



## MICROS PERIPHERALS & DEVELOPMENT TOOLS

### ST9 FAMILY 8/16 BIT MICROCONTROLLER

#### ST9 Family Products (General Purpose, USB, Motor Control)

Device <sup>(1)</sup>	Pins/Type	Program Memory Type				Memory Size			Peripherals				Package
		ROM	EPROM	OTP/FLASH	FAST ROM <sup>(2)</sup>	Program Memory	RAM	EEPROM	A/D Inputs	Timers (+ WDG) <sup>(3)</sup>	Serial Interface <sup>(4)</sup>	I/Os	
						KB	B	B					
ST90135M5 <sup>(5)</sup>	80	Yes	ST90E158			24	768		8x8-Bit	WDG 4x16-Bit <sup>(3)</sup>	SPI SCI <sup>(6)</sup>	67	TQFP80/PQFP80 <sup>(7)</sup>
ST90135M6 <sup>(5)</sup>	80	Yes	ST90E158			32	1000		8x8-Bit	WDG 4x16-Bit <sup>(3)</sup>	SPI SCI <sup>(6)</sup>	67	TQFP80/PQFP80 <sup>(7)</sup>
ST90158M7 <sup>(5)</sup>	80	Yes	ST90E158			48	1500		8x8-Bit	WDG 5x16-Bit <sup>(3)</sup>	SPI 2xSCI <sup>(6)</sup>	67	TQFP80/PQFP80 <sup>(7)</sup>
ST90158M9 <sup>(5)</sup>	80	Yes	ST90E158	OTP		64	2000		8x8-Bit	WDG 5x16-Bit <sup>(3)</sup>	SPI 2xSCI <sup>(6)</sup>	67	TQFP80/PQFP80 <sup>(7)</sup>
ST90R158 <sup>(5)</sup>	80	ROM less				None	2000		8x8-Bit	WDG 5x16-Bit <sup>(3)</sup>	SPI 2xSCI <sup>(6)</sup>	51	TQFP80/PQFP80 <sup>(7)</sup>
ST92F120V9 <sup>(8)</sup>	100			FLASH		60	2000	512	16x8-Bit	WDG 6x16-Bit <sup>(3)</sup>	SPI 2xSCI I2C <sup>(9)</sup>	77	TQFP100/PQFP100 <sup>(7)</sup>
ST92F120V1 <sup>(8)</sup>	100			FLASH		128	4000	1000	16x8-Bit	WDG 6x16-Bit <sup>(3)</sup>	SPI 2xSCI I2C <sup>(9)</sup>	77	TQFP100/PQFP101 <sup>(7)</sup>
ST92141K4 <sup>(10)</sup>	MC <sup>(11)</sup>	No	ST92E141	OTP	Yes	16	512		6x8-Bit	WDG 3x16-Bit <sup>(3)</sup>	SPI <sup>(12)</sup>	15(4)	SDIP32/SO34 <sup>(13)</sup>
ST92163N4 <sup>(14)</sup>	USB <sup>(15)</sup>	Yes	ST90E163	OTP	Yes	20	2000		6x8-Bit	WDG 2x16-Bit <sup>(3)</sup>	USB SCI I2C <sup>(16)</sup>	42(6)	SDIP56 <sup>(17)</sup>
ST92163R4 <sup>(14)</sup>	USB <sup>(15)</sup>	Yes	ST90E163	OTP	Yes	20	2000		6x8-Bit	WDG 2x16-Bit <sup>(3)</sup>	USB SCI I2C <sup>(16)</sup>	44(8)	TQFP64 <sup>(18)</sup>

1) Special Features

2) Fast Advanced Service Technique ROM

3) WDG = 1x16-Bit Watchdog Timer

4) WDG = 1x7-Bit Watchdog Timer

5) PLL Clock(Phase Locked Loop)

6) SPI: Serial Peripheral Interface SCI: Serial Communications Interface

7) TQFP: Thin Quad Flat Pack PQFP: Thin Quad Flat Pack

8) PLL Clock(Phase Locked Loop), J1850 BDLC

9) SPI: Serial Peripheral Interface SCI: Serial Communications Interface I2C: Inter Integrated Circuit

10) Asynchronous 3-phase Motor Controller with 6 10-Bit PWMs (Pulse Width Modulation), Dead time generator, Emergency input, PLL clock (Phase Locked Loop)

11) MC :Motor Control

12) SPI: Serial Peripheral Interface

- 13) SDIP: Shrink Dual In Line, SO: Small Outline
- 14) 16 Full Speed USB endpoints, 3.0 V, LVD (Low Voltage Detection)
- 15) USB: Universal Serial Bus
- 16) USB: Universal Serial Bus SCI: Serial Communications Interface I2C: Inter Integrated Circuit
- 17) SDIP: Shrink Dual In Line
- 18) TQFP: Thin Quad Flat Pack

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