
Description of hardware block diagram_GTI-20110301

Power supply:

1. There is a AC-DC power module inside this product to take 90V~240V AC input and transfer it to 5VDC output with 3A maximum current load
2. 5VDC is then fed into U15,U16,U17,U18,U19 on the Board to create all the necessary power rails for system use, including 1.0VDC,1.2VDC,3.3VDC,1.85VDC and 1.1VDC

SDRAM –U2,U3,U4,U5

1. DDR2 SDRAM is used for this application with 400MHZ clock rate and 800MHZ data rate.
2. 4 units of 1Gb DDR2 with the structure of 4Mbit*8 I/Os *8 bank each,totally there will be **1G** byte memory size.

NANFLASH-U6

1. 512M x 8 bit NAND Flash is used as the storage memory for the Operating system .
2. During power on boot up, the contents will be read out from NAND Flash and stored to SDRAM for fast operating, **It is optional using NANFLASH and SD card of USB connector.**

Gb Ethernet-U9,U10

1. There are two 1000Mb/s Ether net MACs built inside the CPU, U9,U10 work as a dual Ethernet PHY (Physical Layers) to bring the signals to two RJ45 ports
2. These two ports are running at speed of 10/100/1000 Mb/s

SATA/eSATA- J6

1. Two SATA interfaces have been built inside this CPU, all you have to do is to connect them to the SATA or eSATA connectors.
2. Here we use only one of the ports and connected it to the external eSATA interface.

USB- U11 chip, J16,J17,J18

1. This CPU supports one USB 2.0 high speed host port.
2. U11 is the 1-to-4 USB HUB controller which expands 1 USB port to 4 ports.
3. Here we bring to the edge of the PCB only two USB connectors for use
4. Another USB port will be converted as audio interfaces described as below.

WiFi -802 11b/g-Bluetooth2.1 U8 J10-external ANT -ANT1



Globalscale Technologies,INC.

1. One WiFi chip with 802.11/b/g compliance and Bluetooth2.1 are incorporated for wireless LAN application and Bluetooth application.
2. The broadcast frequency band for this 802.11 b/g is 2.4GHz.
3. J10 is the connector for external instrument connection and ANT1 is the Antenna