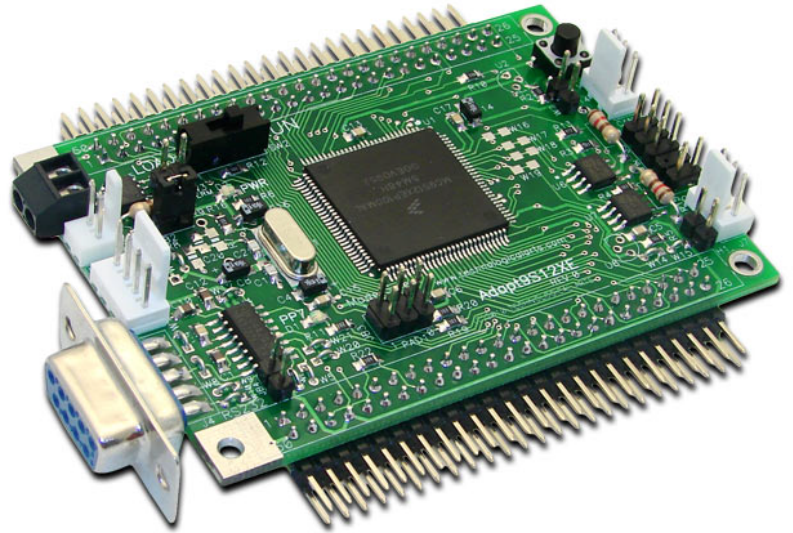




# Adapt9S12XEP™

## Modular S12X

### Microcontroller Board

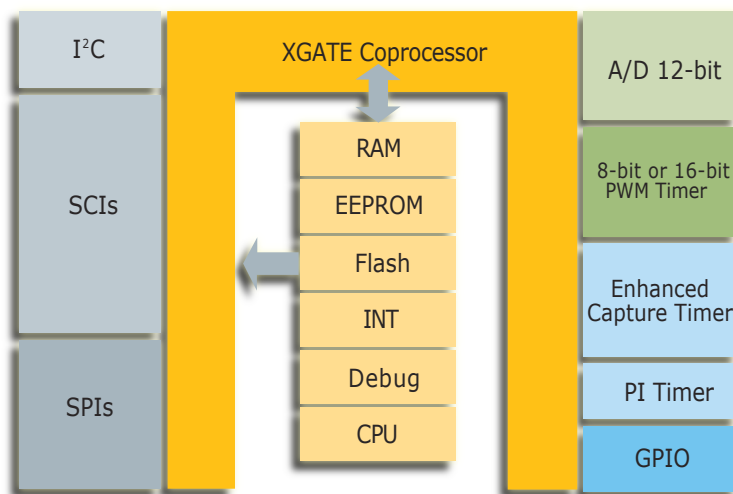


#### PRODUCT FEATURES:

- MC9S12XEP100 MCU
- 4 MHz crystal
- bus speed to 50 Mhz via PLL
- XGATE co-processor (100Mhz)
- 5V low-dropout regulator
- 64K RAM and 4K EEPROM
- 1M high-endurance Flash
- universal BDM connector
- dual RS232 interfaces
- RS485 interface
- two CAN transceivers
- three SPI channels (or two SPI + two SCI)
- I2C interface
- 8-channel Input Capture/ Output Compare enhanced capture timer
- dual 8-channel 12-bit a/d converter subsystems
- 8-channel PWM
- periodic interrupt timer
- all input, output, and interrupt lines user-accessible
- two standard 50-pin I/O connectors
- several connector options
- stackable vertically or horizontally
- AMPS\* form-factor card
- prototyping cards, backplanes, and application cards available
- compact 3.25" x 2.3" module
- connectors on 0.1" grid
- corner mounting holes

#### Overview

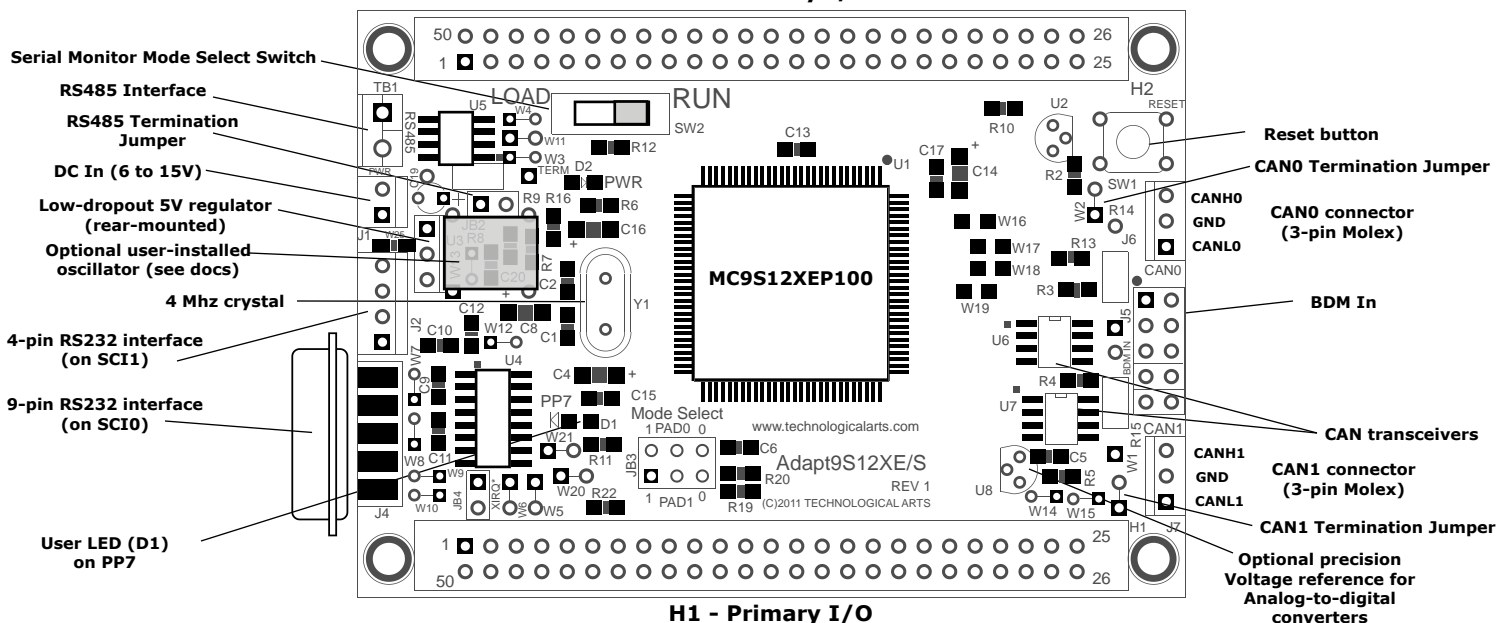
The Freescale 9S12XEP microcontroller is an enhancement of the 9S12XD, with a CPU12X core operating at up to 50 MHz, an XGATE RISC co-processor operating up to 100 Mhz, larger on-chip memory resources (up to 1MB Flash and 64K RAM), enhanced memory access and error-correcting capabilities, additional addressing modes, and faster and higher-resolution analog-to-digital converter subsystems (12-bit resolution and 3us conversion time). Adapt9S12XEP is the latest member of the "Adapt" Modular Prototyping System (AMPS) pioneered by Technological Arts. Unlike conventional evaluation and demo boards offered by other vendors, the flexible design of this system addresses the varied requirements of evaluation, training, product development, proof-of-concept prototyping, and volume production.



9S12XEP100 Block Diagram

\* AMPS = Adapt Modular Prototyping System, pioneered by Technological Arts

## H2 - Secondary I/O



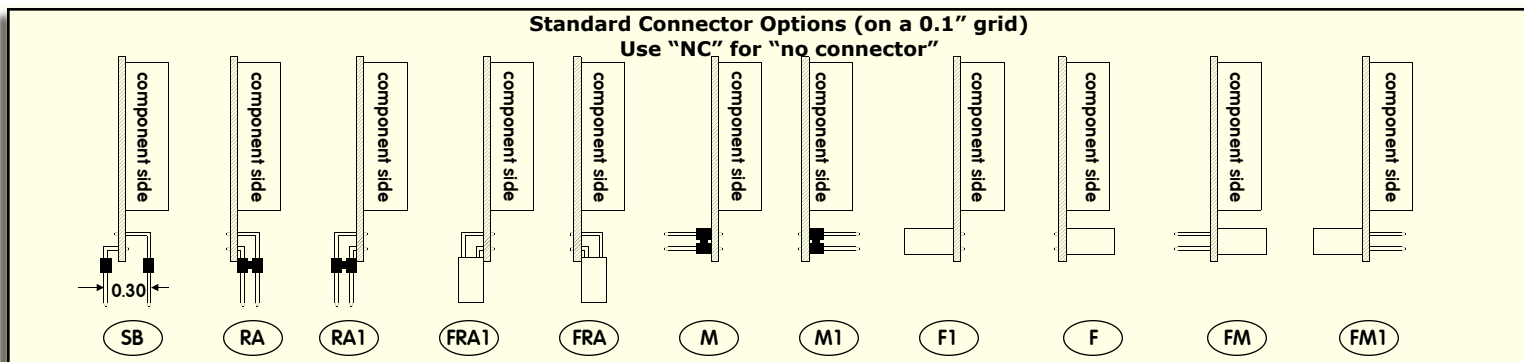
## Adapt9S12XEP Connector Pin Assignments

H1				H2			
PIN	SIGNAL NAME	PIN	SIGNAL NAME	PIN	SIGNAL NAME	PIN	SIGNAL NAME
1	PS4/MISO	50	GROUND	1	PA7	50	VCC (+5VDC)
2	PS5/MOSI	49	GROUND	2	PA6	49	GROUND
3	PS6/SCK	48	PS0/RXD0	3	PA5	48	PE7
4	PS7/SS*	47	+5VDC	4	PA4	47	PK7
5	PS1/TXD0	46	PE1/IRQ*	5	PA3	46	PK5
6	PT7	45	PE0/XIRQ*	6	PA2	45	PK4
7	PT6	44	RESET*	7	PA1	44	PK3
8	PT5	43	PE7	8	PA0	43	PK2
9	PT4	42	PH0	9	PB7	42	PK1
10	PT3	41	PH1	10	PB6	41	PK0
11	PT2	40	PH2	11	PB5	40	PJ0
12	PT1	39	PH3	12	PB4	39	PJ7/SCL
13	PT0	38	PH4	13	PB3	38	PJ6/SDA
14	PP7 (LED D1)	37	PH5	14	PB2	37	TxCAN3/PM7
15	PP6	36	PH6	15	PB1	36	RxCAN3/PM6
16	PP5	35	PH7	16	PB0	35	TxCAN2/PM5
17	PP4	34	PS2/RXD1	17	R/W* PE2	34	RxCAN2/PM4
18	PP3	33	PE4/ECLK	18	ECLK/PE4	33	TxCAN1/PM3
19	PP2	32	PS3/TXD1	19	LSTRB*/PE3	32	RxCAN1/PM2
20	PP1	31	VRL	20	IRQ*/PE1	31	TxCAN0/PM1
21	PP0	30	VRH	21	PJ1	30	RxCAN0/PM0
22	AN00	29	AN04	22	AN08	29	AN12
23	AN01	28	AN05	23	AN09	28	AN13
24	AN02	27	AN06	24	AN10	27	AN14
25	AN03	26	AN07	25	AN11	26	AN15

NOTES: \* indicates active low signal

### Standard Connector Options (on a 0.1" grid)

Use "NC" for "no connector"



Order Code: AD9S12XEP100M2-□-□ (fill in connector option codes for H1 and H2)

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