

x86 MICROPROCESSORS

Type	Socket compatibility custom	Architecture	Max Frequency (MHz)	Performance (P-rating)	Package custom	Int/ext Clock ratio custom	Supply Voltage (Volt)
ST486DC ASIC core		486DX	133				3.3
ST486DX2-66GS	486DX / DX2	486DX	66		PGA 168	2	5
ST486DX2-80GS	486DX / DX2	486DX	80		PGA 168	2	5
ST486DX4V75HS	486DX4 / 5x86	486DX	75		PGA 168	2 or 3	3.45
ST486DX4V10HS	486DX4 / 5x86	486DX	100		PGA 168	2 or 3	3.45
ST486DX4V12HS	486DX4 / 5x86	486DX	120		PGA 168	2 or 3	3.45
ST5X86V10HS	486DX4 / 5x86	6X86	100		PGA 168	2 or 3	3.45
ST6X86P90+HS	Pentium ®	6X86	80	P90+	PGA 296	2 or 3	3.45
ST6X86P120+HS	Pentium ®	6X86	100	P120+	PGA 296	2 or 3	3.45
ST6X86P133+HS	Pentium ®	6X86	110	P133+	PGA 296	2 or 3	3.45
ST6X86P150+HS	Pentium ®	6X86	120	P150+	PGA 296	2 or 3	3.45
ST6X86P166+HS	Pentium ®	6X86	133	P166+	PGA 296	2 or 3	3.45

9400 FAMILY - 4 BIT MCU

Type	Description	Package
ETC 9410/11/13	CMOS, 0.5K ROM, 32 RAM, 15-19 I/O Lines	PDIP20/24, PSO20/24
ETC 9420/21/22	CMOS, 1K ROM, 64 RAM, 15-23 I/O Lines	PDIP20/24/28, PSO20/24/28
ETL 9410/11/13	NMOS, Low Power, 0.5 K ROM, 15-19 I/O Lines	PDIP20/24, PSO20/24
ETL 9420/21/22	NMOS, Low Power, 15K ROM, 15-23 I/O Lines	PDIP20/24/28, PSO20/24/28
MOLE BRAIN	PC interface board	
MOLE-COPS-IBM	Debugger-Software set	
MOLE-COPS-PB1	Hardware-Emulator Card	
ROMLESS	NSCOP401L-X13, NSCOP402N-5, NSCOP404LSN-5, NSCOP404CN	
PIGGY-BACKS	NSCOP444CP, NSCOP444LP, NSCOP420P	

EF6801/04/05 FAMILIES - HMOS, 8 BIT MCU

Type	Description	Package
EF6801U4	4K ROM, 29 I/O Lines, Enhanced SCI and Timer, Standby RAM, 1MHz	PDIP40, PLCC44
EF68HC0J3	2K ROM, 12 I/O Lines, 8 Bit Timer	PDIP20, PSO20
EF68HC04P3	2K ROM, 20 I/O Lines, 8 Bit Timer	PDIP28, PSO28, PLCC28
EF6805U3/R3	3.7K ROM, 32 I/O Lines, 8 Bit Timer	PDIP40, PLCC44

68000 FAMILY - NMOS, 8 BIT MPU

Type	Description	Package
EF68A09	High Performance MPU, 1.5 MHz	PDIP40
EF68A09E	68A09 With External Clock, 1.5 MHz	PDIP40
EF68B09	High Performance MPU, 2 MHz	PDIP40
EF68B09E	68B09 With External Clock, 2 MHz	PDIP40
EF6803U4	6803 With 192 RAM, 1 MHz	PDIP40
EF6809	High Performance MPU, 1 MHz	PDIP40
EF6809E	6809 With External Clock, 1 MHz	PDIP40
EF68A21	Peripheral Interface Adapter, 1.5 MHz	PDIP40
EF68A40	Programmable Timer, 1.5 MHz	PDIP28
EF68A50	Asynchronous Communication Interface Adapter, 1.5 MHz	PDIP24
EF68A54	Advanced Data Link Controller, 1.5 MHz	PDIP28
EF68B21	Peripheral Interface Adapter, 2 MHz	PDIP40
EF68B40	Programmable Timer, 2 MHz	PDIP28
EF68B50	Asynchronous Communication Interface Adapter, 2 MHz	PDIP24
EF68B54	Advanced Data Link Controller, 2 MHz	PDIP28
EF6821	Peripheral Interface Adapter, 1 MHz	PDIP40
EF6840	Programmable Timer, 1 MHz	PDIP28
EF6850	Asynchronous Communication Interface Adapter, 1 MHz	PDIP24
EF6854	Advanced Data Link Controller, 1 MHz	PDIP28
EF6803U4-1P	6803 with 192 RAM, 1.25 MHz	PDIP28

68000 FAMILY - 16 BIT MPU

Type	Description	Package
TS68230	HMOS, Parallel Interface, Timer, 8 and 10 MHz	PDIP48, PLCC52
MK68564	NMOS, Serial I/O, 4 and 5 MHz	PDIP48, PLCC52
MK68901	NMOS, Multifunction peripheral, 4 and 5 MHz	PDIP48, PLCC52
TS68HC901	HCMOS, Multifunction peripheral, 4, 5 and 8 MHz	PDIP48, PLCC52

ST62 FAMILY- CMOS, 8 BIT MCU

This popular family of CMOS single chip microcontrollers is specially tailored to application specific environments. Thanks to its advanced technology this 8 bit MCU family is well suited for analog and digital processing with economy and performance.

All ST6 devices are based on a building block approach. A common core is surrounded by a combination of dedicated on-chip peripherals, e.g.: A/D Converters, Timers, Watchdog, LCD drivers, Operational amplifiers, PLL, D/A Convertors, LED drivers, IR pre-processors, OSD Generators, etc. **The ST62 series are designed for general purpose, industrial control, consumer and automotive applications. The ST63 series is specially designed for TV applications.** Different RAM sizes and ROM from 2K to 8K are available, together with EPROM and OTP versions. Devices with data EEPROM on-chip are also available. The instruction set is designed for byte-efficient program storage and includes bit manipulation and conditional jump instructions.

ST62 SERIES (General Purpose)

Device	Program Memory Type				Program Memory	RAM x 8	EEPROM x 8	Timers	Serial Interface	I/Os (High Current)	Others	Package
	ROM	EPROM	OTP	FAST ¹⁾ ROM								
ST6200	•	ST6201	•	•	1K	64	-	1x8-Bit	-	9 (3)		DIP16/SO16
ST6201	•	•	•	•	2K	64	-	1x8-Bit	-	9 (3)		DIP16/SO16
ST6203	•	ST6201	•	•	1K	64	-	1x8-Bit	-	9 (3)		DIP16/SO16
ST6208	•	ST6220	•	•	1K	64	-	1x8-Bit	-	12 (4)		DIP20/SO20
ST6209	•	ST6220	•	•	1K	64	-	1x8-Bit	-	12 (4)		DIP20/SO20
ST6210	•	ST6220	•	•	2K	64	-	1x8-Bit	-	12 (4)		DIP20/SO20
ST6215	•	ST6625	•	•	2K	64	-	1x8-Bit	-	20 (4)		DIP28/SO28
ST6220	•	•	•	•	4K	64	-	1x8-Bit	-	12 (4)		DIP20/SO20
ST6225	•	•	•	•	4K	64	-	1x8-Bit	-	20 (4)		DIP28/SO28
ST6230	•	•	•	•	8K	192	128	1x8-Bit 1x16-Bit AR	SPI UART	20 (4)		DIP28/SO28
ST6232	•	•	•	•	8K	192	128	1x8-Bit 1x16-Bit AR	SPI UART	30 (9)		SDIP42/QFP52
ST6235	•	•	•	•	8K	192	128	1x8-Bit 1x16-Bit AR	SPI UART	36 (12)		QFP52
ST6240	•	•	•	•	8K	216	128	2x8-Bit	SPI	24 (4)	LCD	QFP80
ST6242	•	•	•	•	8K	216	128	2x8-Bit	SPI	18 (4)	LCD	QFP64
ST6245	•	•	•	•	4K	140	128	2x8-Bit	SPI	19 (4)	LCD	QFP52
ST6246	•	•	•	•	4K	140	128	2x8-Bit	SPI	20 (4)	LCD	SDIP56
ST6252	•	ST6262	•	•	2K	128	-	1x8-Bit 1x8-Bit AR	-	9 (5)		DIP16/SO16
ST6253	•	ST6260	•	•	2K	128	-	1x8-Bit 1x8-Bit AR	-	13 (6)		DIP20/SO20
ST6255	•	ST6265	•	•	4K	128	-	1x8-Bit 1x8-Bit AR	-	21 (8)		DIP28/SO28
ST6260	•	•	•	•	4K	128	128	1x8-Bit 1x8-Bit AR	SPI	13 (6)		DIP20/SO20
ST6262	•	•	•	•	2K	128	64	1x8-Bit 1x8-Bit AR	-	9 (5)		DIP16/SO16
ST6263	•	ST6260	•	•	2K	128	64	1x8-Bit 1x8-Bit AR	-	13 (6)		DIP20/SO20
ST6265	•	•	•	•	4K	128	128	1x8-Bit 1x8-Bit AR	SPI	21 (8)		DIP28/SO28
ST6280	•	•	•	•	8K	320	128	1x8-Bit 1x8-Bit AR	SPI UART	22 (10)	LCD	QFP100
ST6285	•	•	•	•	8K	288	128	1x8-Bit 1x8-Bit AR	SPI UART	12 (4)	LCD	QFP80

ROM and OTP (except 624x and 628x) available in both automotive and industrial temperature range

OTP = ST62Txx

EPROM = ST62Exx

FASTROM¹⁾ = ST62Pxx

1. Factory Advanced Service Technique ROM

ST62 FAMILY- CMOS, 8 BIT MCU (Cont'd)

ST6 FAMILY DEVELOPMENT TOOLS

Device	EPROM Programmer			Emulator		Starter Kit
	Single Eprom	Complete Gang	Gang Adaptor	Complete	Dedication Board	
ST620X ST621X ST622X	ST62E1X-EPB/110 ST62E1X-EPB/220	ST62E10-GP/SO ST62E10-GP/DIP ST62E15-GP/SO ST62E15-GP/DIP	ST62E10-GPA/SO ST62E10-GPA/DIP ST62E15-GPA/SO ST62E15-GPA/DIP	ST626X-EMU2	ST626X-DBE	ST622X-KIT
ST623X*	ST62E3X-EPB/110 ST62E3X-EPB/220	ST62E30-GP/DIP ST62E32-GP/DIP ST62E30-GP/SO	ST62E30-GPA/DIP ST62E32-GPA/DIP ST62E30-GPA/SO	ST623X-EMU2	ST623X-DBE	
ST624X	ST62E4X-EPB/110 ST62E4X-EPB/220	ST62E40-GP/QFP ST62E42-GP/QFP ST62E45-GP/QFP	ST62E40-GPA/QFP ST62E42-GPA/QFP ST62E45-GPA/QFP	ST624X-EMU2 ST6240-EMU2 ST6242-EMU2 ST6245-EMU2	ST624X-DBE	ST6240-KIT
ST626X	ST62E6X-EPB/110 ST62E6X-EPB/220	ST62E60-GP/SO ST62E60-GP/DIP ST62E65-GP/SO ST62E65-GP/DIP	ST62E60-GPA/SO ST62E60-GPA/DIP ST62E65-GPA/SO ST62E65-GPA/DIP	ST626X-EMU2	ST626X-DBE	ST626X-KIT
ST628X	ST62E8X-EPB/110 ST62E8X-EPB/220	ST62E80-GP/QFP	ST62E80-GPA/QFP	ST628X-EMU2	ST628X-DBE	
ST636X/7X/8X	ST63E1X-EPB/220	ST63E87-GP/DIP		ST638X-EMU	ST638X-DBE	
ST6369		ST63E69-GP/DIP				
ST631XX						

* For further Information please contact our Marketing

DEVICES	SOFTWARE TOOLS	DESCRIPTION
ALL	ST6-SW/PC	Macro-assembler, Linker and Simulator
ALL	ST6-FUZZY/PC	Fuzzy logic compiler
ALL	ST6-REALIZER/PC	Development based on graphical description

ST63 MICROCONTROLLER FAMILY - CMOS, 8 BIT MCU

This family of CMOS single chip microcontrollers is specially tailored to application specific environment. Thanks to its advanced technology this 8 bit MCU family is well suited for analog and digital processing with economy and performance.

All ST6 devices are based on a building block approach. A common core is surrounded by a combination of dedicated on-chip peripherals, e.g.: A/D Converters, Timers, Watchdog, LCD drivers, Operational amplifiers, PLL, D/A, LED driver, IR pre-processors, OSD Generators, Voltage Synthesis etc. **The ST62 are designed for general purpose, industrial control, consumer and automotive applications. The ST63 series is especially designed for TV, SVR (Satellite Video Receiver) and Monitor applications.** Different ROM/RAM sizes, from 8K to 20K ROM are available together with EPROM and OTP versions. Devices with data EEPROM on-chip are also available. The instruction set is designed for byte-efficient program storage and includes bit manipulation and conditional jump instructions.

ST63 SERIES

Devices	Program Memory	RAM x 8	EEPROM	Package	Timers	I/O Ports	D/A Outputs
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ST631xx Family for TV and Satellite Video Receiver

ST63126	8K ROM	256	128	PDIP40	2x8 Bit + WD	11	4 x 6 Bit
ST63E126	8K EPROM	256	128	CPDIP40W	2x8 Bit + WD	11	4 x 6 Bit
ST63T126	8K OTP	256	128	PDIP40	2x8 Bit + WD	11	4 x 6 Bit

ST636/7/8x Family for TV and Satellite Video Receiver

ST6365	8K ROM	256	384	PSDIP42	2x8 Bit + WD	22	4 x 6 Bit
ST6375	14K ROM	256	384	PSDIP42	2x8 Bit + WD	22	4 x 6 Bit
ST6385	20K ROM	256	384	PSDIP42	2x8 Bit + WD	22	4 x 6 Bit
ST63E85	20K EPROM	256	384	CSDIP42W	2x8 Bit + WD	22	4 x 6 Bit
ST63T85	20K OTP	256	384	PSDIP42	2x8 Bit + WD	22	4 x 6 Bit
ST6367	8K ROM	256	384	PSDIP42	2x8 Bit + WD	20	6 x 6 Bit
ST6377	14K ROM	256	384	PSDIP42	2x8 Bit + WD	20	6 x 6 Bit
ST6387	20K ROM	256	384	PSDIP42	2x8 Bit + WD	20	6 x 6 Bit
ST63E87	20K EPROM	256	384	CSDIP42W	2x8 Bit + WD	20	6 x 6 Bit
ST63T87	20K OTP	256	384	PSDIP42	2x8 Bit + WD	20	6 x 6 Bit

ST63 Family for Monitor

ST6369	8K ROM	256	384	PDIP40	2x8 Bit + WD	21	6x6 Bit + 1x14 Bit
ST63E69	8K EPROM	256	384	CDIP40W	2x8 Bit + WD	21	6x6 Bit + 1x14 Bit
ST63T69	8K OTP	256	384	PDIP40	2x8 Bit + WD	21	6x6 Bit + 1x14 Bit
ST6373	8/12/16K ROM	256	384 + 128 (DDC)	PSDIP42	2x8 Bit + WD	20	9x7 Bit + 1x14 Bit
ST63E73	16K EPROM	256	384 + 128 (DDC)	CSDIP42W	2x8 Bit + WD	20	9x7 Bit + 1x14 Bit
ST63T73	16K OTP	256	384 + 128 (DDC)	PSDIP42	2x8 Bit + WD	20	9x7 Bit + 1x14 Bit

Note: Standard features include 5V+/-10% operating voltage, 6,5µs typical instruction time, 8 MHz maximum Frequency, one SPI and one Watchdog.
 All TV and SVR devices with 128 characters in two OSD Backs.
 xxx: Customer ROM Code Number.

ST72 FAMILY - CMOS, 8 BIT MCU

The ST72 family of CMOS single chip microcontroller is based around an industry standard and powerful 8-bit core. Its advanced thin technology associated with its familiar and efficient instruction set leads to high performance and low cost applications.

All ST72 products have a building cell approach, the common ST72 core is surrounded by a combination of dedicated on-chip peripherals, e.g. Timers, A/D and D/A converters, PWM, wave generator, synchro processor East-West Pin Cushion Automatic correction and RDS processor.

The ST72 is designed for customer specified applications with cost effective different RAM sizes and ROM from 3K to 48K bytes, available with Eprom and OTP versions for instant prototyping and code validation. Devices with EEprom on-chip are also available for integrated data storage.

ST72 SERIES

Device	Program Memory	RAM x 8	EEPROM x 8	Package	I/O Ports	Other Features
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ST7291 Family for Remote Control

ST7291	16/24/32K ROM	256/384	None	PDIP28/PSO28	19/20	WAKE-UP FUNCTION + LOW VOLTAGE STANDBY MODES+WD + POWER SAVING
ST72E91	16/32K EPROM	256/384	None	CDIP28W	19/20	
ST72T91	16/32K OTP	256/384	None	PDIP28/PSO28	19/20	

ST7294 Family for Telephone Set

ST7294	6K ROM	224	256	PDIP28/PSO28	22	WAKE-UP FUNCTION + POWER SAVING STANDBY MODES+WD
ST72E94	6K EPROM	224	256	CDIP28W	22	
ST72T94	6K OTP	224	256	PDIP28/PSO28	22	

ST7272 Family for TV/Monitor

ST7272	24K ROM	384	896	SDIP56	27	ADC+PWM+SPI + WAKE UP FUNCTION FULL DDC FUNCTION UPGRADED SYNC. PROCESSOR
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Note : Standard features include 0.5µs typical instruction time & 4 to 8 MHz maximum Frequency.

ST72 FAMILY - CMOS, 8-BIT MCU (Cont'd)**ST72 FAMILY DEVELOPMENT TOOLS**

Device	Starter Kit	Emulator	EPROM Programmer	GANG Programmer	Other
ST7294	None	ST7294-EMU	ST72E94-EPB/110	ST72E94-GP/(SO28)	ST7-SW/PC ST7-SWCHIW/PC ST7-SWDHIW/PC
ST7294	None	ST7294-DBE	ST72E94-EPB/220	ST72E94-GP/DIP (Q4-1995)	
ST7291	None	ST7291-EMU	ST72E91-EPB/110	ST72E91-GP/SO28	
ST7291	None	ST7291-DBE	ST72E91-EPB/220		
ST7272	None	ST7272-EMU	ST72E71-EPB/110	ST72E71-GP/DIP56	
		ST7272-DBE	ST72E71-EPB/220		

ST90 FAMILY - HIGH PERFORMANCE - HCMOS 8/16-BIT MCU

SGS-THOMSON's ST9 microcontroller family was designed to meet the performance and flexibility requirements of medium and high-end Applications in Automotive, Consumer, Industrial and Telecom Segments.

Available in a wide range of memory and peripheral combination, ST9 devices are build around an 8-Bit Core with 16-Bit instruction capabilities. Modularity ensures software compatibility between family members.

The smart and powerful peripherals, including DMA capabilities as well as original features such as an Analog Watch-Dog, provide designers with cost effective hardware solutions to their Real Time needs.

Software engineers will benefit from the rich set of instructions and addressing modes, easing the generation of dense and efficient codes.

Comprehensive development tools ranging from low cost Starter Kits to Real Time full capability Emulation Systems allow effective Application developments.

ST9 devices are manufactured using SGS-THOMSON's proprietary Multi-Purpose CMOS Technology, which provides fully compatible EPROM and OTP devices (including on chip high reliability EEPROM) for prototyping and pre-production, and low cost ROM devices for volume Production.

ST90 SERIES

Devices	Program Memory	RAM x 8 + REG	EEPROM x 8	Package	Timers	Serial Interface	I/O Ports	A/D* Inputs	Other Features
ST9027	16K ROM	256 + 224	None	PDIP40	1x16Bit+WD	SPI + SCI	32	None	HSHK + DMA
ST90E27	16K EPROM	256 + 224	None	CDIP40	1x16Bit+WD	SPI + SCI	32	None	HSHK + DMA
ST90T27	16K OTP	256 + 224	None	PDIP40	1x16Bit+WD	SPI + SCI	32	None	HSHK + DMA
ST9028	16K ROM	256 + 224	None	PLCC44	1x16Bit+WD	SPI + SCI	32	None	HSHK + DMA
ST90E28	16K EPROM	256 + 224	None	CLCC44	1x16Bit+WD	SPI + SCI	32	None	HSHK + DMA
ST90T28	16K OTP	256 + 224	None	PLCC44	1x16Bit+WD	SPI + SCI	32	None	HSHK + DMA
ST9036	16K ROM	256 + 224	None	PLCC68	2x16Bit+WD	SPI + SCI	56	8x8Bit	HSHK + DMA
ST90T36	16K OTP	256 + 224	None	PLCC68	2x16Bit+WD	SPI + SCI	56	8x8Bit	HSHK + DMA
ST9040	16K ROM	256 + 224	512	PLCC68/PQF80	2x16Bit+WD	SPI + SCI	56	8x8Bit	HSHK + DMA
ST90R40	None	256 + 224	512	PLCC68	2x16Bit+WD	SPI + SCI	56	8x8Bit	HSHK + DMA
ST90E40	16K EPROM	256 + 224	512	CLCC68-W/CQFP80-W	2x16Bit+WD	SPI + SCI	56	8x8Bit	HSHK + DMA
ST90T40	16K OTP	256 + 224	512	PLCC68/PQFP80	2x16Bit+WD	SPI + SCI	56	8x8Bit	HSHK + DMA
ST90R50	None	224	None	PQFP80/PLCC84	3x16Bit+WD	SPI + 2xSCI	68	8x8Bit	DMA+2HSHK+16Mbit Address
ST90R52	None	224	None	PQFP80	3x16Bit+WD	SPI + 2xSCI	70	8x5Bit	DMA+2HSHK+16Mbit Address

* With Analog WDOG.

HSHK : Handshake - DMA : Direct Memory Access.

Note : Standard features include 5V+/-10% operating voltage, 0.5µ typical instruction time, 24MHz maximum Frequency and one Watchdog.

ST90 FAMILY DEVELOPMENT TOOLS

Devices	Emulator		EPROM Programmer		Kit	Software Tools
	Complete	Dedicated Board	Single EPROM	Complete		
ST904X	ST904X-EMU	ST904X-DBE	ST90E4X-EPB/220 ST90E4X-EPB/110	ST90E4X-GP/LCC68	ST9040-KIT/220 ST9040-KIT/110 ST9040-KIT/UK	ST9-SWC/PC
ST905X	ST90R50-EMU/LCC ST90R50-EMU/QFP ST90R52-EMU/QFP	None	None	None	None	

ST92 MICROCONTROLLER TV FAMILY - HCMOS 8/16-BIT MCU**A BROAD RANGE OF INTEGRATED PRODUCTS FOR THE CONSUMER SEGMENT**

With ST92, SGS-THOMSON MICROELECTRONICS supports TV applications development with a complete range of integrated solutions that meet global market requirements from Low to High-End Chassis...

Built in functions, also suitable for Monitor, Satellite Receiver and VCR applications include On Screen Display, Data Slicer, Voltage Synthesis, and Infra Red Signal input handling.

The large memory space allows the inclusion of software for Close Caption, Teletext, and Scart/Peritel socket market management.

A standard video chassis developed by SGS-THOMSON supports evaluation and demonstration, and can form the basis of an original design with vastly reduced time to market.

ST92 SERIES

Device *	Program Memory	RAM x 8 + REG	Package	Timers	I/O Ports	A/D Inputs	D/A Outputs
ST9291	24/32/48K ROM	640 + 224	PSDIP42	1x16 Bit + WD + SLT	31/42	3x6 Bit	8x8 Bit + 1x14 Bit
ST92E91	32/48K EPROM	640 + 224	CSDIP42-W	1x16 Bit + WD + SLT	31/42	3x6 Bit	8x8 Bit + 1x14 Bit
ST92T91	32/48K OTP	640 + 224	PSDIP42	1x16 Bit + WD + SLT	31/42	3x6 Bit	8x8 Bit + 1x14 Bit
ST9293	32/48/63K ROM	640/768 + 224	PSDIP42	1x16 Bit + WD + SLT	31	4x6 Bit	None
ST92E93	48/83K EPROM	768 + 224	CSDIP42-W	1x16 Bit + WD + SLT	31	4x6 Bit	None
ST92T93	48/63K OTP	768 + 224	PSDIP42	1x16 Bit + WD + SLT	31	4x6 Bit	None
ST9294	16/24K ROM	384/640 + 224	PSDIP42	1x16 Bit + WD + SLT	31	3x6 Bit	8x8 Bit
ST92E94	24K EPROM	640 + 224	CSDIP42-W	1x16 Bit + WD + SLT	31	3x6 Bit	8x8 Bit
ST92T94	24K OTP	640 + 224	PSDIP42	1x16 Bit + WD + SLT	31	3x6 Bit	8x8 Bit
ST92E96▲	63K EPROM	2048 + 224	CSDIP56-W	1x16 Bit + WD + SLT	39	3x6 Bit	8x8 Bit

Note : *Standard features include 5V+/-10% operating voltage, 0.5µs typical instruction time, 12 MHz maximum Frequency, OSD (On-Screen-Display), ADC functions and SPI.

▲ Contact marketing.

ST92 FAMILY DEVELOPMENT TOOLS

Devices	Starter Kit	Emulator	EPROM Programmer	GANG Programmer	Other
ST9291	None	ST9291-EMU ST9291-DBE	ST92E9X-EPB/110 ST93E9X-EPB/220	ST92E94-GP/DIP42 ST93E94-GP/DIP56	'C' Compiler ST9-SWC/PC
ST9293	None	ST9293-EMU ST9293-DBE		ST92E93-GP/DIP42	
ST9294	None	ST9294-EMU ST9294-DBE		ST92E94-GP/DIP42	
ST9296▲	None	ST9296-EMU	None		

▲ Contact marketing.

ST10 FAMILY HIGH PERFORMANCE CMOS 16-BIT MCU

The ST10 family of 16-bit microcontrollers covers the evolution into high performance applications in computer, telecom industrial and automotive markets. Driven by the non-volatile FLASH memory technology developed by SGS-Thomson the new ST10 family offers a 16-bit core, FLASH/ROM and RAM capabilities and advanced peripheral functions.

This high-end microcontroller includes independent intelligent Peripherals, designed such that CPU dependence is efficiently reduced and the flexibility is increased.

ST10 SERIES

Devices	Program Memory	RAM x 8	Package	Timers	Serial Interface	I/O Ports	A/D Inputs	Other Features
ST10F163	128K Flash	1K Byte	100TQFP	5 x 16 Bit	USART+SSC	77	-	-
ST10F166	32K Flash	1K Byte	100PQFP	5 x 16 Bit	2 USART	76	10 x 10 Bit	PEC + CAPCOM
ST10F167	128K Flash	2K Byte	144PQFP	5 x 16 Bit	USART+SSC	111	16 x 10 Bit	CAN + CAPCOM + WM
ST10R163	-	1K Byte	100TQFP	5 x 16 Bit	USART+SSC	77	-	-
ST10R165BQ1	-	2K Byte	100PQFP	5 x 16 Bit	USART+SSC	77	-	25 MHz
ST10R165	-	2K Byte	100TQFP	5 x 16 Bit	USART+SSC	77	-	20 MHz

ST10 FAMILY DEVELOPMENT TOOLS

ST10 Emulator user manual - Emulator for ST10 family of devices.

TRANSPUTER FAMILY

Complete range of 16/32 bit microprocessors and peripherals.

- Unique multiprocessing capability.
- Development systems for popular hosts such as IBM PC[®], and SUN[®].
- Compilers for C, and C++. Includes support for parallel processing.
- occam[®] compiler supports optimized parallel processing on transputer.
- Range of software development tools including debuggers and simulators.

PROCESSORS

Family	Part Number	Speed (MHz)	SRAM (Bytes)	Timers	Ext Mem Add (Bytes)	Serial Ports	Link Speed (Bit/s)	Package Options
T2# 16 bit CPU	IMST225 – G25S IMST225 – J25S IMST225 – F25S	25	4k	16 bit	64k	4 OS-Link	20M	68 PGA 68 PLCC 100CQFP
T4 32 bit CPU	IMST400 – G20S IMST400 – J20S IMST400 – X20I IMST400 – T20S	20	2k	32 bit	4G	2 OS-Link	20M	84 PGA 84 PLCC 100 PQFP 100 TQFP
	IMST425 – G25S IMST425 – J25S IMST425 – X25S	25	4k	32 bit	4G	4 OS-Link	20M	84PGA 84 PLCC 100 PQFP
T8# 32 bit CPU + 64 bit FPU	IMST805 – G25S IMST805 – F25S	25	4k	32 bit	4G	4 OS-Link	20M	84 PGA 100CQFP

Extended temperature part available. Consult your local sales representative for details.

PERIPHERALS

Part Number	Speed MBit/s	Relevant Processor	Description	Package
IMSC004–G20S	10/20	TXXX	Programmable Link Switch	84 PGA
IMSC011–P20S# IMSC011–E20S	10/20	TXXX	Link to 8bit parallel I/O interface. Mode 1: 8bit parallel I/O with full handshake	28 DIL 28 SOJ
IMSC012–P20S	10/20	TXXX	C011 Mode 2 operation only. Smaller package	24 DIL

Extended temperature part available. Consult your local sales representative for details.

ST20 FAMILY

Part Number	Description	Speed (MHz)	SRAM (Bytes)	Serial Links	Package
ST20450X40S	32-bit Microprocessor	40	16k	4	208 PQFP
ST20GP1X33S	Application Specific 32 bit GPS Microprocessor	16/33	4k	1	100 PQFP
ST20TP1X40S	Programmable Transport IC for DSS (Digital Satellite Systems) Applications	40	8k	1	PQFP208
ST20TP2BX50S	Programmable Transport IC for DVB (Digital Video Broadcast) Applications	50	8k	1	PQFP208

DEVELOPMENT TOOLS AND SYSTEMS
TRANSPUTER MODULES (TRAMs)

Part Number	Memory Size (MBytes)	Processor	DRAM/cycles	TRAM/HTRAM Size	Subsystem
IMSB452	4	ST20450	4M/100ns	Size 2 TRAM	Yes

COMPILERS & TOOLSETS

Part Number	Target Processor	Description	Language	Host Computer
IMSD4414 IMSD7414	TXXX/ ST20450	C Toolset Including "INQUEST" Debugger	ANSI C	SUN 4 PC 386+
IMSD4405 IMSD7405	TXXX/ ST20450	occam 2.1 Toolset Including "INQUEST" Debugger	occam 2.1	SUN 4 PC 386+
ST20-SWC++/SUN ST20-SWC++/PC	ST20/TXXX	C++ Pre-processor for ST20 and Txxx Toolset	C ++	SUN 4 PC 386+
ST20-SWC/SUN ST20-SWC/PC	ST20	ST20 Toolset Including Debugger	ANSI C	SUN 4 PC 386+

DEVELOPMENT BOARDS

Part Number	Description
ST20450-SAB	Development and Interface prototyping platform for the ST20450 processor. VME format.

SYSTEMS PRODUCTS

Part Number	Description
IMSB300-1	Ethernet to transputer gateway. Full TCP/IP implementation.

INTERFACES

Part Number	Description
ST20-PP1	PC Parallel Port to OS-Link Interface
ST20-JPI	PC Parallel Port to JTAG Interface

1. Each Board exists in /220 (Europe), /110 (U.S.), /UK (U.K.) voltages and plugs

PC MULTIMEDIA**MULTIMEDIA PALETTE-DACS**

Part Number	Description	Package
STG1764X-13	64 bit Multimedia Palette-DAC	128 PQFP

MULTIMEDIA ACCELERATOR

Part Number	Description	Package
STG3000X	RIVA 128 128-bit 3D Multimedia Accelerator	300 PBGA