Changes from TS-8500 to TS-8550

- Changed primary MagJack to 1 Gigabit
- Added 2nd MagJack
- Removed USB Device port
- Fixed CAN problem with TS-4200 (add res)
- SATA pins changed on CN2
- Add caps to SATA Diff pairs
- Allow half-size PCIe conn.
- Change to different 5V reg
- Add TS-4900 SPI Flash for booting
- Add 2x10 JTAG Header (for CPU)
- Remove PCIe clock generator
- Add USB Hub - 3 external Host ports
- Add USB interface to mini-PCIe
- Add 1.5V Reg. to mini-PCIe
- Remove Temp sensor
- Add Bias Resistors for TS-4900 Boot
- Change board ID to Hex 13
- Add Test Point hooks for GND?
5V Power Supply (2000 mA)

8V to 28V Power In

5V Power In

Power Switch

Push Switch

Reset Switch
RS-485 Driver

2.9V <--- 5V
Level shifter

RS-232 Transceiver

COM DB9M

LEDs

Board ID = 19

CAN Tranceiver

TS-4800 requires 3.0V max on the RXD pins

TS-4200 has 1.8V levels on the CAN RXD
SMSC

USB Hub

Micro SD Card Socket

TS-4900

SPI Boot Flash

This switch selects whether the TS-4900 SPI Flash or the Base Bd. Flash is used to Boot

CN1_87 allows software to take control of which SPI Flash chip is accessed
High-speed differential pairs are not routed to these headers.

USB, SATA, Ethernet, SD card, PCIe and Ethernet pairs are not connected because this would mismatch the transmission lines.

CPU JTAG
Two 100-pin Module Connectors

“5V” pins supply all power to the module. Apply 4.5V to 5.5V to these pins.

Current drain is < 100 mA (less than 4 Watts).

OFF_BD_RESET# is an output from the SBC.

FPGA JTAG

OFF_BD_RESET# is a reset input to the SBC used to reboot the CPU.

Do not drive active high (use open drain).

SD Card

SD card signals on connector are wired in parallel with SD card socket. Only one can be populated with SD card.

Maximum load on 5V pin is 500 mA.

Mode 2 state is selected prior to OFF_BD_RESET# deasserted.

MODE2 has a 132KPU on the SBC module.

Mode 2

Boots from

1
NAND Flash

0
SD Card

Right

Gigabit Ethernet

2nd Ethernet

12C

CPU JTAG

Serial Ports or DIO

Console

CAN

SPI Bus

Technologic Systems

Date: May 8, 2014

Title: TS-8550 Dual 100-pin Module Connectors

Rev: A  Designer: RLM  Sheet 9 of 9