EsduinoXtreme 9S12G-based Arduino-compatible* [JB4]: DIG6 Source [JB6]: DIG11 Source 1-2 (left): AN7/PAD7 1-2 (left): PW4/PP4 PW2/PP2 2-3 (right): PW2/PP2 [U5]: Serial Memory footprint 2-3 (right): AN10/PAD10/DACU1 for optional SPI memory device [JB5]: DIG9 Source (25LCxx, etc.).(SO-8 150 mils) [D2]: User LED 1-2 (left): AN9/PAD9 (on DIG13) ō 2-3 (right): PW3/PP3 [U4]: FT230 USB-to-UART interfacechip. Find driver software at www.ftdichip.com [JB3]: DIG3 Source 1-2 (left): IRQ*/IOC1/PT1 [J5]: microB USB communications connector. 2-3 (right): PW0/PP0 Can also provide 5V power from the host PC (set JB1 to USB position); maximum 500 mA [JB2] PS/PM SELECT: Select between PS2/PS3 (RXD1/TXD1) [J10]: [XBee Option] and PM0/PM1 (RXCAN/TXCAN) Install header here to support optional assignments for DIG0 and DIG1 pins. ADXB adapter, enabling use of XBee module for This frees up the pins for GPIO or CAN. wireless communication (3V/5V compatible). [J9] BDM IN: Standard right-angle 6-pin [JB9] TX/RX Communications Routing: U5 NA PW C5 JB6 Background Debug Mode (BDM) Place two shunts in the positions shown connector for program/debug use US = USB-to-SCI (default) [U1]: Freescale 9S12GA240 When XBee Option is present: Esduino 16-bit microcontroller UX = USB-to-Xbee (for configuring via Host) Xtreme SX = SCI-to-Xbee (for wireless communications) [J8]: SPI peripheral connector JB8 SPI signals, +5V, and Ground for [JB1]: 5V Source Selector easy interfacing to SPI peripherals 1-2 (lower): 5V from host USB port 2-3 (upper): 5V from U1 via VIN [SW1]: Serial Monitor mode select. Place in LOAD (L) position to activate; [D1]: Power indicator LED R to RUN program in Flash following Powerup or Reset [U2]: 5V regulator (800 mA max.) [JB8]: Select VRH source for A/D converter subsystem [U3]: 3.3V regulator (800 mA max.) [J12] DACU0/AMP0 & DACU1/AMP1: PADO PAD1 PAD2 PAD3 PAD4 Optional DACO and 1 output header; [U61: [SW2]: Reset button Populate R10 and R11 to suit application **Power Configuration Options:** Optional precision Instead of deriving 5V to power the board from the USB Host voltage reference connection, it can be derived from on-board regulator U1. Two different power connections are provided, as user-[JB7]: 3V/5V Operation A0: A2: A3: A5: A5: installed options: J6 is a barrel jack connector (2.1mm center 1-2 (left): 3.3V -positive) compatible with most common AC-to-DC adapters, 2-3 (right): 5V [J2] A0 - A5: and J7 is a 2-pin Molex connector. Since they have overlapping Note that this setting has no Technologica Six Analog Inputs:

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

via BDM pod.

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

position.

footprints, you can install only one of them. The applied

To choose VIN as the source of the board's system 5V

voltage (VIN) can be anywhere in the range of 7 to 15V DC.

(via regulator U1), set jumper block JB1 to the 2-3 (upper)

www.TechnologicalArts.com

effect when board is powered

Any of these may be

used as digital inputs

or outputs instead

Check for updates at support.technologicalarts.ca/Esduino

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

Rev. 1 DECEMBER 2014