Changes from Rev. E to G

Fixed Left Ethernet LED (reversed polarity)
Changed to new Full-size SD card socket Due to EOL on old socket
Added TVS and res on DIO Header for keypad
Added Console TVS on COM3
Improve clearance for bottom parts
Added R15 (0 Ohms) to connect Frame to GND
Improved board design with more by pass caps
Start_Burst length = Ave of 4 data lanes + CLK
1.2V or 1.42V Power Supply

1.2V Power Supply

2.5V Power Supply

3.3V Regulator

SATA 0

SATA 1

Power Sequencing:
2.5V and 3.3V must come up before 1.2V and 1.4V

When FETs are on, regulator at 1.2V (JP3, 0.0Ω).

SATA can NOT have polarity swapped

SATA and PCIe Diff pairs do NOT have to be length matched
Must enable pull-up resistors for these pins:
- SD card D0-D3
- SD Power#
- SD card WP

Full-Size SD Card Socket

Micro SD Card Socket

5 Channel 12-bit A/D

NV 3.3V Regulator for AVR

Reset will re-initialize all pins

SD0, SD1, SD2, SD3, SD4 or ISA3, ISA32 can wake up AVR

Vout = 1.24 * (1 + Rtop/Rbot)
IRQ3 must be 3.3V levels

All other signals must be 5V tolerant, but

Warning:
All IRQs and data lines are 5V tolerant, but
all other signals must use 3.3V levels.

IRQ0 must be 3.3V levels.
DIO Port

- **DIO_01** thru **DIO_15** (odds) are always open drain outputs, initialized to high. They can be used as inputs.
- **DIO_08** initializes to an input when output, active high-low. It is programmable In or out.
- **DIO_04** is always input. AVR drives pull-up on this pin.
- Open drain outputs can sink 8 mA but only source current thru resistor.
- Pull-up resistors for the open-drain outputs.

All DIO lines are 5V tolerant