

Esduino12

[JB4] TX/RX Communications Router:
Place two shunts in the UN position
UN = USB-to-9S12C
(other functions to be implemented
on future design revisions)

[J4][J5]: USB2MCU module goes here,
to provide USB interface to host PC;
or supply your own TTL-level signals
to/from Host

[J9][J10]: [Xbee Option]
Plug ADXB here for XBee Interface
(3V/5V compatible). This option is
not functional on Rev. 0 boards)

[J6]: SPI peripheral connector
SPI signals, Output Enable, +5V,
and Ground are all brought out to
this convenient connector for easy
interfacing to SPI peripherals

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

[D1]: Power indicator LED

[J7] PB4, PE7, PE4, PA0:
Four bonus Digital pins.

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

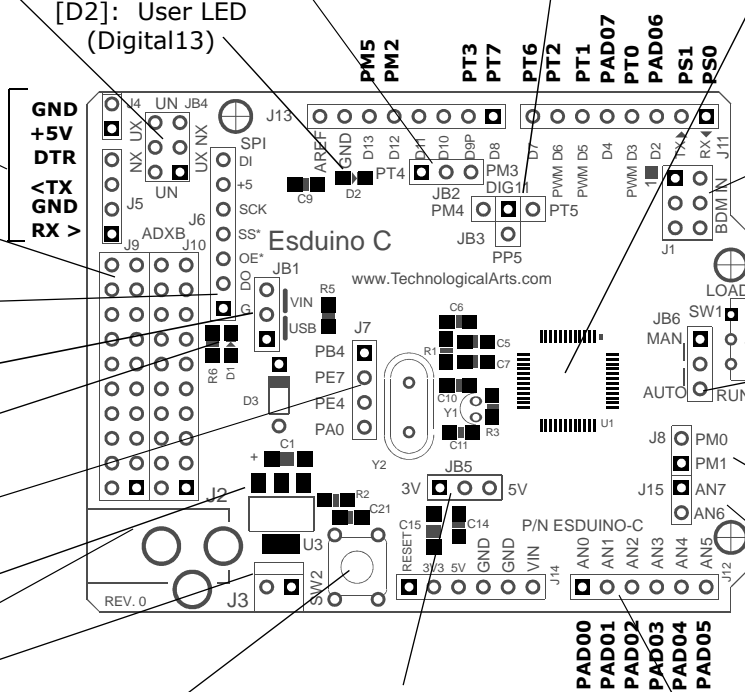
Power Configurations:
Instead of deriving 5V to power the board from the USB Host connection, it can be derived from on-board regulator U1. Two different power connections are provided: J2 and J3. The 2-pin J3 Molex connector is the default, while J2 is an optional barrel jack connector (2.1mm center-positive) compatible with most common AC-to-DC adapters. If J2 is present, and a voltage supply is plugged in, it will automatically override J3. The applied voltage (VIN) can be Anywhere in the range of 7 to 15V DC. To choose VIN as the source of system 5V (via regulator U1), set jumper block JB1 to the 2-3 (upper) position.

[JB2]: Digital10 Source
1-2 (left): PT4
2-3 (right): PM3

[D2]: User LED
(Digital13)

[JB3]: Digital11 Source
1-2 (left): PM4
1-3 (down): PP5 (PAD1)
1-4 (right): PT5

[U1]:
Freescale 9S12C microcontroller



[J1] BDM IN:
Standard 6-pin Background
Debug Mode connector for
Advanced debugging use

[SW1 and JB6]:
When JB6 set to MAN, use SW1 to
select Serial Monitor mode.
When JB6 set to AUTO, Serial
Monitor mode must be controlled
by host via DTR line on serial port.

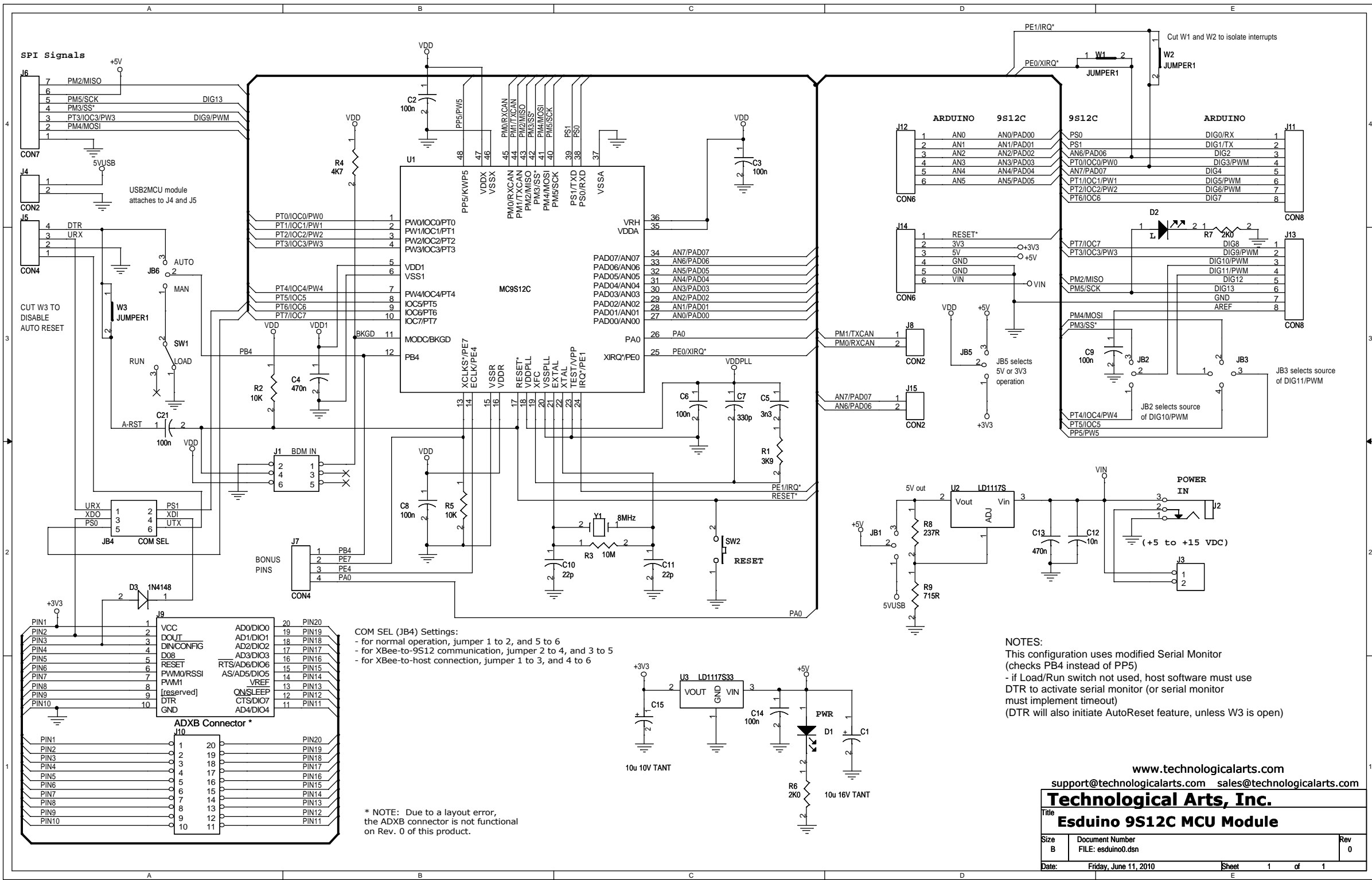
[J8] PM0 - PM1:
Two bonus Digital pins;
may be used with an external
transceiver to implement a
CAN interface.

[J15] AN6 - AN7:
Two bonus Analog Inputs;
may be used as digital
inputs or outputs instead

[J12] AN0 - AN1:
Six Analog Inputs;
Any of these may be
used as digital inputs
or outputs instead

Order Codes:

- ESD12C32 (with 9S12C32; no USB2MCU; no connectors)**
- ESD12C128 (with 9S12C128; no USB2MCU; no connectors)**
- ESD12C32-UR (with 9S12C32; USB2MCU and connectors)**
- ESD12C128-UR (with 9S12C128; USB2MCU and connectors)**



COM SEL (JB4) Settings:
 - for normal operation, jumper 1 to 2, and 5 to 6
 - for XBee-to-9S12 communication, jumper 2 to 4, and 3 to 5
 - for XBee-to-host connection, jumper 1 to 3, and 4 to 6

* NOTE: Due to a layout error, the ADXB connector is not functional on Rev. 0 of this product.

NOTES:
 This configuration uses modified Serial Monitor (checks PB4 instead of PP5)
 - if Load/Run switch not used, host software must use DTR to activate serial monitor (or serial monitor must implement timeout)
 (DTR will also initiate AutoReset feature, unless W3 is open)

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Esduino 9S12C MCU Module

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B	FILE: esduino0.dsn	0	
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