EsduinoXtreme

9S12G-based Arduino-compatible*

[U5]: Serial Memory footprint for optional SPI memory device (25LCxx, etc.).(SO-8 150 mils)

[J5]: microB USB communications connector. Can also provide 5V power from the host PC (set JB1 to USB position)

[J10]: [XBee Option]
Plug optional ADXB here to implement XBee Interface (3V/5V compatible).

[JB9] TX/RX Communications Routing:
Place two shunts in the positions shown
US = USB-to-SCI (of the MCU)
When XBee Option is present:
UX = USB-to-Xbee (for configuring via Host)
SX = SCI-to-Xbee (for wireless communications)

[JB1]: 5V Source Selector
1-2 (lower): 5V from host USB port
2-3 (upper): 5V from U1 via VIN

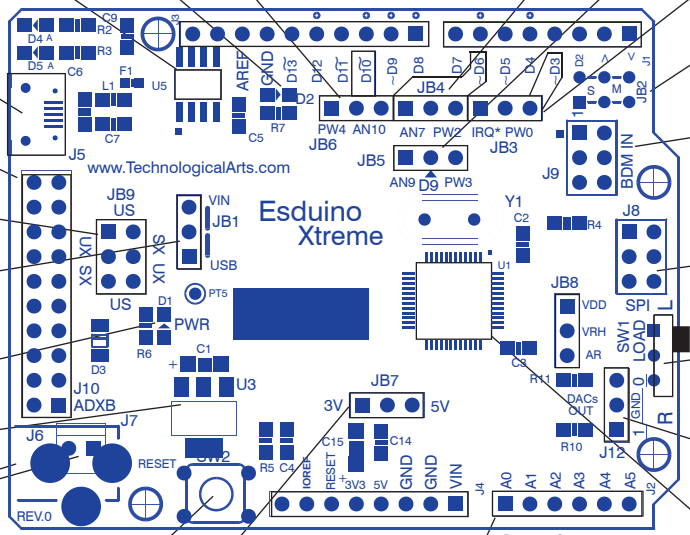
[D1]: Power indicator LED

[U3]: 3.3V regulator (800 mA max.)

[JB6]: DIG11 Source
1-2 (left): PW4/PP4
2-3 (right): AN10/PAD10/DACU1

[D2]: User LED (on DIG13)

SCL: IOC4/PT4
SDA: IOC3/PT3
AREF
GND
DIG13: MISO1/PW6/PJ0
DIG12: AN11/PAD11/DACU0
DIG11: PW5/PP5
DIG10: AN10/PAD10/DACU1 or PW4/PP4
DIG9: AN9/PAD9 or PW3/PP3
DIG8: AN8/PAD8
DIG7: IOC2 /PT2
DIG6: AN7/PAD7 or PW2/PP2
DIG5: PW1/PP1
DIG4: AN6/PAD6
DIG3: PW0/PP0 or IRQ*/IOC1/PT1
DIG2: XIRQ*/IOC0/PT0
DIG1: PS3/TXD1 or PM1/TXCAN
DIG0: PS2/RXD1 or PM0/RXCAN



[J4]: DIG6 Source
1-2 (left): AN7/PAD7
2-3 (right): PW2/PP2

[JB5]: DIG9 Source
1-2 (left): AN9/PAD9
2-3 (right): PW3/PP3

[JB3]: DIG3 Source
1-2 (left): IRQ*/IOC1/PT1
2-3 (right): PW0/PP0

[JB2] PS/PM SELECT:
Select between PS2/PS3 (RXD1/TXD1) and PM0/PM1 (RXCAN/TXCAN) assignments for DIG0 and DIG1 pins. This frees up the pins for GPIO or CAN.

[J9] BDM IN:
Standard right-angle 6-pin Background Debug Mode (BDM) connector for program/debug use

[J8]: SPI peripheral connector
SPI signals, +5V, and Ground for easy interfacing to SPI peripherals

[SW1]: Serial Monitor mode select.
Place in LOAD (L) position to activate; R to RUN program in Flash following Powerup or Reset

[J12] DACU0/AMP0 & DACU1/AMP1:
Two Digital-to-Analog Output Channels
Connect stereo headphones or PC speakers for audio applications

[U1]:
Freescale 9S12GA240
16-bit microcontroller

[SW2]: Reset button

[JB7]: 3V/5V Operation
1-2 (left): 3.3V
2-3 (right): 5V

A0: AN0/PAD0
A1: AN1/PAD1
A2: AN2/PAD2
A3: AN3/PAD3
A4: AN4/PAD4
A5: AN5/PAD5

[J2] A0 - A5:
Six Analog Inputs;
Any of these may be used as digital inputs or outputs instead

Power Configuration Options:
Instead of deriving 5V to power the board from the USB Host connection, it can be derived from on-board regulator U1. Two different power connections are provided, as user-installed options: J6 is a barrel jack connector (2.1mm center -positive) compatible with most common AC-to-DC adapters, and J7 is a 2-pin Molex connector. Since they have overlapping footprints, you can install only one of them. The applied voltage (VIN) can be anywhere in the range of 7 to 15V DC. To choose VIN as the source of the board's system 5V (via regulator U1), set jumper block JB1 to the 2-3 (upper) position.

NOTE: Square pad denotes pin 1 on all components with reference to schematic diagram.

Order Code:
ESD12X (fully assembled with 9S12GA240 and headers)

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* Footprint and pinout are compatible with most Arduino-style shields.

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