x12-bit	4x16-bit (16/16/18)				26(26)	QFN36			
64 pins	STM32F103C6	●		32	10 K		10x12-bit	3x16-bit (12/12/14)				36(36)	LQFP48			
	STM32F103C8	●		64	20 K		10x12-bit	4x16-bit (16/16/18)				36(36)	LQFP48			
100 pins	STM32F103CB	●		128	20 K		10x12-bit					36(36)	LQFP48			
	STM32F103R6	●		32	10 K		16x12-bit	3x16-bit (12/12/14)				51(51)	LQFP64			
64 pins	STM32F103R8	●		64	20 K		16x12-bit					51(51)	LQFP64			
	STM32F103RB	●		128	20 K		16x12-bit					51(51)	LQFP64			
100 pins	STM32F103V8	●		64	20 K		16x12-bit	4x16-bit (16/16/18)				80(80)	LQFP100/BGA100			
	STM32F103VB	●		128	20 K		16x12-bit					80(80)	LQFP100/BGA100			

STR7: 32-bit ARM7™ RISC CPU microcontrollers

64 pins	STR711FR0	●		64+16	16 K		4x12-bit			2xSPI/2x ² PC/4xUART/HDLC/SC/USB		30(0)	LQFP64/BGA64	3.0 to 3.6 V	16-Kbyte data Flash
	STR712FR0	●		64+16	16 K		4x12-bit	4x16-bit (5/5/3)				32(0)	LQFP64/BGA64		
64 pins	STR715FR0	●		64+16	16 K		4x12-bit			2xSPI/2x ² PC/4xUART/HDLC/SC		32(0)	LQFP64/BGA64		4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C
	STR751FR0	●		64	16 K		11x10-bit					38(7)	LQFP64		
64 pins	STR752FR0	●		64	16 K		11x10-bit	5x16-bit (5/5/11)		2xSPI/ ² PC/3xHS-UART/USB		38(7)	LQFP64	3.0 to 3.6 V or 4.5 to 5.5 V	4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C/105 °C
	STR755FR0	●		64	16 K		11x10-bit					38(7)	LQFP64		
64 pins	STR711FR1	●		128+16	32 K		4x12-bit	4x16-bit (5/5/3)		2xSPI/2x ² PC/4xUART/HDLC/SC/USB		30(0)	LQFP64/BGA64	3.0 to 3.6 V	16-Kbyte data Flash
	STR712FR1	●		128+16	32 K		4x12-bit					32(0)	LQFP64/BGA64		
64 pins	STR751FR1	●		128	16 K		11x10-bit			2xSPI/ ² PC/3xHS-UART/USB		38(7)	LQFP64		4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +8 °C
	STR752FR1	●		128	16 K		11x10-bit	5x16-bit (5/5/11)				38(7)	LQFP64		
64 pins	STR755FR1	●		128	16 K		11x10-bit			2xSPI/ ² PC/3xHS-UART		38(7)	LQFP64	3.0 to 3.6 V or 4.5 to 5.5 V	4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C
	STR711FR2	●		256+16	64 K		4x12-bit	4x16-bit (5/5/3)		2xSPI/2x ² PC/4xUART/HDLC/SC/USB		30(0)	LQFP64/BGA64	3 to 3.6 V	16-Kbyte data Flash
	STR712FR2	●		256+16	64 K		4x12-bit					32(0)	LQFP64/BGA64		
64 pins	STR751FR2	●		256	16 K		11x10-bit			2xSSP/ ² PC/3xHS-UART/USB		38(7)	LQFP64/BGA64		4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C
	STR752FR2	●		256	16 K		11x10-bit	5x16-bit (6/6/12)				38(7)	LQFP64/BGA64		
64 pins	STR755FR2	●		256	16 K		11x10-bit			2xSSP/ ² PC/3xHS-UART/CAN		38(7)	LQFP64/BGA64	3.0 to 3.6 V or 4.5 to 5.5 V	4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C/105 °C
	STR731FV0	●		64	16 K		12x10-bit	15x16-bit (12/12/12)		3xSPI/2x ² PC/4xUART/3xCAN		72(0)	LQFP 100	4.5 to 5.5 V	16xDMA channels, on-chip RC oscillator
100 pins	STR736FV0	●		64	16 K		16x10-bit					72(0)	LQFP 100		
	STR750FV0	●		64	16 K		16x10-bit	5x16-bit (6/6/12)		2xSPI/ ² PC/3xHS-UART/CAN/USB		72(9)	LQFP100	3.0 to 3.6 V or 4.5 to 5.5 V (without USB)	4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C
	STR755FV0	●		64	16 K		16x10-bit					72(9)	LQFP100		
100 pins	STR731FV1	●		128	16 K		12x10-bit	15x16-bit (12/12/12)		2xSPI/ ² PC/3xHS-UART/3xCAN		72(0)	LQFP 100	4.5 to 5.5 V	16xDMA channels, on-chip RC oscillator
	STR736FV1	●		128	16 K		12x10-bit					72(0)	LQFP 100		
100 pins	STR750FV1	●		128	16 K		16x10-bit	5x16-bit (6/6/12)		3xSPI/2x ² PC/4xUART/CAN/USB		72(9)	LQFP100/BGA100	3.0 to 3.6 V or 4.5 to 5.5 V (without USB)	4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C
	STR755FV1	●		128	16 K		16x10-bit					72(9)	LQFP100		
100 pins	STR731FV2	●		256	16 K		12x10-bit			3xSPI/2x ² PC/4xUART/3xCAN		72(0)	LQFP 100	4.5 to 5.5 V	16xDMA channels, on-chip RC oscillator
	STR736FV2	●		256	16 K		12x10-bit	15x16-bit (12/12/12)				72(0)	LQFP 100		

144 pins	STR750FV2	●		256	16 K		16x10-bit	5x16-bit (6/6/12)			2xSPI/I ² C/3xHS-UART/ CAN/USB		72(9)	LQFP100/BGA100	3.0 to 3.6 V or 4.5 to 5.5 V (without USB)	4xDMA, AWU, SMI, on-chip RC oscillator, motor control oriented PWM, -40 to +85 °C
	STR755FV2	●		256	16 K		16x10-bit				2xSPI/I ² C/3xHS-UART		72(9)	LQFP100/BGA100		
	STR710RZ	●			64 K		4x12-bit	4x16-bit (5/5/3)			2xSPI/2xI ² C/4xUART/ HDLC/SC/CAN/USB		48(8)	LFBGA144/ LQFP144	3 to 3.6 V	EMI
	STR710FZ1	●		128+16	32 K		4x12-bit				3xSPI/2xI ² C/4xUART/ 3xCAN		48(8)	LFBGA144/ LQFP144		EMI, 16-Kbyte data Flash
	STR730FZ1	●		128	16 K		16x10-bit	19x16-bit (20/20/16)			2xSPI/2xI ² C/4xUART/ HDLC/SC/CAN/USB		112(0)	LFBGA144/ LQFP144	4.5 to 5.5 V	16xDMA channels, on-chip RC oscillator
	STR735FZ1	●		128	16 K		16x10-bit				3xSPI/2xI ² C/4xUART		112(0)	LFBGA144/ LQFP144		
	STR710FZ2	●		256+16	64 K		4x12-bit	4x16-bit (5/5/3)			3xSPI/2xI ² C/4xUART		112(0)	LFBGA144/ LQFP144	3 to 3.6 V	EMI, 16-Kbyte data Flash
	STR730FZ2	●		256	16 K		16x10-bit	19x16-bit (20/20/16)			2xSPI/2xI ² C/4xUART/ HDLC/SC/CAN/USB		112(0)	LFBGA144/ LQFP144	4.5 to 5.5 V	16xDMA channels, on-chip RC oscillator
	STR735FZ2	●		256	16 K		16x10-bit				3xSPI/2xI ² C/4xUART		112(0)	LFBGA144/ LQFP144		

STR9: 32-bit ARM966E-STM RISC CPU microcontrollers

80 pins	STR910FAM32	●		256+32	64 K		8x10-bit	7x16-bit (8/8/7)	WDG, 1 μ A RTC	CAN, 3x UART, 2x fast I ² C, 2x SPI	2	40(16)	LQFP80	CPU core: 1.8 V +/-10% I/O ring: selectable: 2.7 to 3.3 V or 3.0 to 3.6 V	96 MHz ARM9E CPU core, 9xDMA, brown-out warning, 3-phase AC MC, ETM trace
	STR911FAM42	●		256+32	96 K		8x10-bit			USB, CAN, 3x UART, 2x fast I ² C, 2x SPI	2	40(16)	LQFP80		
	STR911FAM44	●		512+32	96 K		8x10-bit				2	40(16)	LQFP80		
	STR911FAM46	●		1024+128	96 K		8x10-bit				2	40(16)	LQFP80		
	STR911FAM47	●		2048+128	96 K		8x10-bit				2	40(16)	LQFP80		
128 pins	STR910FAW32	●		256+32	64 K		8x10-bit			CAN, 3x UART, 2x fast I ² C, 2x SPI	2	80(16)	LQFP128		96 MHz ARM9E CPU core, 9xDMA, brown-out warning, 3-phase AC MC, ETM trace, tamper detect, EMI
	STR911FAW42	●		256+32	96 K		8x10-bit			USB, CAN, 3x UART, 2x fast I ² C, 2x SPI	2	80(16)	LQFP128		
	STR911FAW44	●		512+32	96 K		8x10-bit				2	80(16)	LQFP128		
	STR911FAW46	●		1024+128	96 K		8x10-bit				2	80(16)	LQFP128		
	STR911FAW47	●		2048+128	96 K		8x10-bit				2	80(16)	LQFP128		
	STR912FAW32	●		256+32	64 K		8x10-bit			Ethernet, USB, CAN, 3x UART, 2x fast I ² C, 2x SPI	2	80(16)	LQFP128		
	STR912FAW42	●		256+32	96 K		8x10-bit				2	80(16)	LQFP128		
	STR912FAW44	●		512+32	96 K		8x10-bit				2	80(16)	LQFP128		
	STR912FAW46	●		1024+128	96 K		8x10-bit				2	80(16)	LQFP128		
	STR912FAW47	●		2048+128	96 K		8x10-bit				2	80(16)	LQFP128		
144 pins	STR910FAZ32	●		256+32	64 K		8x10-bit			CAN, 3x UART, 2x fast I ² C, 2x SPI	2	80(16)	LQFP144		
	STR912FAZ42	●		256+32	96 K		8x10-bit			Ethernet, USB, CAN, 3x UART, 2x fast I ² C, 2x SPI	2	80(16)	LQFP144		
	STR912FAZ44	●		256+32	96 K		8x10-bit				2	80(16)	LQFP144		
	STR912FAZ46	●		1024+128	96 K		8x10-bit				2	80(16)	LQFP144		
	STR912FAZ47	●		2048+128	96 K		8x10-bit				2	80(16)	LQFP144		

8-, 16- and 32-bit microcontroller families

Part number		Program memory type		Prog. (Kbytes)	RAM (bytes)	Data E ² PROM (bytes)	A/D inputs	Timer functions			Serial interface	LVD levels	I/Os (high current ²)	Packages	Supply voltage	Special features	
		Flash	ROM					12 or 16-bit (IC/OC/ PWM)	8-bit (IC/OC/ PWM)	Others							
ST10: 16-bit fast core with advanced interrupt management (up to 10 Mbytes address space)																	
100 pins	ST10R172L				1 K			5x16-bit		WDG	USART/SSP		77	LQFP100	3.3 V	50 MHz, ROMless, PEC, PWM, EMI	
	ST10R272L				1 K								77			50 MHz, ROMless, PEC, PWM, MAC, EMI	
144 pins	ST10R167-Q				4 K		16x10-bit					USART/SSC/CAN		111	PQFP144	4.5 to 5.5 V	25 MHz, ROMless, PEC, PWM, CAPCOM, EMI
	ST10F269Z1	●		128	12 K		16x10-bit					USART/SSC/2xCAN		111	LQFP144/ PQFP144		40 MHz, PEC, CAN, PWM, CAPCOM, MAC
	ST10F271Z1	●		128	12 K		24x10-bit			WDG, RTC	PC/2xUART/2xSSC/ 2xCAN		111				
	ST10F269Z2	●		256	12 K		16x10-bit			WDG	USART/SSC/2xCAN		111				
	ST10F272Z2	●		256	20 K		24x10-bit				UART/SSC/2xCAN		111				
	ST10F273Z4	●		512	36 K		24x10-bit			WDG, RTC	PC/2xUART/2xSSC/ 2xCAN		111				
	ST10F276Z5	●		832	68 K		24x10-bit					111		64 MHz, PEC, PWM, CAPCOM, MAC,EMI			
ST7: 8-bit industry standard, fast core architecture with innovative peripherals (up to 64 Kbytes address space)																	
ST7FOX																	
8 pins	ST7FOXAO	●		2	128			1x12-bit (0/1/1)	1(1/0/0)	WDG, RTC		1	5(5)	DIP8/S08/DFN8	4.5 to 5.5 V	Precise RC, AWU, ROP, ICP, IAP	
20 pins	ST7FOXF1	●		4	384		5x10-bit	2x12-bit (1/4/4)	2(0/0/0)		PC	1	16(7)	PDIP20/S020			
32 pins	ST7FOXK1	●		4	384		10x10-bit	2x12-bit (1/4/4)	2(1/0/0)			1	24(8)	LQFP32/PDIP32			
	ST7FOXK2	●		8	384		10x10-bit	2x12-bit (1/4/4) 1x16-bit (2/2/2)	2(1/0/0)		PC, SPI	1	24(8)	LQFP32/PDIP32			
ST7Lite																	
8 pins	ST7LITEU05	● ^{5,6}		2	128		5x10-bit	1x12-bit (0/1/1)	1(1/0/0)	WDG, RTC		3	5(5)	DIP8/S08/DFN8	2.4 to 5.5 V	8 MHz internal RC oscillator, AWU, ROP, ICP, IAP, 5 I/Os + 1 additional output	
	ST7LITEU09	● ^{5,6}		2	128	128	5x10-bit		1(1/0/0)		3	5(5)	DIP8/S08/DFN8				
	ST7LITE05Y0	● ⁵		1.5	128		5x8-bit		1(1/0/0)		3	13(6)	DIP16/S016	1% internal RC oscillator, PLL, ADC with op-amp, ROP, ICP, IAP			
16-20 pins	ST7LITE09Y0	● ⁵		1.5	128	128	5x8-bit	1x12-bit (0/1/1)	1(1/0/0)			3	13(6)	DIP16/S016	2.7 to 5.5 V	1% internal RC oscillator, PLL, 32 MHz timer, ART with deadline and enhanced one-pulse mode, AWU, ADC with op-amp, analog comp., ROP, ICP, IAP, debug module	
	ST7LIT15BF0	● ⁵		2	256		7x10-bit	2x12-bit (1/4/4)	2(1/0/0)		SPI	3	17(7)	DIP20/S020/ QFN20			
	ST7LIT15BY0	● ⁵		2	256		7x10-bit		2(1/0/0)			3	13(5)	DIP16/S016			
	ST7LIT19BF0	● ⁵		2	256	128	7x10-bit	2x12-bit	2(1/0/0)				3	17(7)			DIP20/S020/ QFN20
	ST7LIT19BY0	● ⁵		2	256	128	7x10-bit	(1/4/4)	2(1/0/0)				3	13(5)			DIP16/S016
	ST7LIT15BF1	● ⁵		4	256		7x10-bit		2(1/0/0)				3	17(7)			DIP20/S020/ QFN20
	ST7LIT15BY1	● ⁵		4	256		7x10-bit		2(1/0/0)				3	13(5)			DIP16/S016
	ST7LIT19BF1	● ⁵		4	256	128	7x10-bit		2(1/0/0)				3	17(7)			DIP20/S020/ QFN20
	ST7LIT19BY1	● ⁵		4	256	128	7x10-bit		2(1/0/0)				3	13(5)			DIP16/S016
	ST7DALIF2	● ^{5,6}		8	384	256	7x10-bit	1x12-bit (1/4/4)	2(1/0/0)				3	15(7)			S020
	ST7LITE35F2	● ^{5,6}		8	384		7x10-bit	2x12-bit (1/4/4)	2(1/0/0)				3	15(7)			DIP20/S020/ QFN20
	ST7LITE39F2	● ^{5,6}		8	384	256	7x10-bit		1(1/0/0)				3	15(7)			DIP20/S020/ QFN20
32 pins	ST7LIT49MK1	● ^{5,6}		4	384	128	10x10-bit		2(1/0/0)				PC	3	24(8)	LQFP32/PDIP32	2.7 to 5.5 V
	ST7LITE49K2	● ^{5,6}		8	384	256	10x10-bit	2x12-bit (1/4/4) 1x16-bit (2/2/2)	2(1/0/0)			SPI/PC	3	24(8)	LQFP32/PDIP32		
ST7 mid-range																	
28-32 pins	ST7232AK1	● ^{4,6}	●	4	384		8X10-bit	2x16-bit (3/3/1)	WDG, RTC	SPI/SCI		24(10)	SDIP32/LQFP32	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72264G2	● ^{5,6}	●	8	256		6x10-bit	2x16-bit (4/4/2)			SPI/SCI/PC	3	22(8)	SDIP32/S028/ BGA6x6	2.7 to 5.5 V	ROP, ICP, IAP, PLL, nested interrupts	
	ST72324BK2	● ^{4,6}	●	8	384		8x10-bit			SPI/SCI	3	24(10)	SDIP32/LQFP32	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72324LK2	● ^{4,6}	●	8	384		8x10-bit	2x16-bit (3/3/1)				24(10)	SDIP32/LQFP32	2.85 to 3.6 V			
	ST7232AK2	● ^{4,6}	●	8	384		8x10-bit				24(10)	SDIP32/LQFP32	3.8 to 5.5 V	1% internal RC oscillator, PLL, ROP, ICP, IAP			
	ST72344K2	● ^{5,6}		8	512	256	8x10-bit	2x16-bit (3/3/2)	WWDG, RTC	SPI/SCI/PC	3	22(5)	LQFP32		2.7 to 5.5 V		
	ST72324BK4	● ^{4,6}	●	16	512		8x10-bit				24(10)	SDIP32/LQFP32	3.8 to 5.5 V				
	ST72324LK4	● ^{4,6}	●	16	512		8x10-bit	2x16-bit (3/3/1)	WDG, RTC	SPI/SCI		24(10)	SDIP32/LQFP32	2.85 to 3.6 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72325K4	● ^{4,6}	●	16	512		8x10-bit		1(0/3/3)	CSS,WDG, RTC		3	24(10)	SDIP32/LQFP32	3.8 to 5.5 V	1% internal RC oscillator, PLL, ROP, ICP, IAP	
	ST72344K4	● ^{5,6}	●	16	1 K	256	8x10-bit	2x16-bit (3/3/2)	WWDG, RTC	SPI,SCI,PC	3	22(5)	LQFP32	2.7 to 5.5 V			
	ST72321BK6	● ^{4,6}		32	1 K		8x10-bit					3	24(10)	SDIP32/LQFP32	3.8 to 5.5 V		
	ST72324BK6	● ^{4,6}	●	32	1 K		8x10-bit	2x16-bit (3/3/1)	WDG, RTC	SPI/SCI	3	24(10)	SDIP32/LQFP32	2.85 to 3.6 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72324LK6	● ^{4,6}	●	32	1 K		8x10-bit										
	ST72325K6	● ^{4,6}	●	32	1 K		8x10-bit		1(0/3/3)	CSS,WDG, RTC	SPI,SCI,PC	3	24(10)	SDIP32/LQFP32	3.8 to 5.5 V		
	ST72361K6	● ^{4,6}	●	32	1 K		6x10-bit		1(1/1/3)	WWDG, RTC	SPI/2xSCI	1	24(5)	LQFP32	4.5 to 5.5 V		Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCL), AWU
	ST72361K7	● ^{4,6}	●	48	1 K		6x10-bit		1(1/1/3)				1	24(5)		LQFP32	
	ST72361K9	● ^{4,6}	●	60	2 K		6x10-bit		1(1/1/3)				1	24(5)		LQFP32	

For a list of abbreviations and notes, refer to the page following the mature products

8-, 16- and 32-bit microcontroller families

Part number	Program memory type		Prog. (Kbytes)	RAM (bytes)	Data E ² PROM (bytes)	A/D inputs	Timer functions			Serial interface	LVD levels	I/Os (high current ²)	Packages	Supply voltage	Special features			
	Flash	ROM					12 or 16-bit (IC/OC/ PWM)	8-bit (IC/OC/ PWM)	Others									
ST7 mid-range																		
44-48 Pins	ST7232AJ1	● ^{4,6}	●	4	384		12X10-bit	2x16-bit (3/3/1)		WDG, RTC	SPI/SCI	3	32(12)	SDIP42/LQFP44	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72324BJ2	● ^{4,6}	●	8	384		12X10-bit						32(12)	SDIP42/LQFP44				
	ST72324LJ2	● ^{4,6}	●	8	384		12X10-bit						32(12)	LQFP44			2.85 to 3.6 V	
	ST72324LS2	● ^{4,6}		8	384		12X10-bit						32(12)	LQFP48				
	ST7232AJ2	● ^{4,6}	●	8	384		12X10-bit			WWDG, RTC	SPI/SCI/PC	3	32(12)	SDIP42/LQFP44	3.8 to 5.5 V	1% internal RC oscillator, PLL, ROP, ICP, IAP		
	ST72344S2	● ^{5,6}		8	512		12X10-bit	2x16-bit (3/3/2)					32(8)	LQFP44			2.7 to 5.5 V	
	ST72324BJ4	● ^{4,6}	●	16	512		12X10-bit						3	32(12)				SDIP42/LQFP44
	ST72324LJ4	● ^{4,6}	●	16	512		12X10-bit	2x16-bit (3/3/1)						32(12)			LQFP44	2.85 to 3.6 V
	ST72324LS4	● ^{4,6}		16	512		12X10-bit			CSS, WDG, RTC	SPI/SCI/PC	3	32(12)	LQFP48	ICP, IAP, nested interrupts, TLI, ROP, beep ³			
	ST72325S4	● ^{4,6}	●	16	512		12X10-bit		1(0/4/4)				32(12)	LQFP48				
	ST72325J4	● ^{4,6}	●	16	512		12X10-bit		1(0/4/4)				3	32(12)		LQFP44	3.8 to 5.5 V	
	ST72344S4	● ^{4,6}	●	16	1 K	256	12x10-bit	2x16-bit (3/3/2)					3	32(8)		LQFP44		
	ST72345C4	● ^{4,6}	●	16	1 K	256	12x10-bit			WWDG, RTC	SPI/SCI/PC/PC slave 3-addr.	3	32(8)	LQFP48	2.7 to 5.5 V	1% internal RC oscillator, PLL, ROP, ICP, IAP		
	ST72321BJ6	● ^{4,6}	●	32	1 K		12X10-bit		1(0/4/4)				3	32(12)			LQFP44	
	ST72324BJ6	● ^{4,6}	●	32	1 K		12X10-bit	2x16-bit (3/3/1)						32(12)			SDIP42/LQFP44	3.8 to 5.5 V
	ST72324LJ6	● ^{4,6}	●	32	1 K		12X10-bit						32(12)	LQFP44			2.85 to 3.6 V	
	ST72325C6	● ^{4,6}		32	1 K		12X10-bit		1(0/4/4)	CSS, WDG, RTC	SPI/SCI/PC	3	36(13)	LQFP48	ICP, IAP, nested interrupts, TLI, ROP, beep ³			
	ST72325J6	● ^{4,6}	●	32	1 K		12X10-bit	2x16-bit (3/3/2)	1(0/4/4)				32(12)	SDIP42/LQFP44/48		3.8 to 5.5 V		
	ST72325S6	● ^{4,6}	●	32	1 K		16x10-bit		1(0/4/4)				3	36(13)			LQFP48	
	ST72361J6	● ^{4,6}	●	32	1 K		11x10-bit	1x16-bit (2/2/1)	1(2/1/5)				WWDG, RTC	SPI/2xSCI		1	34(6)	LQFP44
	ST72321BJ7	● ⁴	●	48	1.5 K		12X10-bit		1(0/4/4)	WDG, RTC	SPI/SCI/PC	3	32(12)	LQFP44	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72325C7	● ^{4,6}		48	1.5 K		12x10-bit	2x16-bit (3/3/2)	1(0/4/4)				CSS, WDG, RTC	36(13)			LQFP48	
	ST72325J7	● ^{4,6}		48	1.5 K		12x10-bit		1(0/4/4)				32(12)	LQFP44			Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU	
	ST72361J7	● ⁴	●	48	2 K		11x10-bit	1x16-bit (2/2/1)	1(2/1/5)				WWDG, RTC	SPI/2xSCI				1
	ST72321BJ9	● ⁴	●	60	2 K		12X10-bit		1(0/4/4)	WDG, RTC	SPI/SCI/PC	3	32(12)	LQFP44	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72325C9	● ^{4,6}		60	2 K		12x10-bit	2x16-bit (3/3/2)	1(0/4/4)				CSS, WDG, RTC	36(13)			LQFP48	
	ST72325J9	● ^{4,6}		60	2 K		12x10-bit		1(0/4/4)				32(12)	LQFP44			Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU	
	ST72361J9	● ⁴	●	60	2 K		11x10-bit	1x16-bit (2/2/1)	1(2/1/5)				WWDG, RTC	SPI/2xSCI				1
	ST72321BAR6	● ⁴	●	32	1 K		16x10-bit	2x16-bit (4/4/2)	1(2/4/4)	WDG, RTC	SPI/SCI/PC	3	48(16)	LQFP64 (10x10)	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³		
	ST72321BR6	● ⁴	●	32	1 K		16x10-bit		1(2/4/4)				48(16)	LQFP64 (14x14)				
	ST72325AR6	● ^{4,6}	●	32	1 K		16x10-bit		1(2/4/4)				CSS, WDG, RTC	48(16)			LQFP64 (10x10)	Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU
	ST72361AR6	● ⁴	●	32	2 K		16x10-bit	1x16-bit (2/2/1)	2(4/2/5)				WWDG, RTC	SPI/2xSCI			1	
ST72321BAR7	● ⁴	●	48	1.5 K		16x10-bit		1(2/4/4)	WDG, RTC	SPI/SCI/PC	3	48(16)	LQFP64 (10x10)	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³			
ST72321BR7	● ⁴	●	48	1.5 K		16x10-bit	2x16-bit (4/4/2)	1(2/4/4)				48(16)	LQFP64 (14x14)					
ST72325AR7	● ^{4,6}		48	1.5 K		16x10-bit		1(2/4/4)				CSS, WDG, RTC	48(16)			LQFP64 (10x10)	Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU	
ST72325R7	● ^{4,6}		48	1.5 K		16x10-bit		1(2/4/4)				48(16)	LQFP64 (14x14)			4.5 to 5.5 V		
ST72361AR7	● ⁴	●	48	2 K		16x10-bit	1x16-bit (2/2/1)	2(4/2/5)	WWDG, RTC	SPI/2xSCI	1	48(6)	LQFP64 (10x10)	3.8 to 5.5 V	ICP, IAP, nested interrupts, TLI, ROP, beep ³			
ST72321BAR9	● ⁴	●	60	2 K		16x10-bit		1(2/4/4)	WDG, RTC	SPI/SCI/PC	3	48(16)	LQFP64 (10x10)			Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU		
ST72321BR9	● ⁴	●	60	2 K		16x10-bit	2x16-bit (4/4/2)	1(2/4/4)				48(16)	LQFP64 (14x14)				ICP, IAP, nested interrupts, TLI, ROP, beep (audio square wave generator)	
ST72325AR9	● ^{4,6}		60	2 K		16x10-bit		1(2/4/4)				CSS, WDG, RTC	48(16)			LQFP64		Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU
ST72325R9	● ^{4,6}		60	2 K		16x10-bit		1(2/4/4)				48(16)	LQFP64	4.5 to 5.5 V				
ST72361AR9	● ⁴	●	60	2 K		16x10-bit	1x16-bit (2/2/1)	2(4/2/5)	WWDG, RTC	SPI/2xSCI	1	48(6)	LQFP64 (10x10)	4.5 to 5.5 V	Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), AWU			
80 pins	ST72321M6	● ^{4,6}	●	32	1 K		16x10-bit	2x16-bit (4/4/2)	1(2/4/4)	WDG, RTC	SPI/SCI/PC	3	64(16)	LQFP80	3.8 to 5.5 V	Nested interrupts, TLI, ROP, beep (audio square wave generator)		
	ST72321M9	● ^{4,6}	●	60	2 K		16x10-bit		1(2/4/4)				64(16)	LQFP80				
ST7 application specific																		
CAN	ST72561AR4	● ^{4,6}	●	16	1 K		16x10-bit	1x16-bit (2/2/1)	2(4/2/5)	WWDG, RTC	SPI/ 2xSCI/CAN	1	48(6)	LQFP64 (10x10)	4.5 to 5.5 V	Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), CAN 2.0B active, AWU		
	ST72561J4	● ^{4,6}	●	16	1 K		11x10-bit	1(2/1/5)					34(6)	LQFP44				
	ST72561K4	● ^{4,6}	●	16	1 K		6x10-bit	1(1/1/3)					24(5)	LQFP32				
	ST72521AR6	● ^{4,6}	●	32	1 K		16x10-bit	2x16-bit (4/4/2)	1(2/4/4)				48(16)	LQFP64 (10x10)			3.8 to 5.5 V	
	ST72521R6	● ^{4,6}	●	32	1 K		16x10-bit		1(2/4/4)	48(16)	LQFP64 (14x14)	Nested interrupts, TLI, ROP, beep ³ , CAN (2.0B passive)						
	ST72561AR6	● ^{4,6}	●	32	1 K		16x10-bit		2(4/2/5)	1	48(6)		LQFP64 (10x10)	4.5 to 5.5 V	Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), CAN 2.0B active, AWU			
	ST72561J6	● ^{4,6}	●	32	1 K		11x10-bit	1x16-bit (2/2/1)	1(2/1/5)	1	34(6)	LQFP44						
	ST72561K6	● ^{4,6}	●	32	1 K		6x10-bit	1(1/1/3)		1	24(5)	LQFP32						
	ST72561AR7	● ^{4,6}	●	48	2 K		16x10-bit		2(4/2/5)	1	48(6)	LQFP64 (10x10)	3.8 to 5.5 V					
	ST72521AR9	● ^{4,6}	●	60	2 K		16x10-bit	1(2/4/4)		3	48(16)	LQFP64 (10x10)		Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), CAN 2.0B active, AWU				
	ST72521M9	● ^{4,6}	●	60	2 K		16x10-bit	2x16-bit (4/4/2)	1(2/4/4)	3	64(16)	LQFP80						
	ST72521R9	● ^{4,6}	●	60	2 K		16x10-bit		1(2/4/4)	3	48(16)	LQFP64 (14x14)		Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), CAN 2.0B active, AWU				
	ST72561AR9	● ^{4,6}	●	60	2 K		16x10-bit		2(4/2/5)	1	48(6)	LQFP64 (10x10)	4.5 to 5.5 V					
	ST72561J9	● ^{4,6}	●	60	2 K		11x10-bit	1x16-bit (2/2/1)	1(2/1/5)	WWDG, RTC	SPI/2xSCI/CAN	1		34(6)	LQFP44	Nested interrupts, TLI, ROP, SCIs with LIN features (LINSCI), CAN 2.0B active, AWU		
	ST72561K9	● ^{4,6}	●	60	2 K		6x10-bit		1(1/1/3)	1	24(5)	LQFP32						
	ST72561R9	● ^{4,6}	●	60	2 K		16x10-bit		2(4/2/5)	1	48(6)	LQFP64 (14x14)	4.5 to 5.5 V					
DiSeqC™	ST7LNB0V2Y0	6	●	1.5	128	128							13(6)	SO16		DiSeqC™ 2.1 interface, 22 kHz tone detector		
	ST7LNB1Y0	6	●	1.5	128	128							13(6)	SO16		DiSeqC™ interface, SatCR control		

8-, 16- and 32-bit microcontroller families

Part number		Program memory type		Prog. (Kbytes)	RAM (bytes)	Data E ² PROM (bytes)	A/D inputs	Timer functions			Serial interface	LVD levels	I/Os (high current ²)	Packages	Supply voltage	Special features			
		Flash	ROM					12 or 16-bit (IC/OC/PWM)	8-bit (IC/OC/PWM)	Others									
ST7 application specific																			
MC	ST7MC1K2	● ^{4,6}	●	8	384		8x10-bit	1x16-bit (2/2/1)	1(1/0/1)	LINSPI	1	17(3)	LQFP32, SDIP32	4.5 to 5.5 V	Sensorless brushless motor control cell, ICD, ICP, IAP, LVD, CSS/PLL, ROP, RTC, nested interrupts				
	ST7MC1K4	● ^{4,6}	●	16	768		8x10-bit		1(1/0/1)		1	17(3)	LQFP32, SDIP32						
	ST7MC2S4	● ^{4,6}	●	16	768		11x10-bit	2x16-bit (2/2/1)	1(1/0/1)		1	26(6)	LQFP44						
	ST7MC2R6	● ^{4,6}		32	1 K		16x10-bit	2x16-bit (2/2/2)	1(2/0/4)		1	44(12)	LQFP64						
	ST7MC2S6	● ^{4,6}		32	1 K		11x10-bit	2x16-bit (2/2/1)	1(1/0/1)	LINSPI	1	26(6)	LQFP44		Sensorless brushless motor control cell, ICD, ICP, IAP, LVD, CSS/PLL, ROP, RTC, nested interrupts, beep ³				
	ST7MC2R7	● ^{4,6}		48	1.5 K		16x10-bit	2x16-bit (2/2/2)	1(2/0/4)		1	44(12)	LQFP64						
	ST7MC2S7	●		48	1.5 K		11x10-bit	2x16-bit (2/2/1)	1(1/0/1)		1	26(6)	LQFP44						
	ST7MC2M9	● ^{4,6}		60	1.5 K		16x10-bit	2x16-bit (2/2/2)	1(2/0/4)		1	60(12)	LQFP80						
SCR	ST7GEME4		●	16	768				1(0/0/0)	WDG	1	4(1)	S024/QFN24	4.0 to 5.5 V	Turnkey firmware from GEMALTO				
	ST7SCR1E4	● ^{4,6}	●	16	768				1(0/0/0)		1	4	S024/QFN24						
	ST7SCR1R4	● ^{4,6}	●	16	768				1(0/0/0)		1	35	LQFP64						
USB 2.0 (HS)	ST72681/R21									USB 2.0HS			LQFP48	3.0 to 3.6 V	Mass storage controller interface, Reed-Solomon error correction engine				
	ST72682/R21												LQFP64						
USB (FS)	ST72652AR4		●	16	512					USB/DTC	1	47(11)	LQFP64 (10x10)	4.0 to 5.5 V	PVR, ROP, 5 full-speed USB endpoints, ICP, IAP				
	ST72652C4		●	16	512						1	31(5)	LQFP48 (7x7)						
	ST72651AR6	● ^{4,6}	●	32	5 K		8x8-bit	1x16-bit (0/2/2)		USB/DTC/PC/SPI	1	47(11)	LQFP64 (10x10)			2.7 to 5.5 V			
USB (LS)	ST7260E1	● ⁴	●	4	384			1x16-bit (2/1/1)		USB/SCI	1	14(6)	S024	4.0 to 5.5 V	3 low-speed USB endpoints, ICP, IAP, ROP				
	ST7260K1	● ^{4,6}	●	4	384			1x16-bit (2/2/1)			1	19(10)	QFN40						
	ST7263BE1	● ⁴	●	4	384			1x16-bit (2/1/1)			1	14(6)	S024						
	ST7263BK1	● ⁴	●	4	384		8x8-bit	1x16-bit (2/2/1)		USB	1	19(10)	SDIP32/S034						
	ST7260E2	● ⁴	●	8	384			1x16-bit (2/1/1)		USB/SCI	1	14(6)	S024						
	ST7260K2	● ⁴	●	8	384			1x16-bit (2/2/1)			1	19(10)	QFN40						
	ST7263BE2	● ⁴	●	8	384			1x16-bit (2/1/1)		USB/SCI/PC	1	14(6)	S024						
	ST7263BH2	● ⁴	●	8	384		12x8-bit	1x16-bit (2/2/1)			1	27(10)	LQFP48 (7x7)						
	ST7263BK2	● ⁴	●	8	384		8x8-bit	1x16-bit (2/2/1)		USB/SCI	1	19(10)	SDIP32/S034/QFN40						
	ST7263BE4	● ⁴	●	16	512			1x16-bit (2/1/1)			1	14(6)	S024						
	ST7263BK4	● ⁴	●	16	512		8x8-bit	1x16-bit (2/1/1)		USB/SCI/PC	1	19(10)	SDIP32/S034						
	ST7263BD6	● ⁴	●	32	1 K		12x8-bit	1x16-bit (2/2/1)			1	27(10)	QFN40						
	ST7263BE6	● ⁴	●	32	1 K			1x16-bit (2/1/1)			1	14(6)	S024						
	ST7263BH6	● ⁴	●	32	1 K		12x8-bit	1x16-bit (2/1/1)			1	27(10)	LQFP48 (7x7)						
	ST7263BK6	● ⁴	●	32	1 K		8x8-bit	1x16-bit (2/2/1)			1	19(10)	SDIP32/S034						
µPSD: 8-bit Flash programmable system device with 8032 microcontroller core																			
Turbo plus µPSD w/32-Kbyte SRAM and USB - 9 MIPs																			
5 V 3 V	µPSD3454EV	●		288	32 K		8x10-bit	5x16-bit (1/2/6)	2(6/8/6)	WDG, PCA	1	36/45(8)	LQFP52/80	3.0 to 3.3 V	JTAG ISP/debug, PLD, FS USB				
	µPSD3454E	●		288	32 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80	4.5 to 5.5 V					
Turbo plus µPSD w/USB - 9 MIPs																			
3 V 5 V	UPSD3433EV	●		160	8 K		8x10-bit	5x16-bit (1/2/6)	2(6/8/6)	WDG, PCA	1	36/45(8)	LQFP52/80	3.0 to 3.6 V	TAG ISP/debug, PLD, FS USB				
	UPSD3434EV	●		288	8 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80						
	UPSD3422E	●		80	4 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80						
	UPSD3433E	●		160	8 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80						
	UPSD3434E	●		288	8 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80						
Turbo µPSD - 6 MIPs																			
3 V 5 V	µPSD3333DV	●		160	8 K		8x10-bit	5x16-bit (1/2/6)	2(6/8/6)	WDG, PCA	1	36/45(8)	LQFP52/80	3.0 to 3.6 V	PLD, JTAG ISP/debug				
	µPSD3334DV	●		288	8 K		8x10-bit		2(6/8/6)		1	45(8)	LQFP80						
	µPSD3312D	●		80	2 K		8x10-bit		2(6/8/6)		1	36(8)	LQFP52						
	µPSD3333D	●		160	8 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80						
	µPSD3334D	●		288	8 K		8x10-bit		2(6/8/6)		1	45(8)	LQFP80						
Turbo µPSD w/32-Kbyte SRAM - 6 MIPs																			
5 V 3 V	µPSD3354DV	●		288	32 K		8x10-bit	5x16-bit (1/2/6)	2(6/8/6)	WDG, PCA	1	36/45(8)	LQFP52/80	3.0 to 3.6 V	PLD, JTAG ISP/debug				
	µPSD3354D	●		288	32 K		8x10-bit		2(6/8/6)		1	36/45(8)	LQFP52/80	4.5 to 5.5 V					

For a list of abbreviations and notes, refer to the page following the mature products

8-, 16- and 32-bit microcontroller families

Part number		Program memory type		Prog. (Kbytes)	RAM (bytes)	Data E ² PROM (bytes)	A/D inputs	Timer functions			Serial interface	LVD levels	I/Os (high current ²)	Packages	Supply voltage	Special features
		Flash	ROM					12 or 16-bit (IC/OC/ PWM)	8-bit (IC/OC/ PWM)	Others						
ST6: 8-bit general-purpose control applications (up to 8 Kbytes address space)																
16 pins	ST6200C ¹	6	●	1	64		4x8-bit		1(0/0/0)	WDG		1	9(3)	DIP16/SO16	3.0 to 6 V	RC oscillator, OSG, ROP
	ST6203C ¹	6	●	1	64		-		1(0/0/0)			1	9(3)	DIP16/SO16		
	ST6201C ¹	6	●	2	64		4x8-bit		1(0/0/0)			1	9(3)	DIP16/SO16		
20 pins	ST6210C ¹	6	●	2	64		8x8-bit		1(0/0/0)			1	12(4)	DIP20/SO20		
	ST6220C ¹	6	●	4	64		8x8-bit		1(0/0/0)			1	12(4)	DIP20/SO20		
	28 pins	ST6225C ¹	6	●	4	64		16x8-bit			1(0/0/0)		1	20(4)		

Mature products – microcontroller families

Not recommended for new designs

Part number	Program memory type		Prog. (Kbytes)	RAM (bytes)	Data E ² PROM (bytes)	A/D inputs	Timer functions			Serial interface	LVD levels	I/Os (high current ²)	Packages	Supply voltage	Special features	
	Flash	ROM					12 or 16-bit (IC/OC/ PWM)	8-bit (IC/OC/ PWM)	Others							
µPSD: 8-bit Flash programmable system device with 8032 microcontroller core																
Standard µPSD																
3V	µPSD3233BV	●	160	8 K		4x8-bit	3x16-bit (1/2/0)	2 (0/2/5)	WDG	2x UART/I2C/DD	1	37/46	TQFP52/80	3.0 to 3.6 V	PLD, JTAG ISP	
	µPSD3234BV	●	288	8 K		4x8-bit		2 (0/2/5)			1	37/46	TQFP52/80			
5V	µPSD3212C	●	80	2 K		4x8-bit		2 (0/2/5)			1	37/46	TQFP52/80	4.5 to 5.5 V		
	µPSD3233B	●	160	8 K		4x8-bit		2 (0/2/5)			1	37/46	TQFP52/80			
Standard µPSD w/ 32-Kbyte SRAM																
3V	µPSD3253BV	●	160	32 K		4x8-bit	3x16-bit (1/2/0)	2 (0/2/5)	WDG	2x UART/I2C/DDC	1	37/46	TQFP52/80	3.0 to 3.6 V	PLD, JTAG ISP	
	µPSD3254BV	●	288	32 K		4x8-bit		2 (0/2/5)			1	46	TQFP80			
	µPSD3253B	●	160	32 K		4x8-bit		2 (0/2/5)			1	37	TQFP52	4.5 to 5.5 V		
Standard µPSD w/USB																
5V	µPSD3212A	●	80	2 K		4x8-bit	3x16-bit (1/2/0)	2 (0/2/5)	WDG	2x UART/I2C/DDC/USB	1	37/46	TQFP52/80	4.5-5.5 V	PLD, JTAG ISP, LS USB 2.0	
	µPSD3234A	●	288	8 K		4x8-bit	3x16-bit (1/2/0)	2 (0/2/5)	WDG	2x UART/I2C/DDC/USB	1	37/46	TQFP52/80			
Standard µPSD w/USB and 32-Kbyte SRAM																
5V	µPSD3254A	●	288	32 K		4x8-bit	3x16-bit (1/2/0)	2 (0/2/5)	WDG	2x UART/I2C/DDC/USB	1	37/46	TQFP52/80	4.5 to 5.5 V	PLD, JTAG ISP, LS USB 2.0	

ST7: 8-bit industry standard, fast core architecture with innovative peripherals (up to 64 Kbytes address space)																		
ST7Lite																		
16 Pins	8 Pins	ST7LITEUS5	● ^{5,6}		1	128		5x10-bit	1x12-bit (0/1/1)	1(1/0/0)	WDG, RTC		3	5(5)	DIP8/SO8/DFN8	2.4 to 5.5 V	8 MHz internal RC oscillator, AWU, ROP, ICP, IAP, 5 I/Os + 1 additional output	
		ST7LITESY0	● ^{5,6}		1	128		5x8-bit		1(1/0/0)			SPI	3	13(6)		DIP16/SO16	1 % internal RC oscillator, PLL, ROP, ICP, IAP
20 Pins		ST7LITE20F2	● ⁵		8	384		7x10-bit	1x12-bit (1/4/4)	2(1/0/0)			SPI	3	15(7)		DIP20/SO20	PLL, 32 MHz timer, AWU, ADC with op-amp, ROP, ICP, IAP, debug module
		ST7LITE25F2	● ⁵		8	384		7x10-bit		2(1/0/0)			SPI	3	15(7)		DIP20/SO20	1 % internal RC oscillator, PLL, 32 MHz timer, AWU, ADC with op-amp, ROP, ICP, IAP, debug module
		ST7LITE29F2	● ⁵		8	384	256	7x10-bit		2(1/0/0)			SPI	3	15(7)		DIP20/SO20	
ST7 application specific																		
USB		ST72622L2	● ⁶	●	8 K	384		8x10-bit		2(2/2/2)	WDG	USB/SPI	1	23(8)	SO34	4.0 to 5.5 V	3 low-speed USB endpoints, ICP, IAP, ROP	
		ST72623F2	● ⁶	●	8 K	384		3x10-bit		2(2/2/2)		USB	1	11(8)	SO20/DIP20			
		ST72621J4	● ⁶	●	16 K	768		8x10-bit		2(2/2/2)			1	31(8)	TQFP44/SDIP42			
		ST72621K4	● ⁶	●	16 K	768		8x10-bit		2(2/2/2)		USB/SPI/SCI	1	21(8)	SDIP32			
		ST72621L4	● ⁶	●	16 K	768		8x10-bit		2(2/2/2)			1	23(8)	SO34			

For a list of abbreviations and notes, refer to the page following the mature products

Abbreviations and notes

Abbreviations

- ADC : Analog-to-digital converter
- ART : Auto-reload timer
- ATAPI : AT attachment packet interface
- AWU : Auto wake-up from HALT
- BLPD : Byte level protocol decoder
- BOD : Brown-out detector
- CAN : Controller area network
- CAPCOM: Capture compare
- CSS : Clock security system
- DALI : Digital addressable lighting interface
- DDC : Data display channel
- DisSeq : Digital satellite equipment control
- DMA : Direct Memory Access
- DSC : Dual supply control
- DTC : Data transfer coprocessor
- EMI : External memory interface
- HDLC : High-level data link control
- IAP : In-application programming
- IC/OC : Input capture/output compare ICP programming
- IR : Infrared
- IrDA : Infrared data association
- ISP : In-situ programming
- iFC : Inter-integrated circuit
- LCD : Liquid crystal display
- LIN : Local interconnect network
- LVD : Low voltage detection
- MAC : Multiply accumulator
- MC : Motor control
- MFT : Multifunction timer
- NMI : Non-maskable interrupt
- OSG : Oscillator safeguard
- PCA : Programmable counter array
- PDR : Power-down reset
- PHW : Programmable half wake-up
- PEC : Peripheral event controller
- PLD : Programmable logic device

- PLL : Phase locked loop
- POR : Power-on reset
- PVD : Programmable voltage detector
- PVR : Programmable voltage regulator
- PWM : Pulse width modulation
- ROP : Readout protection
- RTC : Real-time clock timer
- SC : Smartcard
- SCI : Serial communication interface
- SCR : Smartcard reader
- SMI : Serial memory interface
- SPI : Serial peripheral interface
- SSC : Single-cycle switching support
- SSP : Synchronous serial port
- TBU : Time base unit
- LI : Top level interrupt
- UART : Universal asynchronous receiver transmitter
- USART : Universal sync/async receiver transmitter
- USB : Universal Serial Bus
- WDG : Watchdog timer
- WWDG : Window watchdog timer

Package

DIP : Dual in-line package
LCC : Leaded chip carrier
SDIP : Shrink dual in-line package
PQFP : Plastic quad flat package
SO : Small outline
LQFP : Low-profile quad flat package
PBGA : Plastic ball grid array
DFN : Dual flat no-lead
QFN : Quad flat no-lead

Notes

- : Under development
- 1 : Exists also in OTP and EPROM version
- 2 : Number of high current pins included in the number of I/O pins
- 3 : Audio square wave generator
- 4 : HFlash (high-density Flash)
- 5 : XFlash (extended Flash for 10 kcycle min)
- 6 : FASTROM service available for pre-programmed devices in production quantities

Notes

8-, 16- and 32-bit microcontroller development tools

This reference guide lists ST and third-party development tools that are promoted as part of the ST tool offer for 8-, 16- and 32-bit microcontrollers. For the latest news about this tool offer, please refer to www.st.com/mcu

Evaluation

Evaluation boards from ST

- Implement full range of device features
- Come with complete schematics, documentation and code samples

Starter kits

- Everything you need to start developing quickly and easily
- Immediate device evaluation with ready-to-run demonstration applications
- In-circuit debugging to troubleshoot code using actual input/output of target system

Low-cost evaluation boards are also available from third-party vendors

Development

In-circuit debugger/programmers

- Real-time debugging using debug resources on the standard chip, no bond-outs, 100% electrical characteristics guaranteed
- Requires separate evaluation or application board
- RLink – debug and program a full range of ST MCUs from 8- to 32-bit

Advanced emulation systems for 8-bit devices

- Real-time emulation
- Advanced breakpoints
- Trace capability with complex triggering
- Code performance analysis

Software

- Free software toolsets with development environment, programming interface, integrated compiler support and more
- C compilers with free versions that output code up to a specified size
- Free ST firmware libraries for all standard peripherals plus special package for USB, motor control and more
- Large selection of development solutions (IDE + compiler) from leading tool suppliers for ARM
- Large selection of royalty-free RTOS, solution stacks (TCP/IP, USB, ...) and middleware

Programming

In-circuit programmers

Program the device on an application board via JTAG, in-circuit communication or in-situ programming interface (depends on target device)

Pre-programming

ST FASTROM service for ST7 and ST6 also provides rapid delivery of ready-to-mount MCUs pre-programmed with the customer's application

Automated programmers

Third-party solutions for programming in a production environment.
For a list of vendors, refer to www.st.com/mcu

Single position programmers

Third-party solutions for programming one device at a time.
Allows operation from a host PC, or in standalone mode.
For a list of vendors, refer to www.st.com/mcu

Gang programmers

Third-party solutions for programming several devices at once.
For a list of vendors, refer to www.st.com/mcu

Tools for ST ARM® core-based STM32, STR9 and STR7 families include a full range of third-party solutions that come complete with C/C++ compiler, integrated development environment and in-circuit debugger/programmer with industry standard JTAG interface. Explore and start applications easily with any of a range of affordable, easy-to-use starter kits. Take advantage of a range of firmware to speed application development, including free ST libraries and royalty-free RTOS, solution stacks (USB, TCP/IP, ...) and middleware.

Evaluation	Evaluation boards ST evaluation boards: Implement the full range of device peripherals and features for each family. STM32F10xB (USB, CAN, RS232, IrDA), STR91x (Ethernet, USB, CAN, RS232, IrDA, trace tool support), STR75x (USB, CAN, RS232), STR73x (CAN, RS232), STR71x (USB, CAN, RS232). (Order code types: STxxx-EVAL) Starter kits STM32 Primer: A fun, stimulating learning and development platform with MEMS-based controls and integrated debugging/programming via USB. Includes Raisonance RIDE (debug up to 32 Kbytes of code) and GNU C/C++ compiler. (Order code: STM3210B-PRIMER) STM32-PerformanceStick: Your window to explore STM32 performance. Includes integrated debugging/programming via USB, unlimited Hitex HITOP5, Tasking VX compiler and DashBoard GUI for device performance evaluation. (Order Code: STM3210B-PFSTICK) STR9-ComStick: Low-cost evaluation and development package for Ethernet, USB and CAN connectivity with STR9, includes debugging/programming via dedicated USB, unlimited Hitex tool set (HiTOP5 IDE, GNU C/C++ compiler). (Order code: STR9-COMSTICK) Hitex STM32 starter kit: Unlimited HiTOP5, Tasking VX compiler, STM32-PerformanceStick with integrated debugging/programming via USB, extension I/O board with peripheral evaluation features, DashBoard GUI. (Order code: STM3210B-SK/HIT) Hitex starter kits: HiTOP5 (16 Kbyte code-size limited version) with GNU C/C++ compiler, debugger, Tantino (USB/JTAG) and evaluation board for either STR912F, STR750F, STR730F, or STR710F. (Order code types: STxxx-SK/HIT) IAR starter kits: Embedded workbench for ARM (EWARM 32 Kbyte code-size limited version), C/C++ compiler, J-Link (USB/JTAG) and IAR demonstration board for either STM32F10xB, STR912F, STR750F, STR731F, STR730F, STR712F, or STR711F. (Order code types: STxxx-SK/IAR) Keil starter kits: RealView microcontroller development kit for ARM (16 Kbyte code-size limited version) with U-LINK (USB/JTAG) and evaluation board for either STM32F10xB, STR912F or STR750F. (Order codes types: STxxx-SK/KEIL) Raisonance REva starter kits: RIDE (32 Kbyte code-size limited version), GNU C/C++ compiler, RLink (USB/JTAG), REva demonstration mother board (CAN, RS232, I/Os etc.) and daughter boards for STM32F10xB, STR912F, STR750F, STR730F, STR711F or STR712F. (Order code types: STxxx-SK/RAIS) STM32 motor control starter kit: Complete, ready-to-run application for motor control with vector-based algorithms. Includes sensor and sensorless libraries, demo application, STM32 control board, hardware platform for vector drive of three-phase PMSM and induction motors, opto-isolation, and Segger J-Link (USB/JTAG) for host PC interface. (Order code: STM3210B-MCKIT)
Development	Development environments Software package IAR embedded workbench for ARM integrated development environment with IAR C/C++ compiler and C-SPY debugger: ■ STR-EW/IAR – unlimited version with MISRA C extension and 1-year of support and updates from IAR ■ STR-EW/D/IAR – unlimited version with license dongle, MISRA C extension and 1 year of support and updates from IAR ■ STR-EW-BL/IAR – baseline version with 256 Kbyte code-size limitation ■ STR-EW-BL/D/IAR – baseline version with license dongle and 256 Kbyte code-size limitation Software package with in-circuit debugger/programmer STX-PRO/RAIS: Raisonance developer's kit for ARM core-base MCUs with unlimited RIDE integrated development environment, GNU C/C++ compiler and RLink (USB/JTAG) Complete hardware/software package with trace support for STR9 STR91X-DK/IAR: IAR advanced development kit EWARM-BL512 integrated development environment (512 Kbyte code-size limited), IAR C/C++ compiler, STR912F evaluation board and J-Trace (USB/JTAG) with 38-pin trace connection for STR9 STR9-DK/RAIS: Raisonance professional developer kit for STR9 with RIDE integrated development environment (unlimited), GNU C/C++ compiler, REva evaluation board with STR912F and Signum JTAGjet-ETM (USB/JTAG) with 38-pin trace connection for STR9
Software	RTOS, stack software and libraries: A full range of portable embedded system software, TCP/IP stacks and several royalty-free, small-footprint operating systems from a range of third parties (see table) Free ST library packages for all standard device peripherals, USB, and motor control. Refer to www.st.com/mcu
Programming	A complete range of programming solutions from single-position to automated are available from third-party vendors. For updated listings, refer to www.st.com/mcu RLink from Raisonance provides a low-cost solution for programming a complete range of ST microcontrollers from 8 to 32 bits FlashRunner from SofTec Microsystems provides in-circuit programming for ST microcontrollers that is ready to integrate into production/test equipment Flasher ARM, Segger Microcontroller Systems' in-circuit programmer with standalone mode for production environment

1 All part numbers shown are for STMicroelectronics and third-party tools (Hitex, IAR, Keil and Raisonance) which are available from ST. Additional tools that are not available through ST can be ordered from the third-parties listed.

STM32, STR9 and STR7 families

STM32, STR9 and STR7 development and programming tools

Device	Evaluation		Development environment available from ST	C/C++ compiler	3rd-part development environment	RTOS and stack software	Programmer
	Evaluation board	Starter kit					
STM32F10xB	STM3210B-EVAL	STM3210B-PRIMER STM3210B-PFSTICK STM3210B-SK/HIT STM3210B-SK/IAR STM3210B-SK/KEIL STM3210B-SK/RAIS	Software only: STR-EW/IAR STR-EW/D/IAR STR-EW-BL/IAR STR-EW-BL/D/IAR Software with in-circuit emulator: STX-PRO/RAIS Software/hardware package supporting STR9 trace capability: STR91X-DK/IAR STR9-DK/RAIS	ARM www.arm.com GNU gcc.gnu.org GreenHills www.ghs.com IAR www.iar.com Keil www.keil.com Altium/Tasking www.tasking.com	Aiji System www.aijisystem.com Altium/Tasking www.tasking.com Anby www.anby.cn ARM www.arm.com Ashling www.ashling.com Embest www.embedinfo.com Green Hills Software www.ghs.com Hitex www.hitex.com IAR www.iar.com iSYSTEM www.isystem.com Keil www.keil.com Lauterbach www.lauterbach.com Nohau www.icetech.com PLS www.pls-mc.com Raisonance www.raisonance.com Rowley www.rowley.co.uk Signum www.signum.com	CMX www.cmx.com eCosCentric www.ecoscentric.com freeRTOS www.freertos.org GreenHills www.ghs.com IAR www.iar.com InterNiche www.iniche.com Keil www.keil.com Micrium www.micrium.com NexGen www.nexgen-software.com Port www.epl-tools.com Quadros www.quadros.com Segger www.segger.com uClinux www.uclinux.org Wittenstein High Integrity Systems www.highintegritysystems.com	From ST: STX-RLINK Third-parties: BP Microsystems www.bpmicro.com Dataman www.dataman.com Data I/O www.data-io.com ElneC www.elnec.sk Hitex www.hitex.com Leap www.leap.com.tw PLS www.pls-mc.com Raisonance www.raisonance.com RK-System www.rk-system.com.pl Segger www.segger.com SofTec www.softecmicro.com Systems General www.sg.com.tw Xeltec www.xeltec.com
STR91xF	STR910-EVAL	STR9-COMSTICK STR91X-SK/HIT STR91X-SK/IAR STR91X-SK/KEI STR91X-SK/RAI					
STR750xF	STR750-EVAL	STR750-SK/HIT STR750-SK/IAR STR750-SK/KEIL STR750-SK/RAIS					
STR73xF	STR730-EVAL	STR730-SK/HIT STR730-SK/IAR STR730-SK/RAIS STR731-SK/IAR Keil www.keil.com					
STR71xF	STR710-EVAL	STR71X-SK/RAIS STR710-SK/HIT STR711-SK/IAR STR712-SK/IAR Keil www.keil.com					

ST10 family

ST10 development and programming tools

Part number	Software	Evaluation board	Emulator/debugger	Programmer
ST10R172	C Toolchain Cosmic www.cosmic-software.com Keil www.keil.com	FPhytec www.phytec.com Rigel www.rigelcorp.com	Hitex www.hitex.com Lauterbach www.lauterbach.com Nohau www.icetech.com PLS www.pls-mc.com	BP Microsystems www.bpmicro.com
ST10R272	Tasking www.tasking.com GNU (HighTec) www.hightec-rt.com			
ST10R167	Real-time kernel CMX www.cmx.com			
ST10F269	OSE166 www.ose.com RTX166 www.keil.com			
ST10F272	PXROS www.hightec-rt.com			
ST10F271	EUROS www.euros-embedded.com µC/OS-II Micrium www.micrium.com			
ST10F273	OSEK osCAN www.vector-informatik.com			
ST10F276	ProOSEK www.3soft.com OSEKWorks www.windriver.com			

Evaluation	Evaluation boards Evaluation boards for learning and testing microcontroller features include: ST7232X-EVAL for ST7F321/521, ST7DALI-EVAL for lighting applications, ST7CAN-DEMO for CAN networks, as well as ST7MDTULS/EVAL, ST7265X-EVAL/MS and ST7265X-DVT/MS for USB devices Starter kits ST7UltraLite primer Ultra low-cost, introductory buzzer/light sensor application (RC, ADC, PWM and LVD) with ST7FLITEUS. Integrated debugging/programming via USB using RIDE integrated development environment (Order code: ST7FUS-PRIMER) Raisonance REva starter kits Complete, cost-effective development kits that include RIDE development environment, RLink (USB) in-circuit debugger/programmer, evaluation motherboard (ADC, SPI, CAN, I²C, I/Os, etc.) and daughter boards featuring supported MCUs: ■ ST7FLITEU0, ST7FLITE0, ST7FLITE1B and ST7FLITE3 daughter boards for ST7FLITE-SK/RAIS ■ ST72321B and ST72325 daughter boards for ST7232X-SK/RAIS ■ ST72345 and ST72264 daughter boards for ST72F34X-SK/RAIS ■ ST72361 daughter board for ST72F36X-SK/RAIS ■ ST7263B daughter board for ST72F63B-SK/RAIS ST7FMC motor control starter kit Motor control development kit for ST7MC that includes firmware, GUI, a 12 VDC 240 VAC 1000 W inverter board, isolation board, STXF-INDART/USB debugger/programmer and 24 V BLDC motor. Optional accessories include ST7MC-MOT/IND - 240 V/800 W Selni three-phase induction motor (Order code: ST7MC-KIT/BLDC). Available from ST/distributor or www.softecmicro.com
Development	Hardware tools for all budgets and all needs RLink low-cost, real-time in-circuit debugger/programmer of ST microcontrollers, from Raisonance ST7-DVP3 series emulators for affordable, real-time emulation with advanced breakpoints and trace, plus in-circuit debugging/programming capability ST7-EMU3 series emulators for full-featured, real-time emulation with advanced breakpoints, trace and profiling, plus in-circuit debugging/programming capability. Emulators include everything to connect to the user application for all supported MCUs Free software tools ST MCU toolset with everything to build, debug and program applications in one free download that includes assembler and linker plus: ■ ST Visual Develop (STVD), easy-to-use IDE with integrated control of C toolsets from Cosmic and Raisonance. Supports a full range of debugging and programming tools ■ ST Visual Programmer (STVP), full-featured programming software supporting the complete range of ST programming boards Raisonance software toolset for ST microcontrollers, available at www.raisonance.com. ■ RIDE development environment, RBuilder (application builder), C compiler. Supports DVP3 and EMU3 series emulators and RLink in-circuit debugger/programmer ■ Raisonance C compiler. Available in free version that outputs code up to 16 Kbytes ■ RFlasher programming software for viewing, erasing, writing and verifying device Flash memory. Offers automated mode and project manager Cosmic C compiler with free version that outputs code up to 16 Kbytes. Available at www.cosmic-software.com REALIZER, Actum Solutions' graphical design tool for creating applications without learning assembly or writing a single line of code. Supports ST7 and ST6. Versions include STREALIZER-II (available from ST only), and REALIZER with end-user support available at www.actum.com CAN, OSEK and LIN software: CAN drivers for pCAN and beCAN. ST7 OSEK software from Vector Informatik GmbH is available for most automotive OEMs. LIN driver supports the standard ST7 SCI and LINSCI
Programming	In-circuit programmers A complete range of programming solutions from single-position to automated are available from third-party vendors. For updated listings, refer to www.st.com/mcu RLink from Raisonance provides a low-cost solution for programming a complete range of ST microcontrollers from 8 to 32 bits ST7-STICK, ST's in-circuit communication kit for programming ST7 with parallel port interface to host PC Flasher ST7, Segger Microcontroller Systems' in-circuit programmer with standalone mode for production environment FlashRunner from SofTec Microsystems provides in-circuit programming for ST microcontrollers that is ready to integrate into production/test equipment ST7-SocketBoard provide single-position programming with any tool with in-circuit programming capability (STX-RLINK, ST7-STICK, ST7-DVP3, ST7-EMU3)

Part number	Evaluation		In-circuit debugger	Emulator		3rd-party emulator	Programming tool		
	Evaluation board	Starter kit with RLink ³		DVP series	EMU series		In-circuit programmer	Socket boards ¹¹ or EPB series	3rd-party programmer
ST7F0XA0		ST7F0XA0-D/RAIS ¹³	STX-RLINK ^{3, 8, 12} ST7-STICK ^{1, 9, 12}				STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		
ST7F0XF ST7F0XX		ST7F0XK2-D/RAIS ¹³	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}				STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		
ST7LITEU0		ST7FLITE-SK/RAIS ⁸	STX-RLINK ^{3, 8, 12} ST7-STICK ^{1, 9, 12}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-SU0 ¹	
ST7LITEUS	ST7FUS-PRIMER	ST7FLITE-SK/RAIS ⁸	STX-RLINK ^{3, 8, 12} ST7-STICK ^{1, 9, 12}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-SU0 ¹	
ST7LITES ST7LITE0		ST7FLITE-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-SU0 ¹	
ST7LITE1B		ST7FLITE-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-123 ¹	BP Microsystems www.bpmicro.com
ST7LITE1 ST7LITE2	ST7FLIT2-COS/COM	ST7FLITE-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-123 ¹	Data I/O www.data-io.com
ST7LITE3		ST7FLITE-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-123 ¹	
ST7LITE4		ST7FLI49-D/RAIS ¹³	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}				STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		Dataman www.dataman.com
ST7LITE4M		ST7FLI49M-D/RAIS ¹³	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}				STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		Elnece www.elnec.com
ST7DALI	ST7DALI-EVAL		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-123 ¹	Hi-LO www.hilosystems.com.tw
ST7226x	ST7FOPTIONS-EVAL	ST72F34X-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT10-DVP3 ⁶	ST7MDT10-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7-SB10-26X ¹	
ST7232A			STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT20-DVP3 ⁵	ST7MDT20J-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB20J ¹	Insem www.insem.co.kr
ST72321BJ ST72321J ST72325J	ST7232X-EVAL	ST7232X-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT20-DVP3 ⁵	ST7MDT20J-EMU3	Hitex, iSystem	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB20J ¹	Leap www.leap.com.tw
ST72321R ST72321AR ST72325AR ST72321BR ST7232BAR	ST7232X-EVAL	ST7232X-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT20-DVP3 ⁵	ST7MDT20M-EMU3	Hitex, iSystem	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB20M ¹	RK-System www.rk-system.com.pl
ST72324 ST72324B	ST7232X-EVAL	ST7232X-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT20-DVP3 ⁵	ST7MDT20J-EMU3	Hitex, iSystem	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB20J ¹	Segger www.segger.com
ST7234x		ST72F34X-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		ST7MDT40-EMU3		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB20J ¹ ST7SB40-QP48 ^{1,7}	Softec Microsystems www.softecmicro.com
									System General www.sg.com
ST72521	ST7232X-EVAL ST7CAN-DEMO		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT20-DVP3 ⁵	ST7MDT20M-EMU3	Hitex, iSystem	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB20M ¹	Xeltek www.xeltek.com
ST72361 ST72561	Phytec www.phytec.com	ST72F36X-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7MDT25-DVP3 ⁴		Hitex, iSystem	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}	ST7SB25 ¹	
ST7MC	ST7MC-KIT/BLDC ¹⁰		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		ST7MDT50-EMU3	iSystem	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		
ST7263B ST7260	ST7MDTULS-EVAL	ST72F63B-SK/RAIS ⁸	STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		ST7MDTU3-EMU3		STX-RLINK ^{3, 8}	ST7MDTU3-EPB ¹	
ST7265	ST7265X-EVAL/MS ST7265X-DVT/MS		STX-RLINK ^{3, 8} ST7-STICK ^{1, 9}		ST7MDTU5-EMU2B		STX-RLINK ^{3, 8}	ST7MDTU5-EPB ¹	
ST7SCR	ST7SCR-EVAL/SCR				ST7MDTS1-EMU2B			ST7MDTS1-EPB ¹	

Notes

- 1 Add suffix /EU, /US or /UK for the power supply for your region

2 Add suffix /EU or /US for the power supply for your region

3 Available from ST or from Raisonance, www.raisonance.com

4 Requires optional connection kit. See 'How to order ST7-EMU or DVP' for connection kit ordering information

5 Includes connection kit for SDIP32/SDIP42 only. See 'How to order ST7-EMU or DVP' for connection kit ordering information

6 Includes connection kit for DIP16/SO16 only. See 'How to order ST7-EMU or DVP' for connection kit ordering information

7 Order socket board ST7SB40-QP48 for LQFP48 package and ST7SB20J for all other packages

8 USB connection to PC
- 9 Parallel port connection to PC

10 Available accessories: ST7MC-MOT/IND (induction motor) and ST7-ICC/OPTOISOL (optoisolation board included with motor control starter kit (ST7MC-KIT/BLDC), is also available as separate product)

11 Socket boards complement any tool with ICC capabilities (ST7-STICK, InDART, RLINK, DVP3, EMU3, etc.)

12 For in-circuit debugging of ST7FLITEuX, users must also order the AD-ICD/DS8Z adapter. For ICD of ST7FLITEuX in DFN8 package, users must order AD-ICD/DS8Z and ST7MDT10-8/DVP

13 Order code for daughter board featuring the selected MCU, which can be used with any REva starter kit (STxxxx-SK/RAIS)

How to order ST7-EMU or DVP (accessories)

ST7-EMU series emulators

- ST7MDTxx-EMUx**
Part number for ordering a complete EMUx emulator that includes connection kits for all supported ST7 packages
- ST7MDTxx-TEB**
When adapting an EMU3 to emulate another ST7 family, this part number is for ordering the appropriate target emulation board. It includes connection kits for all supported packages
- AC7MDTxx-xxxx**
Part number for ordering replacement adapters and connectors for connecting to the application board
- AS-xxxx**
Socket part numbers can be used to order additional or replacement sockets

How to order ST7-EMU or DVP (accessories)

Device	Packages	EMU series			DVP series			Socket ¹
		Emulator part number ⁴	Target emulation board ⁶ (TEB)	Connection kit	Emulator part number	Target emulation board ⁶ (TEB)	Connection kit	
ST7LITEuX	DIP8/S08/DFN8	ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6}	ST7MDT10-8/DVP ^{2,8}	ST7MDT10-DVP3 ⁴	ST7MDT10-TEB/DVP ^{3,6}	ST7MDT10-8/DVP ^{2,8}	-
ST7LITE0 ST7LITES	DIP16/S016	ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6}	AC7MDT10-D16/S16 ⁶	ST7MDT10-DVP3 ⁴	ST7MDT10-TEB/DVP ^{4,6}	ST7MDT10-16/DVP ⁴	AS-DIP-S0 ⁷
ST7LITE1B	DIP16/S016 DIP20/S020	ST7MDT10-EMU3 ¹ ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6} ST7MDT10-TEB ^{1,6}	AC7MDT10-D16/S16 ⁶ AC7MDT10-D20/S20 ⁶	ST7MDT10-DVP3 ⁴ ST7MDT10-DVP3 ³	ST7MDT10-TEB/DVP ^{4,6} ST7MDT10-TEB/DVP ^{3,6}	ST7MDT10-16/DVP ⁴ ST7MDT10-20/DVP ²	AS-DIP-S0 ⁷ AS-DIP-S0 ⁷
ST7LITE1 ST7LITE2	DIP20/S020	ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6}	AC7MDT10-D20/S20 ⁶	ST7MDT10-DVP3 ³	ST7MDT10-TEB/DVP ^{3,6}	ST7MDT10-20/DVP ²	AS-DIP-S0 ⁷
ST7LITE3	DIP20/S020	ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6}	AC7MDT10-D20/S20 ⁶	ST7MDT10-DVP3 ³	ST7MDT10-TEB/DVP ^{3,6}	ST7MDT10-20/DVP ²	AS-DIP-S0 ⁷
ST7DALI	S020	ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6}	AC7MDT10-D20/S20 ⁶	ST7MDT10-DVP3 ³	ST7MDT10-TEB/DVP ^{3,6}	ST7MDT10-20/DVP ²	AS-DIP-S0 ⁷
ST7226x	SDIP32/S028	ST7MDT10-EMU3 ¹	ST7MDT10-TEB ^{1,6}	AC7MDT10-D32/S28 ⁶	ST7MDT10-DVP3 ³	ST7MDT10-TEB/DVP ^{3,6}	ST7MDT10-32/DVP ²	AS-DIP-S0 ⁷
ST7232A	SDIP32 LQFP32	ST7MDT20J-EMU3 ¹ ST7MDT20J-EMU3 ¹	ST7MDT20J-TEB ^{1,6} ST7MDT20J-TEB ^{1,6}	AC7MDT20-D32/D42 ⁶ AC7MDT20-T32 ⁶	ST7MDT20-DVP3 ⁴ ST7MDT20-DVP3 ³	ST7MDT20-TEB/DVP ^{4,6} ST7MDT20-TEB/DVP ^{3,6}	— 4 ST7MDT20-T32/DVP ²	AS-DIP-S0 ⁷ AS-TQFP32 ⁷
ST72321B	LQFP44 LQFP64 (10x10) LQFP64 (14x14)	ST7MDT20J-EMU3 ¹ ST7MDT20M-EMU3 ¹ ST7MDT20M-EMU3 ¹	ST7MDT20J-TEB ^{1,6} ST7MDT20M-TEB ^{1,6} ST7MDT20M-TEB ^{1,6}	AC7MDT20-T44 ⁶ AC7MDT20-T64/10 ⁶ AC7MDT20-T64/14 ⁶	ST7MDT20-DVP3 ³ ST7MDT20-DVP3 ³ ST7MDT20-DVP3 ³	ST7MDT20-TEB/DVP ^{3,6} ST7MDT20-TEB/DVP ^{3,6} ST7MDT20-TEB/DVP ^{3,6}	ST7MDT20-T44/DVP ² ST7MDT20-T64/DVP ² ST7MDT20-T64/DVP ²	AS-TQFP44 ⁷ AS-TQFP64/10 ⁷ AS-TQFP64/14 ⁷
ST72324 ST72324B	SDIP32/SDIP42 LQFP32 LQFP44	ST7MDT20J-EMU3 ¹ ST7MDT20J-EMU3 ¹ ST7MDT20J-EMU3 ¹	ST7MDT20J-TEB ^{1,6} ST7MDT20J-TEB ^{1,6} ST7MDT20J-TEB ^{1,6}	AC7MDT10-D32/D42 ⁶ AC7MDT20-T32 ⁶ AC7MDT20-T44 ⁶	ST7MDT20-DVP3 ⁴ ST7MDT20-DVP3 ³ ST7MDT20-DVP3 ³	ST7MDT20-TEB/DVP ^{4,6} ST7MDT20-TEB/DVP ^{3,6} ST7MDT20-TEB/DVP ^{3,6}	— 4 ST7MDT20-T32/DVP ² ST7MDT20-T44/DVP ²	AS-DIP-S0 ⁷ AS-TQFP32 ⁷ AS-TQFP44 ⁷
ST7234x	LQFP32 LQFP44 LQFP48	ST7MDT40-EMU3 ¹ ST7MDT40-EMU3 ¹ ST7MDT40-EMU3 ¹						
ST72361	LQFP32 LQFP44 LQFP64 (10x10) LQFP64 (14x14)				ST7MDT25-DVP3 ³ ST7MDT25-DVP3 ³ ST7MDT25-DVP3 ³ ST7MDT25-DVP3 ³	ST7MDT25-TEB/DVP ^{3,6} ST7MDT25-TEB/DVP ^{3,6} ST7MDT25-TEB/DVP ^{3,6} ST7MDT25-TEB/DVP ^{3,6}	ST7MDT25-T32/DVP ² ST7MDT25-T44/DVP ² ST7MDT25-T6A/DVP ² ST7MDT25-T64/DVP ²	AS-TQFP32 ⁷ AS-TQFP44 ⁷ AS-TQFP64/10 ⁷ AS-TQFP64/14 ⁷
ST72521	LQFP64 (10x10) LQFP64 (14x14) LQFP80	ST7MDT20M-EMU3 ¹ ST7MDT20M-EMU3 ¹ ST7MDT20M-EMU3 ¹	ST7MDT20M-TEB ^{1,6} ST7MDT20M-TEB ^{1,6} ST7MDT20M-TEB ^{1,6}	AC7MDT20-T64/10 ⁶ AC7MDT20-T64/14 ⁶ AC7MDT20-T80 ⁸	ST7MDT20-DVP3 ³ ST7MDT20-DVP3 ³ ST7MDT20-DVP3 ³	ST7MDT20-TEB/DVP ^{3,6} ST7MDT20-TEB/DVP ^{3,6} ST7MDT20-TEB/DVP ^{3,6}	ST7MDT20-T6A/DVP ² ST7MDT20-T64/DVP ² ST7MDT20-T80/DVP ²	AS-TQFP64/10 ⁷ AS-TQFP64/14 ⁷ AS-TQFP80 ⁷
ST72561	LQFP32 LQFP44 LQFP64 (10x10) LQFP64 (14x14)				ST7MDT25-DVP3 ³ ST7MDT25-DVP3 ³ ST7MDT25-DVP3 ³ ST7MDT25-DVP3 ³	ST7MDT25-TEB/DVP ^{3,6} ST7MDT25-TEB/DVP ^{3,6} ST7MDT25-TEB/DVP ^{3,6} ST7MDT25-TEB/DVP ^{3,6}	ST7MDT25-T32/DVP ² ST7MDT25-T44/DVP ² ST7MDT25-T6A/DVP ² ST7MDT25-T64/DVP ²	AS-TQFP32 ⁷ AS-TQFP44 ⁷ AS-TQFP64/10 ⁷ AS-TQFP64/14 ⁷
ST7MC	LQFP32 LQFP44 LQFP64 (10x10) LQFP64 (14x14) LQFP80	ST7MDT50-EMU3 ¹ ST7MDT50-EMU3 ¹ ST7MDT50-EMU3 ¹ ST7MDT50-EMU3 ¹ ST7MDT50-EMU3 ¹	ST7MDT50-TEB ^{1,6} ST7MDT50-TEB ^{1,6} ST7MDT50-TEB ^{1,6} ST7MDT50-TEB ^{1,6} ST7MDT50-TEB ^{1,6}					AS-TQFP32 ⁷ AS-TQFP44 ⁷ AS-TQFP64/10 ⁷ AS-TQFP64/14 ⁷ AS-TQFP80 ⁷
ST7260	S024 QFN40 (6x6)	ST7MDTU3-EMU3 ¹ ST7MDTU3-EMU3 ¹						AS-S024 ⁷
ST7263B	SDIP32 S024 S034 LQFP48 (7x7) QFN40 (6x6)	ST7MDTU3-EMU3 ¹ ST7MDTU3-EMU3 ¹ ST7MDTU3-EMU3 ¹ ST7MDTU3-EMU3 ¹ ST7MDTU3-EMU3 ¹						AS-DIP-S0 ⁷ AS-S024 ⁷ AS-S034 ⁷
ST7265	LQFP48 (7x7) LQFP64 (10x10)	ST7MDTU5-EMU2B ¹ ST7MDTU5-EMU2B ¹						
ST7SCR	S024 LQFP64	ST7MDTS1-EMU2B ¹ ST7MDTS1-EMU2B ¹						

Notes:

- 1 Includes all connection kits
- 2 Must be ordered separately
- 3 Connection kit not included, must be ordered separately
- 4 The following connection kit is provided without specifying a connection kit part number:
ST7MDT10-16/DVP for DIP16/S016, when ordering ST7MDT10-DVP3 and ST7MDT10-TEB/DVP
SDIP32/SDIP42 connection kit, when ordering ST7MDT20-DVP3 and ST7MDT20-TEB/DVP
- 5 Add suffix /EU, /US or /UK for the power supply of your region
- 6 These parts are included with the emulator. Ordering references are provided for upgrade or replacement
- 7 These parts are included with connection kits and EMU series emulators. References are provided for ordering spare or replacement parts
- 8 Connection kit includes application board sockets and connectors for DIP8, S08 and DFN8 packages
- 9 ICD adapter for ST7LITEuX includes application board connectors for DIP8 and S08 packages

Definition:

- 1 TEB: target emulation board to emulate a specific ST7 sub-family. Users can upgrade their emulator to emulate another ST7 family by ordering the appropriate TEB
- 2 Connection kit: complete kit to connect the emulator to a target board. Includes cables, adapters and sockets for specific packages
- 3 DVP3: entry-level emulator that offers a low-cost, flexible, modular debugging and programming solution
- 4 EMU3: high-end emulator that offers a complete, flexible, modular debugging and programming solution

Replacement power supplies:

- 1 For EMU series emulators: APS5V/8A
- 2 For DVP series emulators: APS5V/2A5

UPSD family

Development	UPSD development kits include everything required to get started with UPSD including the development software, evaluation copy of a compiler, a JTAG programming adaptor ■ DK3300 - Development kit for uPSD3300 series products ■ DK3400 - Development kit for uPSD3400 series products
Software	■ Configuration and programming software (CAPS), download free at www.st.com/mcu ■ Keil Software, Raisonance and Tasking 8051 development tools and compilers packages support all UPSD series: Keil Software (www.keil.com) Raisonance (www.raisonance.com) Tasking (www.tasking.com) ■ UPSD series is compatible with generic 8051 compilers
Programming	■ FL-101 – FlashLINK JTAG parallel port programmer ■ RLink from Raisonance provides a low-cost solution for programming a complete range of ST microcontrollers from 8 to 32 bits ■ Third party programmers are available as listed below. Please check the vendors site for the appropriate models for your part type ■ Please visit www.st.com/mcu for the most up-to-date listing of third-party programmer vendors

UPSD development and programming tools

Device	ST development kit	Emulator	Programmer	3rd party programmer
UPSD3312D	DK3300	Keil Software uVision2 (w/ ULINK) www.keil.com	FL-101 – FlashLINK JTAG parallel port programmer	JTAG Technologies www.jtag.com
UPSD3333D				
UPSD3333DV				
UPSD3334D				
UPSD3334DV				
UPSD3354D				
UPSD3354DV				
UPSD3422E	DK3400	Raisonance IDE (RIDE) www.raisonance.com (Note 1)	STX-RLINK - USB JTAG programmer	Needham's Electronics www.needhams.com
UPSD3433E				
UPSD3433EV				
UPSD3434E				
UPSD3434EV				
UPSD3454E				
UPSD3454EV				

Notes

1 Code development is easily managed without an external hardware in-circuit emulator by using the on-chip JTAG in-circuit emulator. ST has partnered with Keil Software and Raisonance to include support for UPSD3300 and UPSD3400 JTAG ICE in their 8051 Development Tools

ST6 family

Software

- RIDE, Raisonance's free software toolchain with IDE, assembler, linker and free code-size limited C compiler. Available from www.raisonance.com
- Visual Micro Lab (VMLAB), Advanced Micro Tool's development environment for building virtual prototypes of applications, offers true hardware/software simulation. Available from www.amttools.net

- **REALIZER**, Actum Solutions' graphical design tool for creating applications without learning assembly or writing a single line of code. Supports ST7 and ST6. Versions include STREALIZER-II (available from ST only), and REALIZER enhanced versions with end-user support. Available from www.actum.com

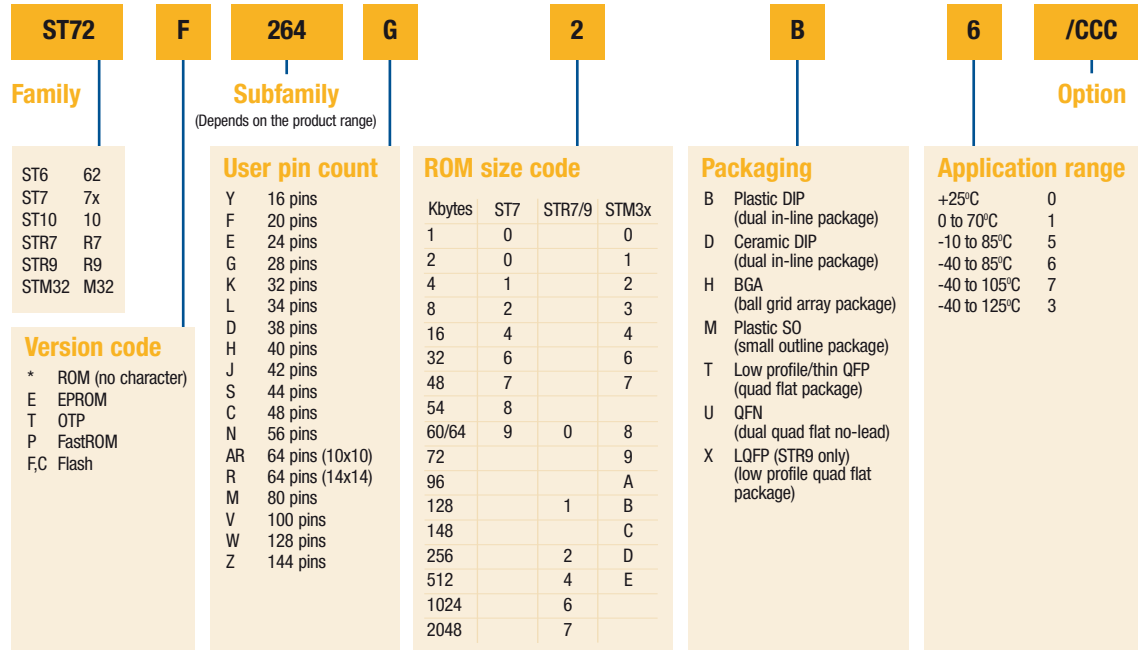
Part number	Starter kit	Emulator	Dedicated board for ST emulators	ST engineering programming board (EPB)	3rd-party programmer	
ST6200C	ST622X-KIT ¹	ST ST62GP-EMU2 ² Softec www.softecmicro.com Ceibo www.ceibo.com	ST62GP-DBE	ST62E2XC-EPB ¹	Advantech Equipment www.aec.com.tw BP Microsystems www.bpmicro.com Conitec www.conitec.net Data I/O www.data-io.com Dataman www.dataman.com EE Tools www.eetools.com Eltec www.eltec.com Hi-Lo Systems www.hilosystems.com.tw Ice Technology www.icetech.com Leap www.leap.com.tw Lloyd Research www.lloyd-research.com	Logical Devices www.chipprogrammers.com MQP Electronics www.mqp.com Needham's Electronics www.needhams.com Phyton www.phyton.com RK-system www.rk-system.com.pl Softec Microsystems www.softecmicro.com STAG Programmers www.stag.co.uk System General Corp www.sg.com.tw Tribal Microsystems www.tribalmicro.com Xeltek www.xeltek.com
ST6203C	ST622X-KIT ¹			ST62E2XC-EPB ¹		
ST6201C	ST622X-KIT ¹			ST62E2XC-EPB ¹		
ST6210C	ST622X-KIT ¹			ST62E2XC-EPB ¹		
ST6220C	ST622X-KIT ¹			ST62E2XC-EPB ¹		
ST6225C	ST622X-KIT ¹			ST62E2XC-EPB ¹		

Notes

1 Add suffix /110, /220 or /UK for the power supply for your region

2 Emulator interface with Raisance's IDE (RIDE)

MCU - Typical designations and part-n^o suffixes





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Full product information at www.st.com

Order code: SGMICR00208

