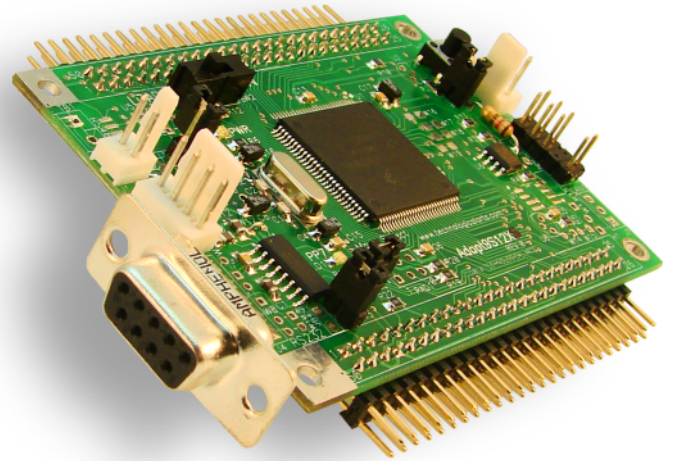




Adapt9S12XS™

Modular S12X

Microcontroller Board



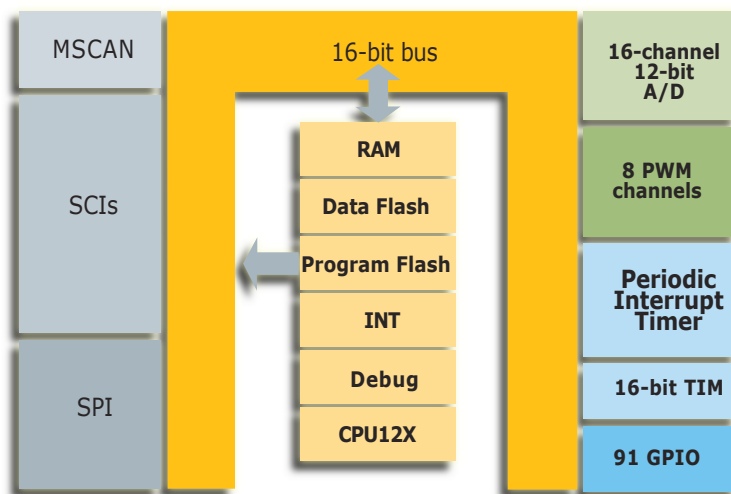
PRODUCT FEATURES:

- MC9S12XS128 MCU
- 4 MHz crystal
- bus speed to 40 MHz via PLL
- 5V low-dropout regulator
- 8K RAM and 8K DataFlash
- 128K high-endurance Flash
- universal BDM connector
 - use with free uBug12JE app
- dual RS232 interfaces
- one CAN transceiver
- one SPI
- two SCI
- 8-channel 16-bit timer (TIM)
 - 8 input captures
 - 8 output compares
 - 16-bit pulse accumulator
- 16-channel 12-bit a/d converter subsystem
- 8-channel PWM
- 4-channel 24-bit timer (PIT)
- 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 (83mm x 58mm)
- connectors on 0.1" grid
- corner mounting holes

Overview

The Freescale 9S12XS microcontroller family is a low-cost version of the high-performance 9S12XE family, with a reduced set of peripherals. Also excluded is the XGATE co-processor, memory protection unit, and emulated EEPROM. What's left is the high-performance CPU12X core operating at up to 40 MHz, a fast 16-channel high-resolution analog-to-digital converter subsystem (12-bit resolution and 3us conversion time), one MSCAN, one SPI, two SCIs, eight PWM channels, and standard timer functions (TIM and PIT).

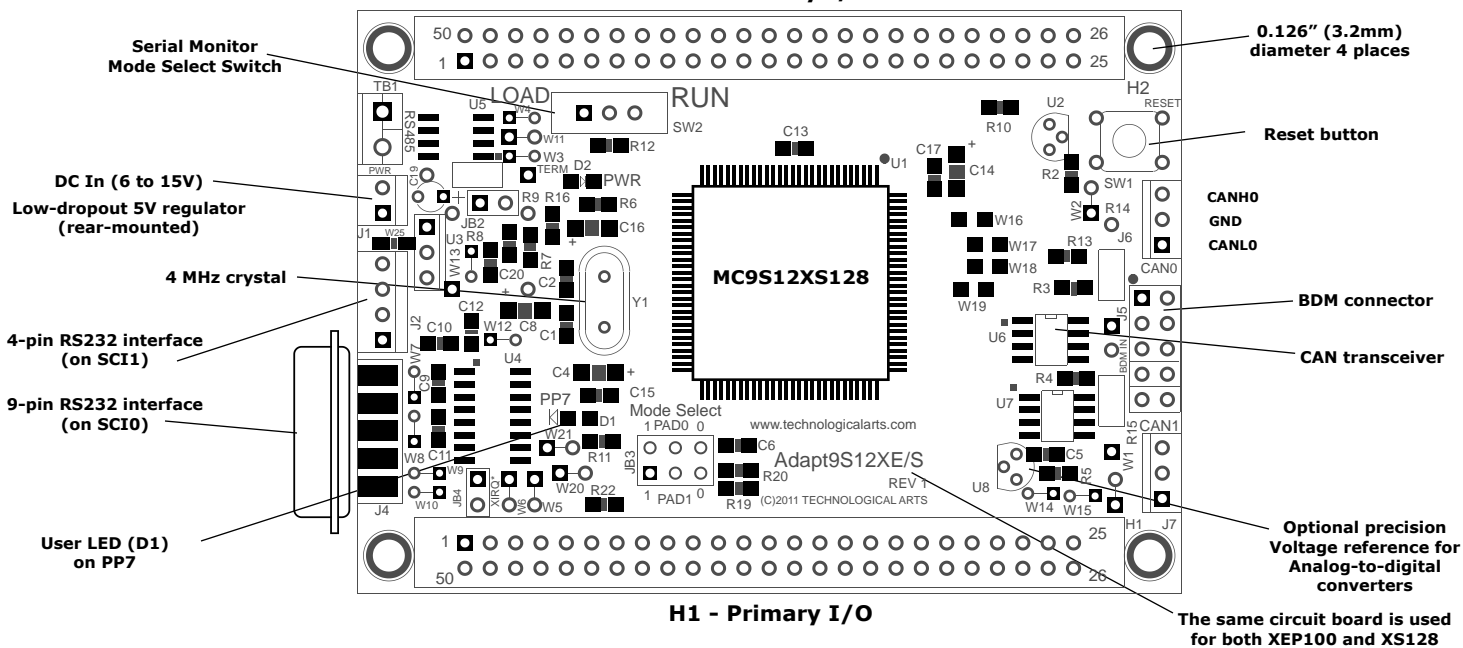
Adapt9S12XS joins the popular "Adapt" Modular Prototyping System (AMPS) pioneered by Technological Arts. Unlike conventional evaluation and demo boards offered by other vendors, the flexible design of this system addresses the varied requirements of evaluation, training, product development, proof-of-concept prototyping, and volume production.



9S12XS Block Diagram

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

H2 - Secondary I/O



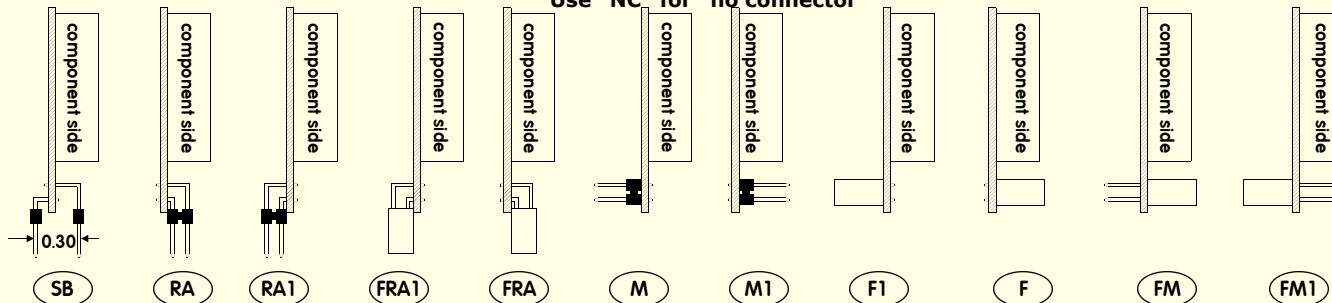
Adapt9S12XS Connector Pin Assignments

H1		H2	
PIN	SIGNAL NAME	PIN	SIGNAL NAME
1	PS4/MISO0	50	GROUND
2	PS5/MOSI0	49	GROUND
3	PS6/SCK0	48	PS0/RXD0
4	PS7/SS0*	47	VCC
5	PS1/TXD0	46	PE1/IRQ*
6	PT7/IOC7/PWM7	45	PE0/XIRQ*
7	PT6/IOC6/PWM6	44	RESET*
8	PT5/IOC5/PWM5/VREG_API	43	PE7/ECLKX2/XCLKS*
9	PT4/IOC4/PWM4	42	PH0/KWH0
10	PT3/IOC3	41	PH1/KWH1
11	PT2/IOC2	40	PH2/KWH2
12	PT1/IOC1	39	PH3/KWH3
13	PT0/IOC0	38	PH4/KWH4
14	PP7/KWP7/PWM7 (LED D1)	37	PH5/KWH5
15	PP6/KWP6/PWM6	36	PH6/KWH6
16	PP5/KPW5/PWM5	35	PH7/KWH7
17	PP4/KWP4/PWM4	34	PS2/RXD1
18	PP3/KWP3/PWM3	33	PE4/ECLK
19	PP2/KWP2/PWM2/IOC2/TXD1	32	PS3/TXD1
20	PP1/KPW1/PWM1/IOC1	31	VRL
21	PP0/KWP0/PWM0/IOC0/RXD1	30	VRH
22	PAD00/AN00	29	PAD04/AN04
23	PAD01/AN01	28	PAD05/AN05
24	PAD02/AN02	27	PAD06/AN06
25	PAD03/AN03	26	PAD07/AN07
1	PA7	50	VCC
2	PA6	49	GROUND
3	PA5	48	PE7/ECLKX2/XCLKS*
4	PA4	47	PK7
5	PA3	46	PK5
6	PA2	45	PK4
7	PA1	44	PK3
8	PA0	43	PK2
9	PB7	42	PK1
10	PB6	41	PK0
11	PB5	40	PJ0/KWJ0
12	PB4	39	PJ7/KWJ7
13	PB3	38	PJ6/KWJ6
14	PB2	37	PM7
15	PB1	36	PM6
16	PB0	35	PM5/SCK0
17	PE2	34	PM4/MOSI0
18	PE4/ECLK	33	PM3/SS0*
19	PE3	32	PM2/MISO0
20	PE1/IRQ*	31	PM1/TXCAN0/TXD1
21	PJ1/KWJ1	30	PM0/RXCAN0/RXD1
22	PAD08/AN08	29	PAD12/AN12
23	PAD09/AN09	28	PAD13/AN13
24	PAD10/AN10	27	PAD14/AN14
25	PAD11/AN11	26	PAD15/AN15

NOTES: * indicates active low signal

Standard Connector Options (on a 0.1" grid)

Use "NC" for "no connector"



Module Order Code:

AD9S12XS128M-□-□ (fill in connector option codes for H1 and H2)

Accessories:

USBDMILT: a low-cost USB BDM pod, compatible with CodeWarrior and NoICE12

www.technologicalarts.com • sales@technologicalarts.com • phone: +1 (416) 963-8996 • fax: +1 (416) 963-9179