Comments:

Cortex M0 can be powered from USB or by 8-28VDC Power
Cortex M0 is powered up first, then it controls MX286 start up
Cortex M0 does these functions:
- Controls MX286 power up sequence
- Controls MX286 Boot Strapping
- USB Device to Console conversion
- Controls Blue LED
- Can read Push Switch
- Measures Analog Vin value
- Reads SD_BOOT Jumper
- Contains customer specific "ID Code"?
- Other NV Parameter storage?

Serial Port Usage

UART0 = RS-232
UART1 = RS-232
UART2 = Modbus/DC
UART3 = DC
UART4 = GPS Radio
Debug = Console/DC

DC = Daughter Card
10 DIO also go to DC

GPS option adds:
U14, PF2, L4, HD3

2nd CAN adds:
U26 and TVS6
UARTs, ADC

Audio
SD Card
SPI Boot

LCD

NAND, PWM

JTAG, I2C

MX286 ARM9 CPU

NAND Interface

MX286 adds 4 CAN signals and ball D7
CPU Power

USB

CPU_RESET#
CPU_PSWITCH

GND Test Point

Technologic Systems  Date  Jan. 7, 2014
Title:  TS-7670  MX286 CPU Power
Rev:  B  Designer  Sheet  4 of 13
DDR2 SDRAM (128 or 256 MByte)

MX286

64M x 16
128 MB

OR

128M x 16
256 MB

Technologic Systems

Title: TS-7670 DDR2 RAM

Rev. B  Designer Sheet 5 of 13

Date Jan. 7, 2014
5V Power Supply (2000 mA)

8-28 VDC
Power Input

USB and MX286
Switched Power

Ethernet and SD
Switched Power

REV: DESIGNEER SHEET OF
5V Power Supply (2000 mA)

C91 must be very near U17

Power Input
8-28 VDC
Auto MDIX is supported and Polarity Correction supported
Flash Memory

Micro SD Card Socket

NAND Flash

Daughter Card Interface

Supplemental Interface

SD Boot Jumper
RTC and Host USB

RTC and Temp. Sensor

External Host USB Port

SMT RA LEDs
RS-232 Ports

**RS-232 Transceiver**

3.3V <-> 5V Level shifter

**Port 1**

RS-232

- RTS/CTS Hardware Flow control supported

**Port 2**

RS-232

- Flow control supported

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Technologic Systems

Title: TS-7670 RS-232 Ports

Rev: B  Designer  Sheet 12 of 13

Date: Jan, 7, 2014
Mod Bus RS-485 and CAN Port

Modbus
Power Switch

RS-485 Driver

Modbus
RJ45

CAN_0 Tranceiver

CAN
RJ45

TJA1040 allows low power 15 uA mode