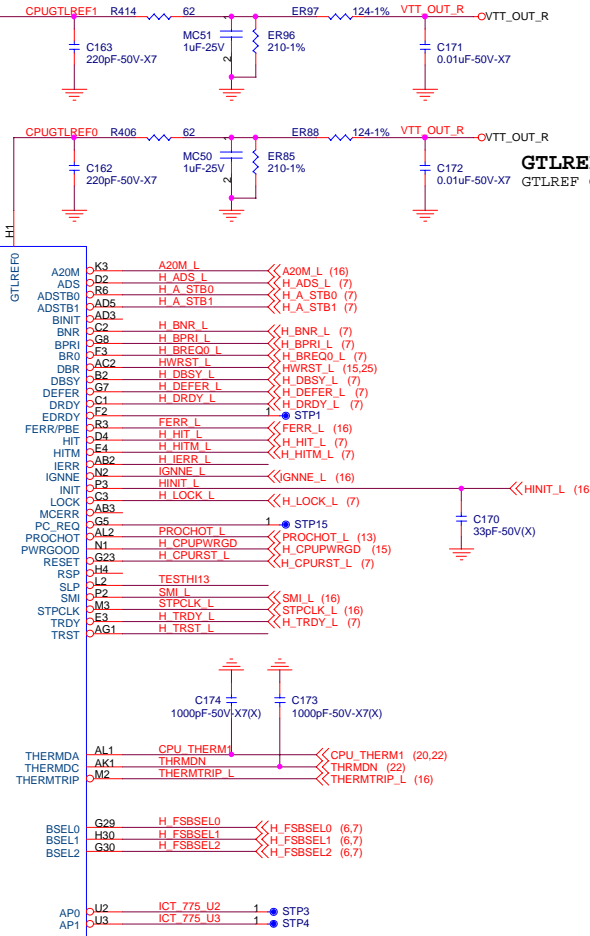
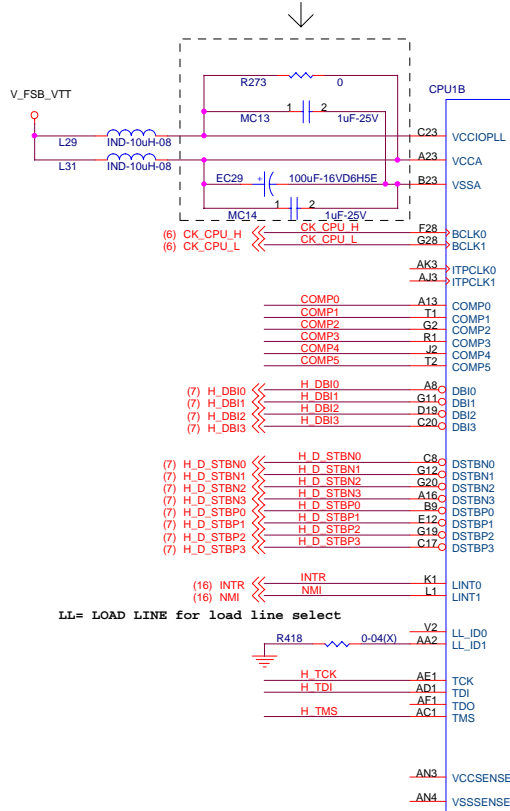
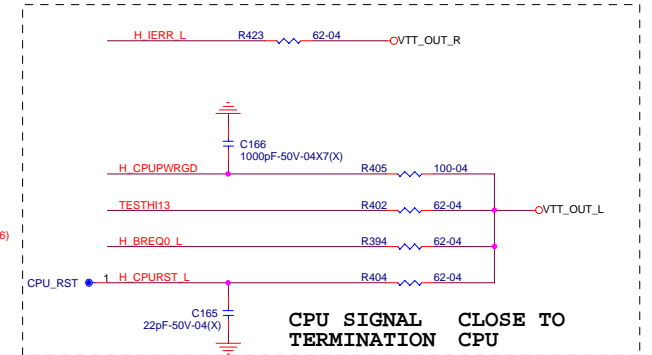


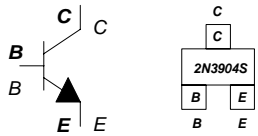
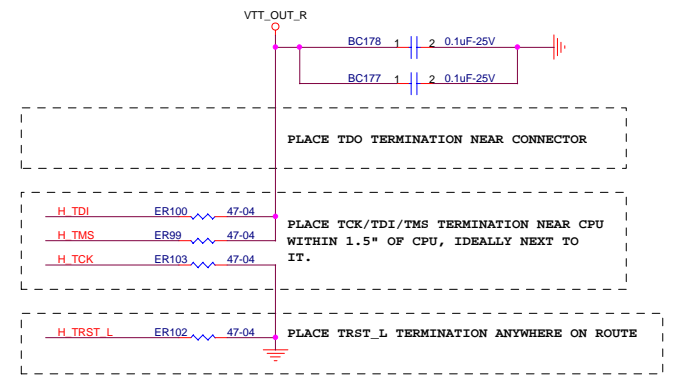
Place componets as close as possible to Processor socket
trace width to cap must be no smaller than 12 Mils



GTLREF= 0.67 * VTT = 0.8V
GTLREF GENERATION CIRCUITS



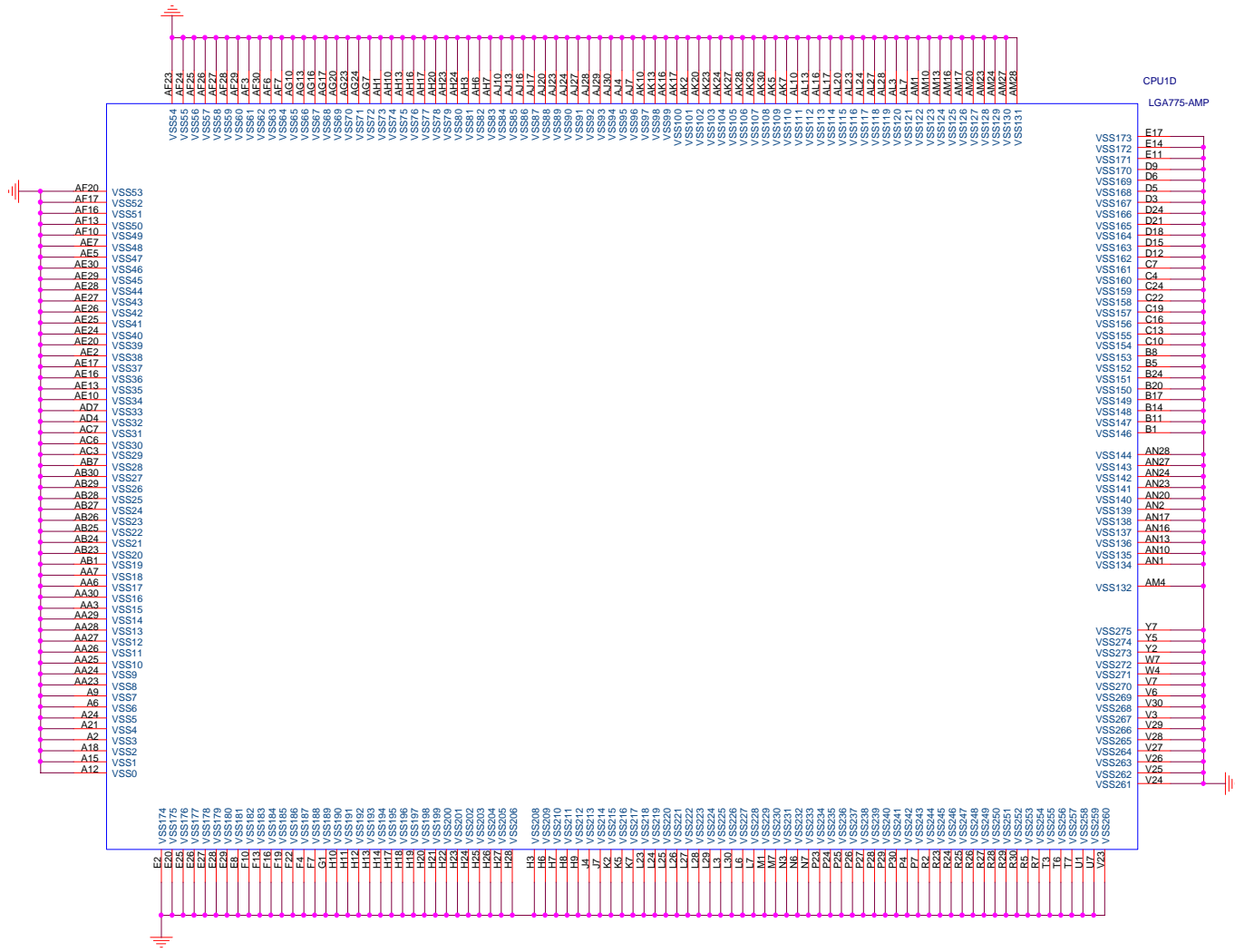
**BSEL resistors can be removed IF
ONLY TEJAS AND CEDAR MILL ARE
SUPPORTED**

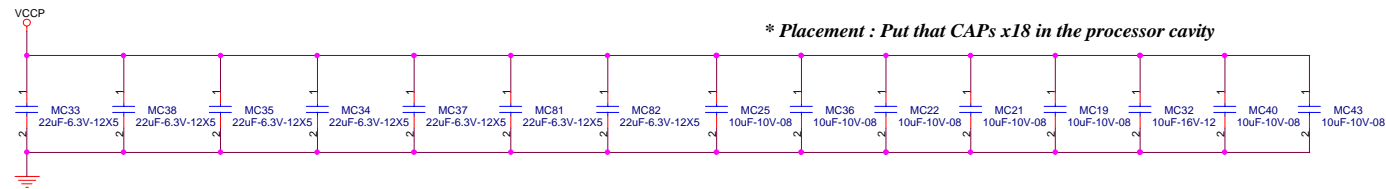


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| P4 LGA775P Part B | | | |
| 945GZ-B2 | | | |
| Size | Document Number | Rev | |
| Custom | | B | |
| Date: | Thursday, October 20, 2005 | Sheet | 2 of 35 |

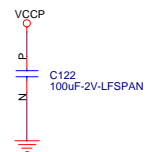


CPU1C
LGA775-AMP



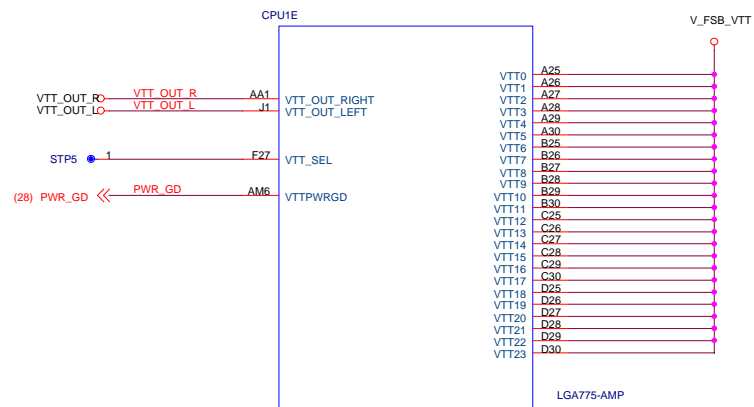
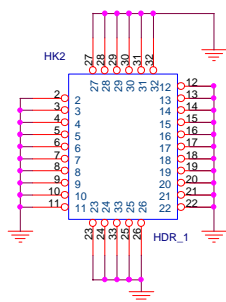


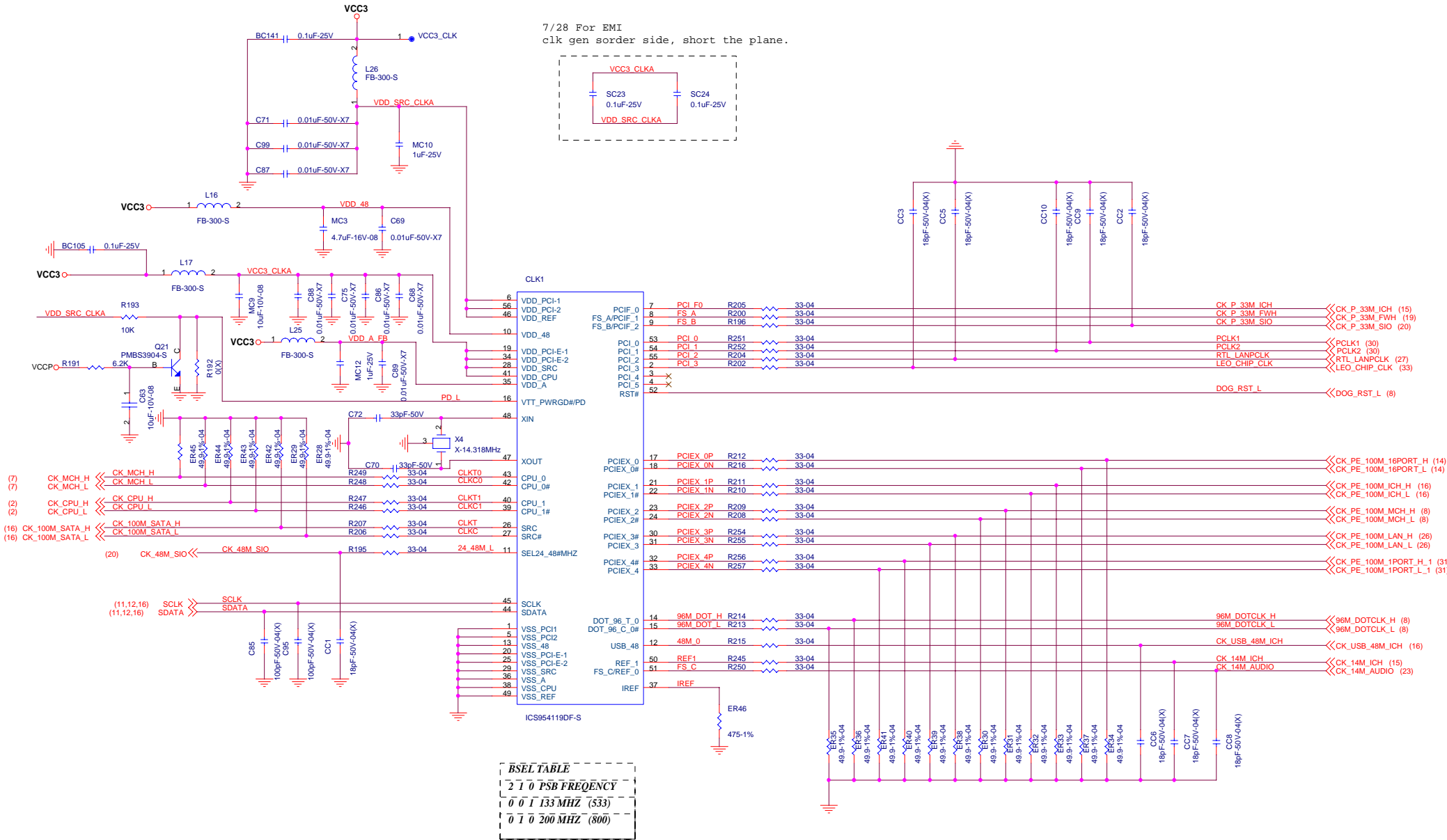
** Placement : Put that CAPs x18 in the processor cavity*

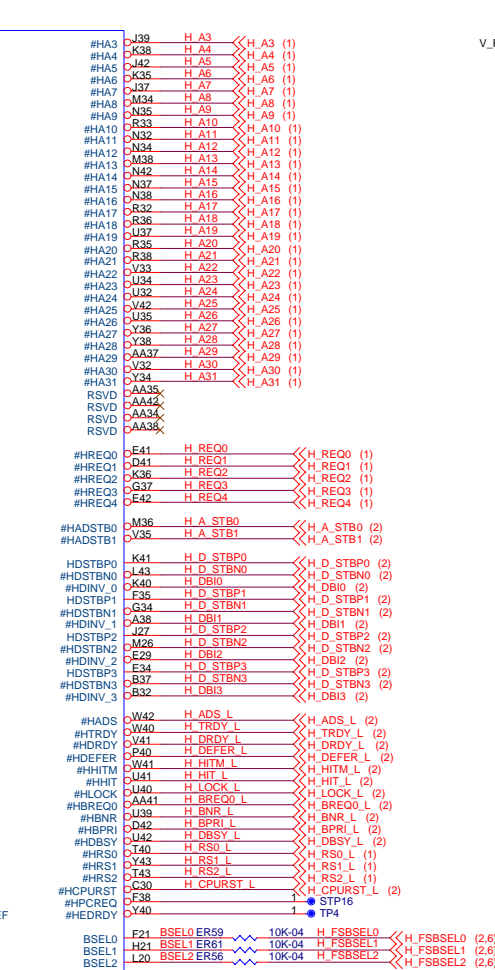
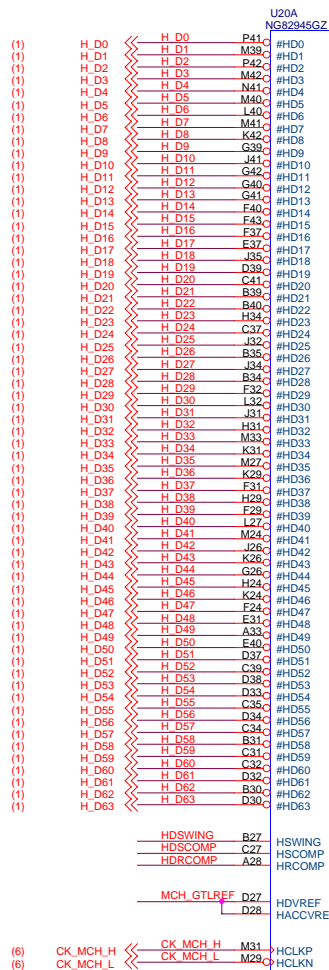


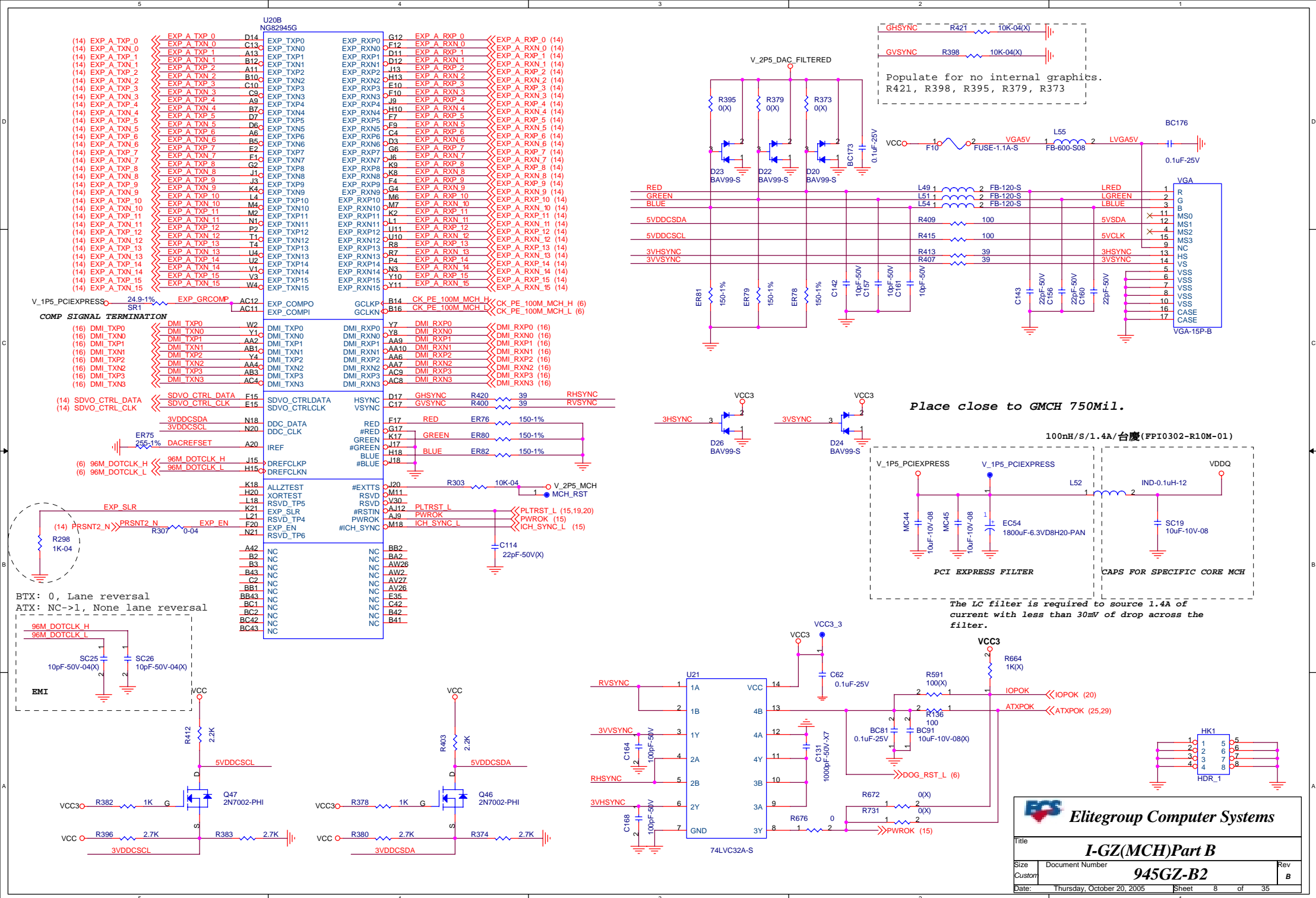
** Placement : Put that CAPs x2 on solder side*

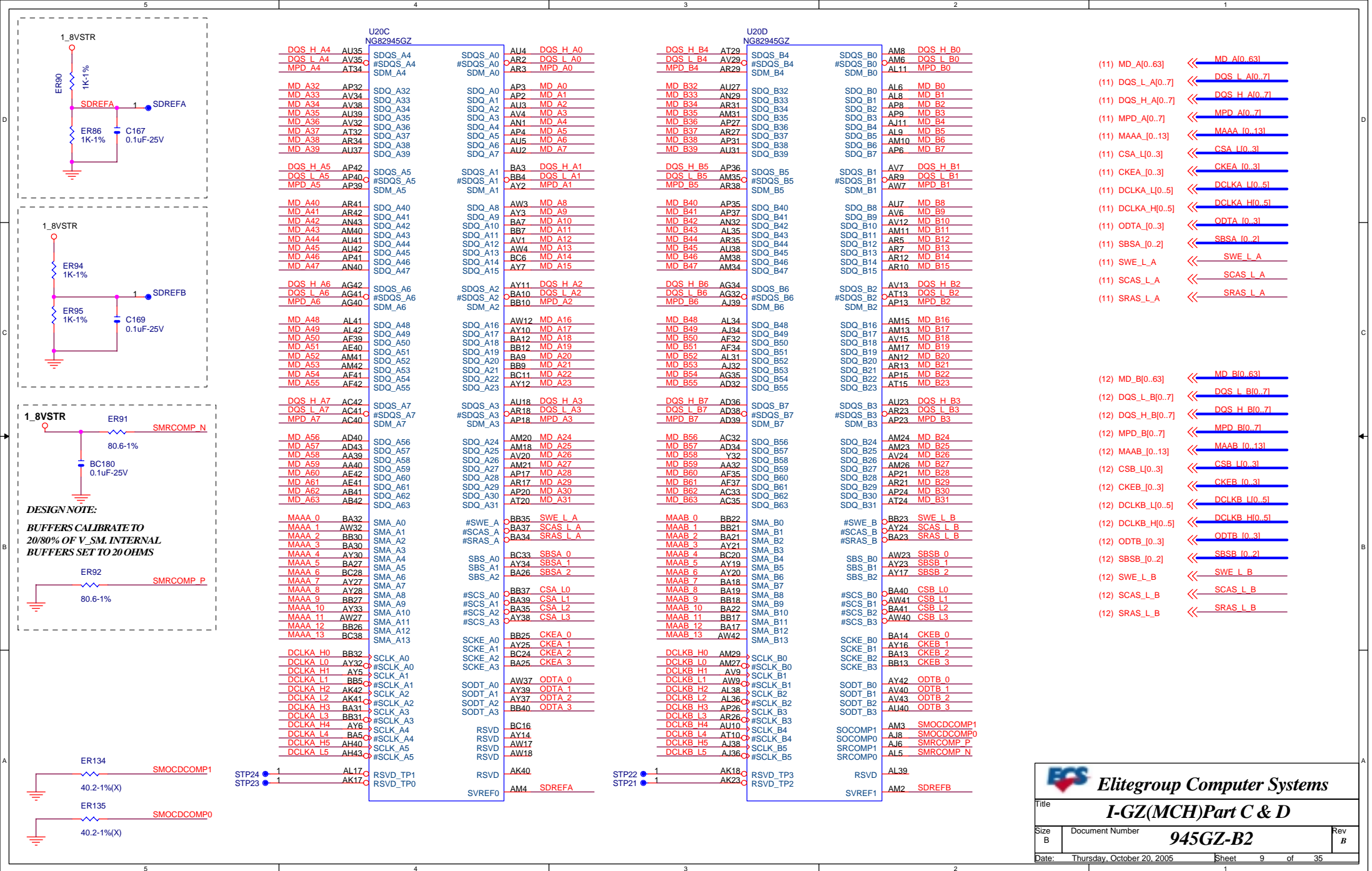
VTT_SEL=0 for the Tejas processor

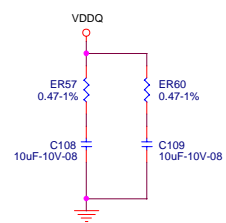
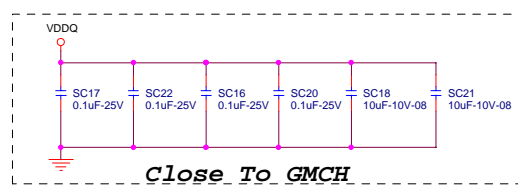
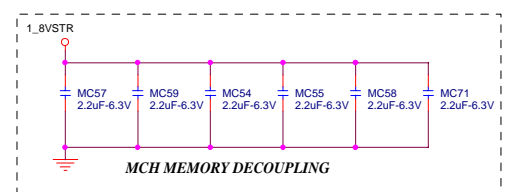
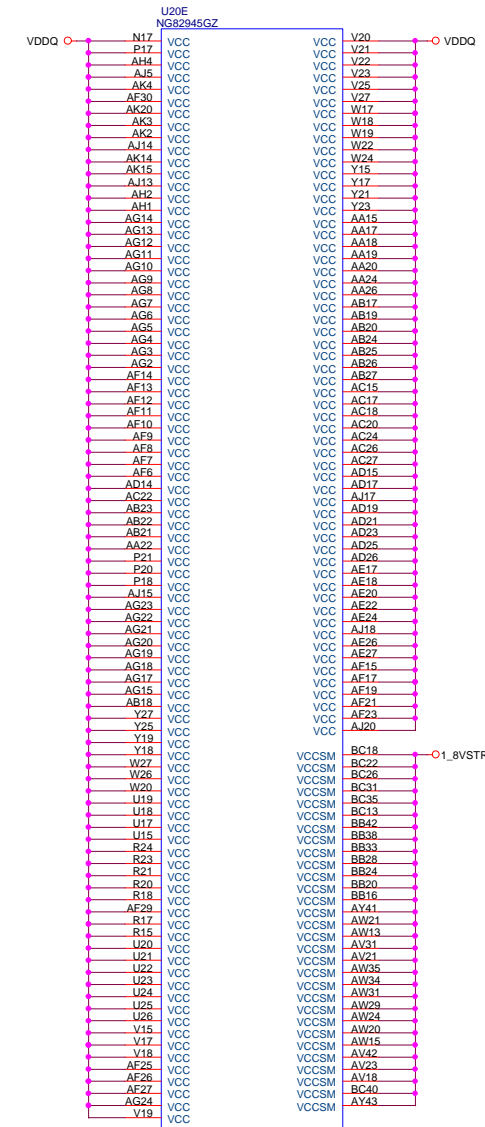
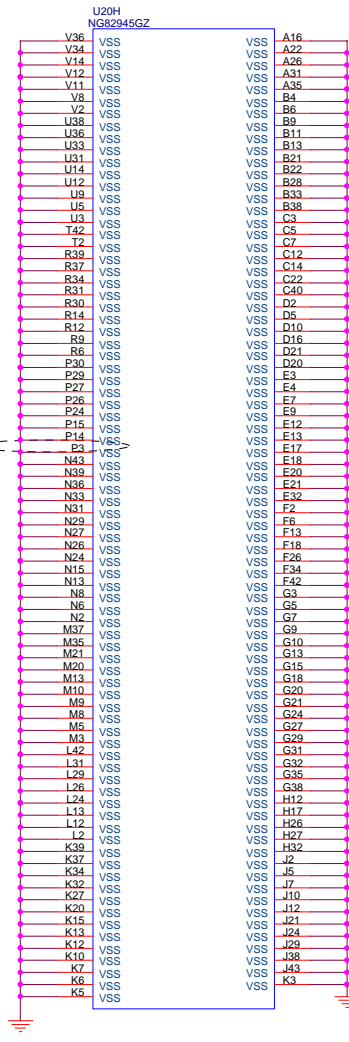
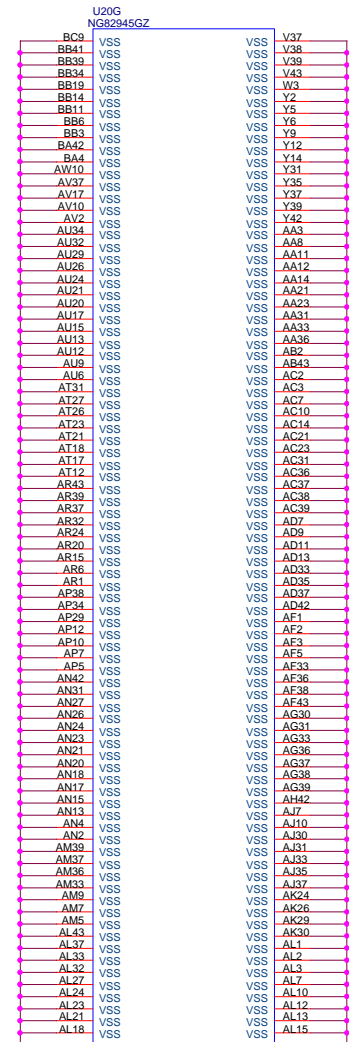


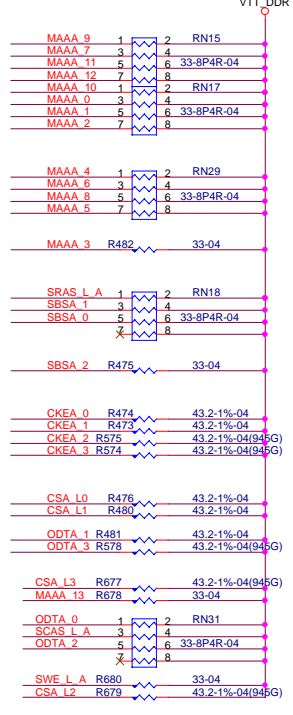
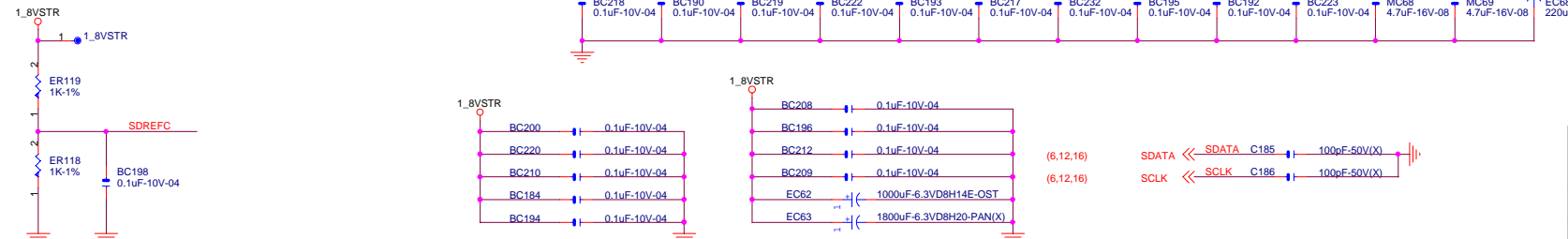
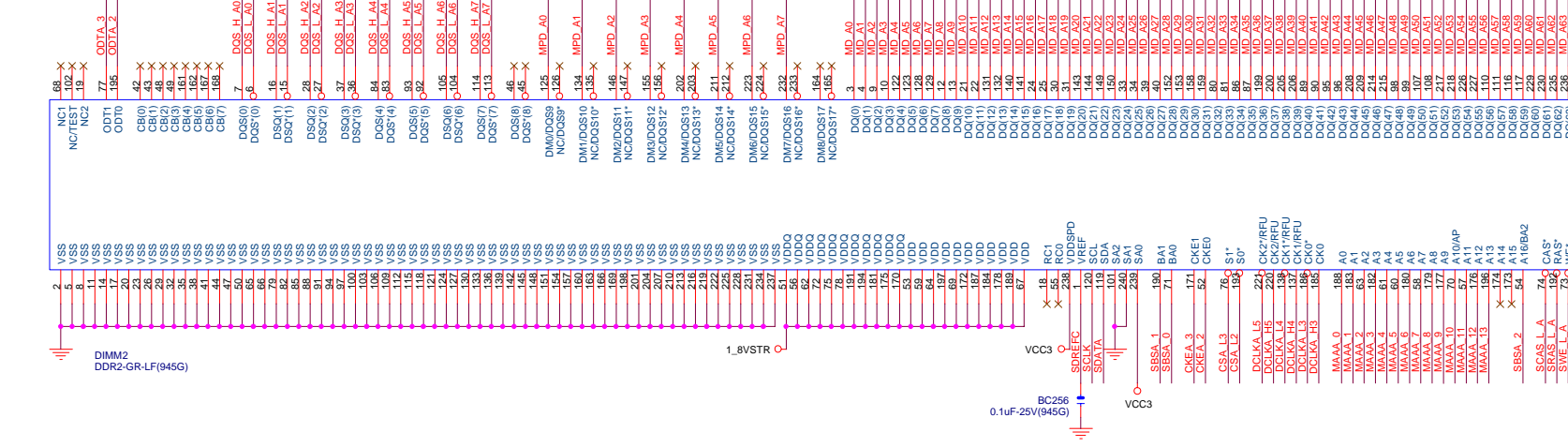
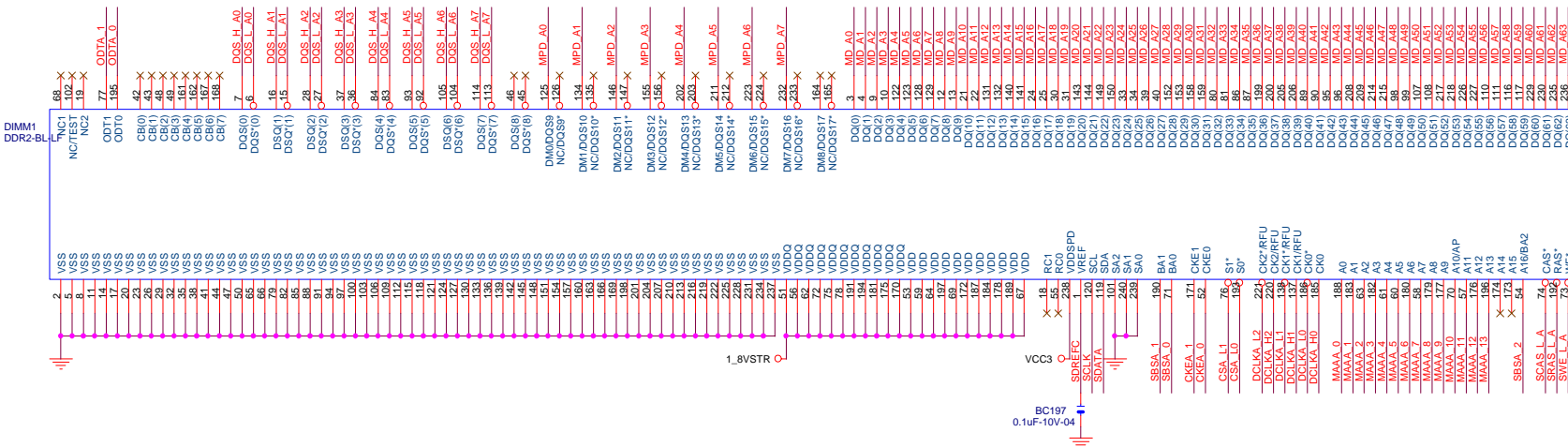













CKE, CS, ODT ==>43ohm RTT

- (9) MD_A[0..63] << MD_A[0..63]
- (9) DQS_L_A[0..7] << DQS_L_A[0..7]
- (9) DQS_H_A[0..7] << DQS_H_A[0..7]
- (9) MPD_A[0..7] << MPD_A[0..7]
- (9) MAAA_A[0..13] << MAAA_A[0..13]
- (9) CSA_L[0..3] << CSA_L[0..3]
- (9) CKEA_L[0..3] << CKEA_L[0..3]
- (9) DCLKA_L[0..5] << DCLKA_L[0..5]
- (9) DCLKA_H[0..5] << DCLKA_H[0..5]
- (9) ODTA_L[0..3] << ODTA_L[0..3]
- (9) SBSA_L[0..2] << SBSA_L[0..2]
- (9) SWE_L_A << SWE_L_A
- (9) SCAS_L_A << SCAS_L_A
- (9) SRAS_L_A << SRAS_L_A

**Elitegroup Computer Systems**

Title

DIMM 1&2 (DDR2 SDRAM)

Size

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Custom

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Sheet

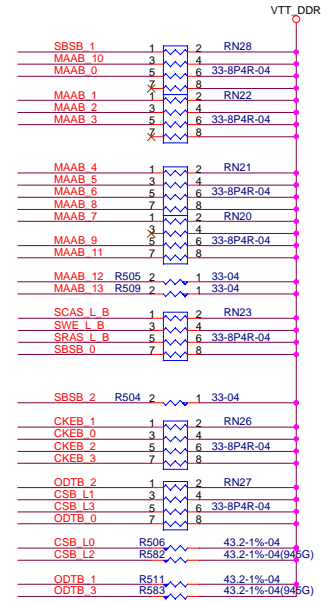
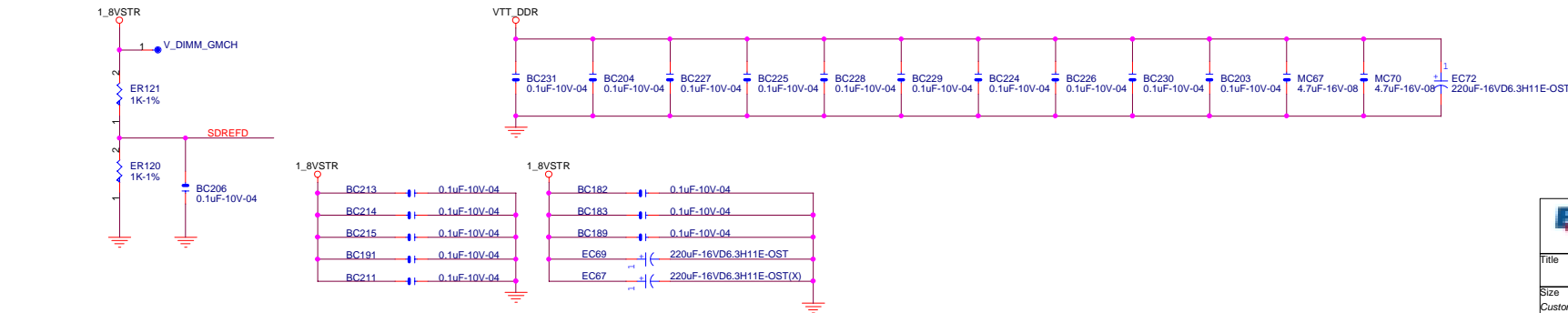
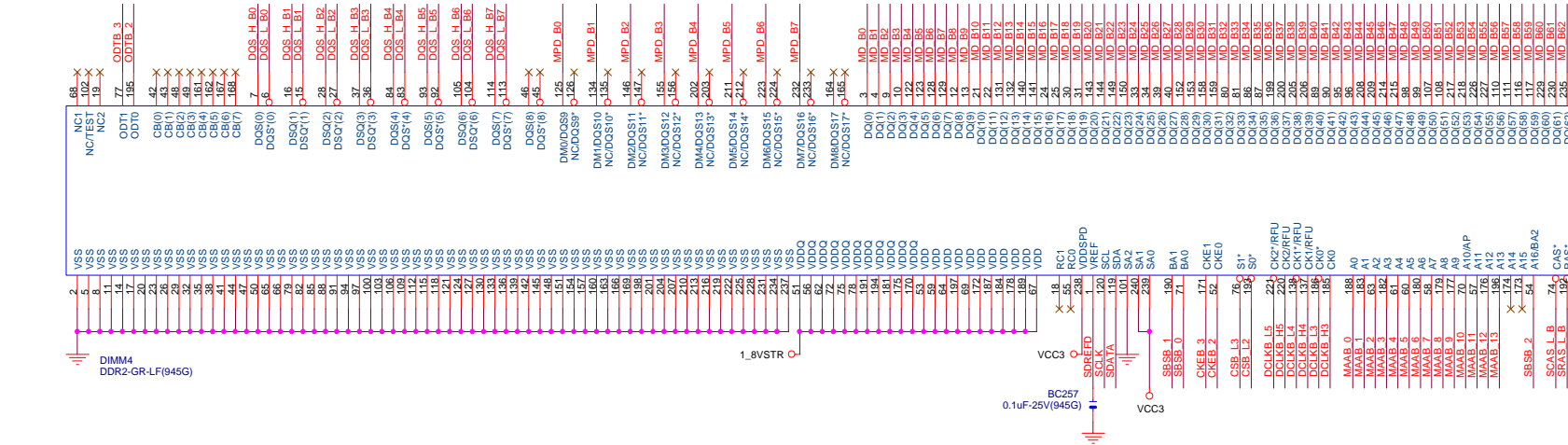
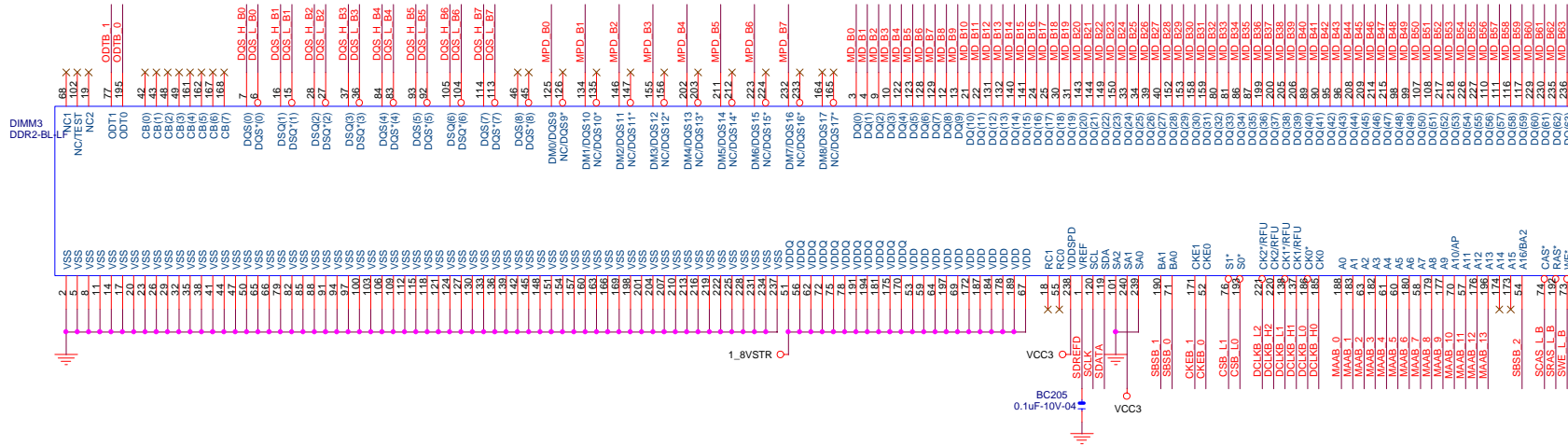
11

of

35

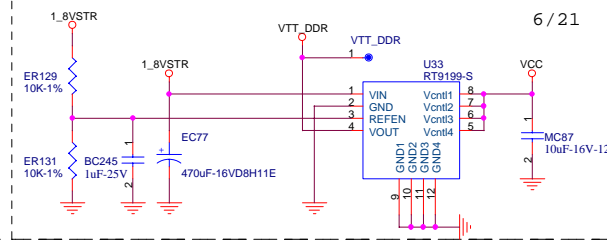
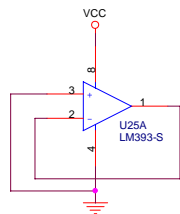
Rev

B

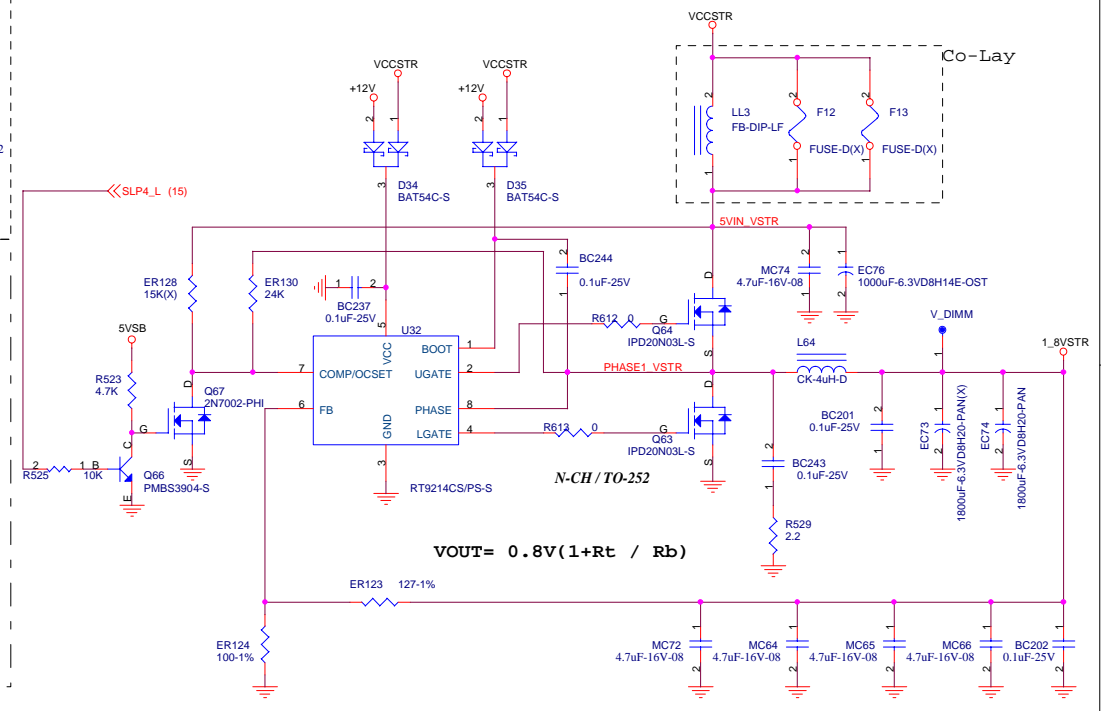
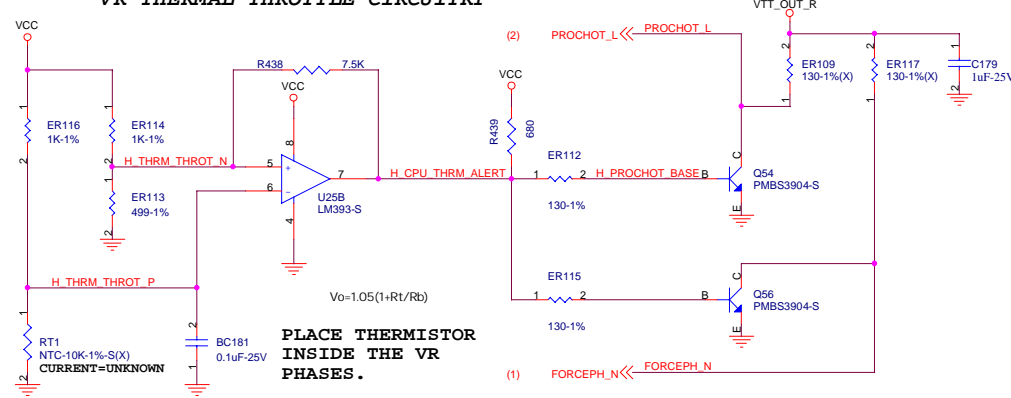


CKE, CS, ODT ==>43ohm RTT

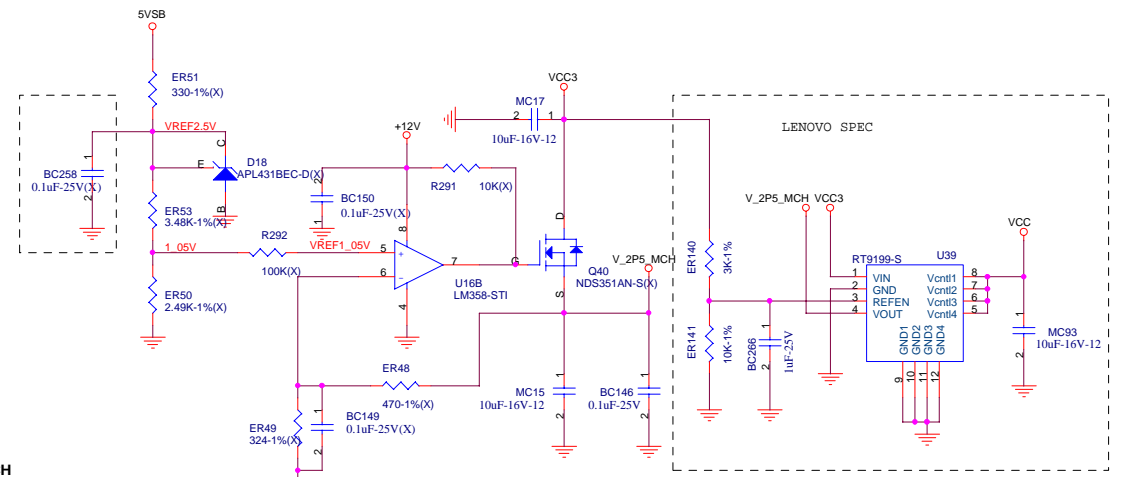
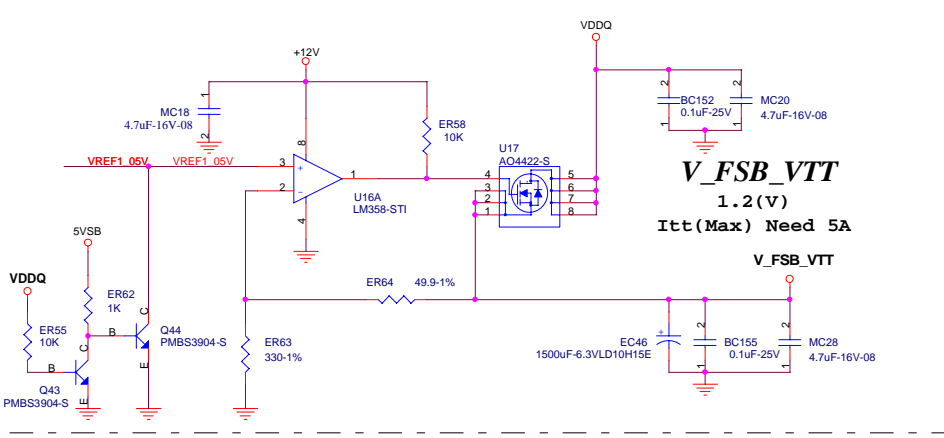
- (9) MD_B[0..63] <<< MD_B[0..63]
- (9) DOS_L_B[0..7] <<< DOS_L_B[0..7]
- (9) DOS_H_B[0..7] <<< MPD_B[0..7]
- (9) MPD_B[0..7] <<< MPD_B[0..7]
- (9) MAAB_[0..13] <<< MAAB_[0..13]
- (9) CSB_L[0..3] <<< CSB_L[0..3]
- (9) CKEB_[0..3] <<< CKEB_[0..3]
- (9) DCLKB_[0..5] <<< DCLKB_[0..5]
- (9) DCLKB_H[0..5] <<< DCLKB_H[0..5]
- (9) ODTB_[0..3] <<< ODTB_[0..3]
- (9) SBSB_[0..2] <<< SBSB_[0..2]
- (9) SWE_L_B <<< SWE_L_B
- (9) SCAS_L_B <<< SCAS_L_B
- (9) SRAS_L_B <<< SRAS_L_B
- (6,11,16) SDATA <<< SDATA
- (6,11,16) SCLK <<< SCLK



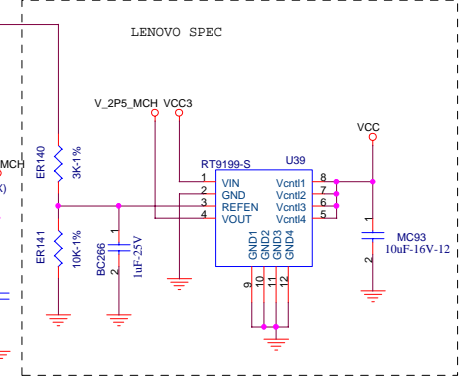
VR THERMAL THROTTLE CIRCUITRY



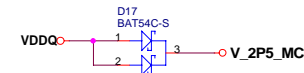
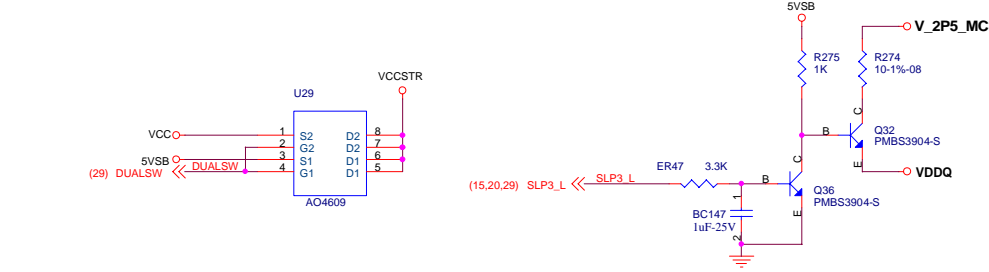
1_8VSTR should be able to support up to 14A



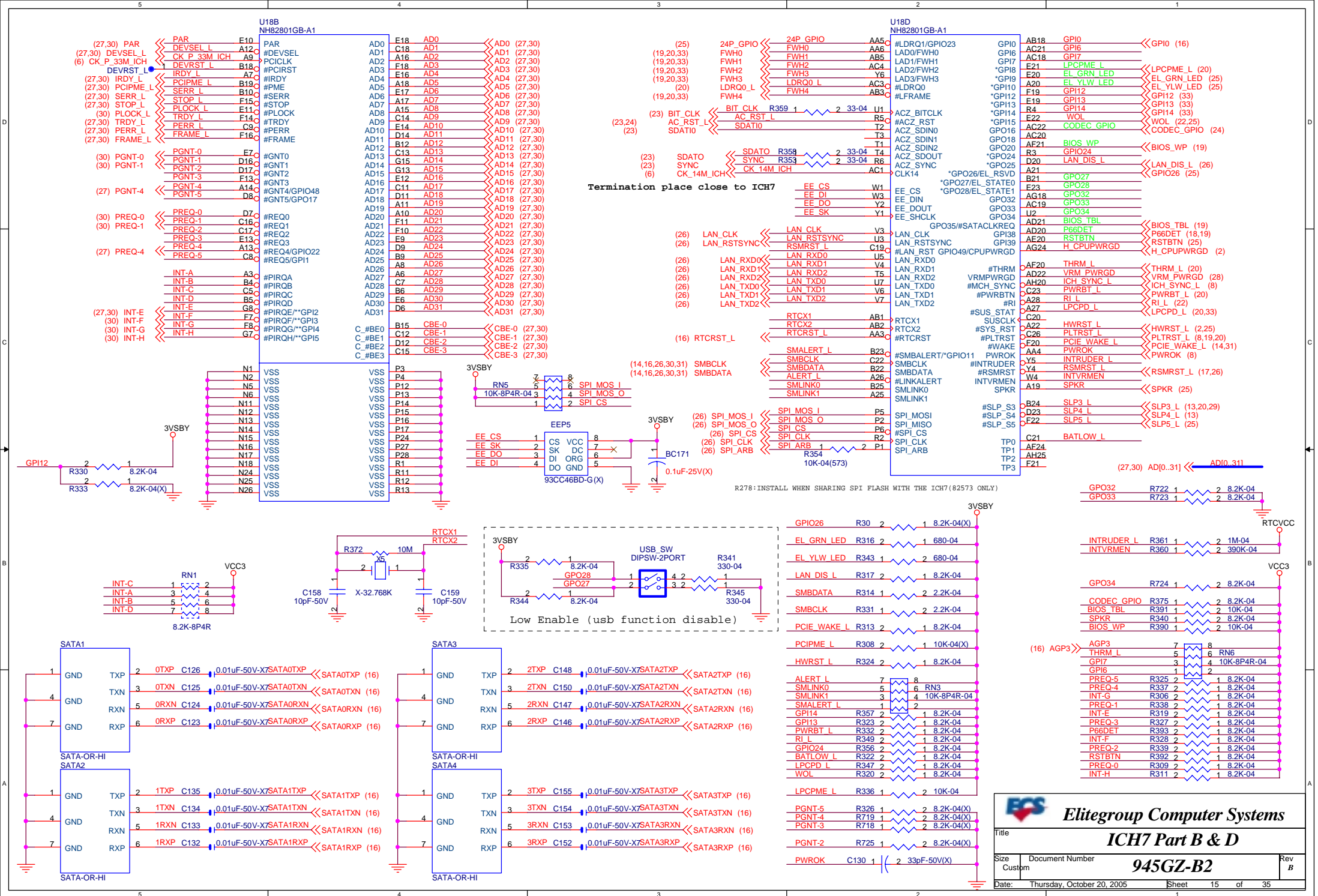
LENOVO SPEC

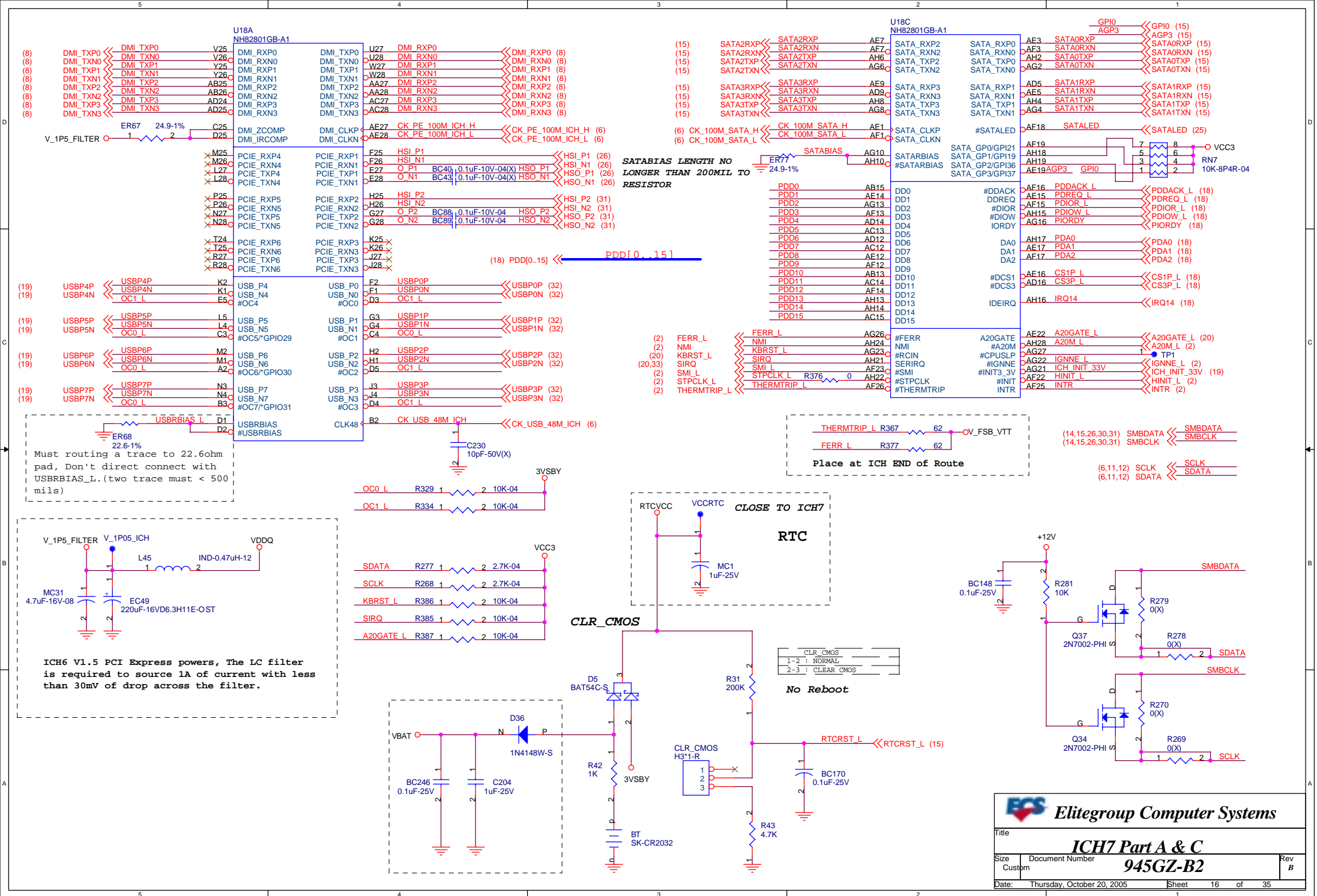


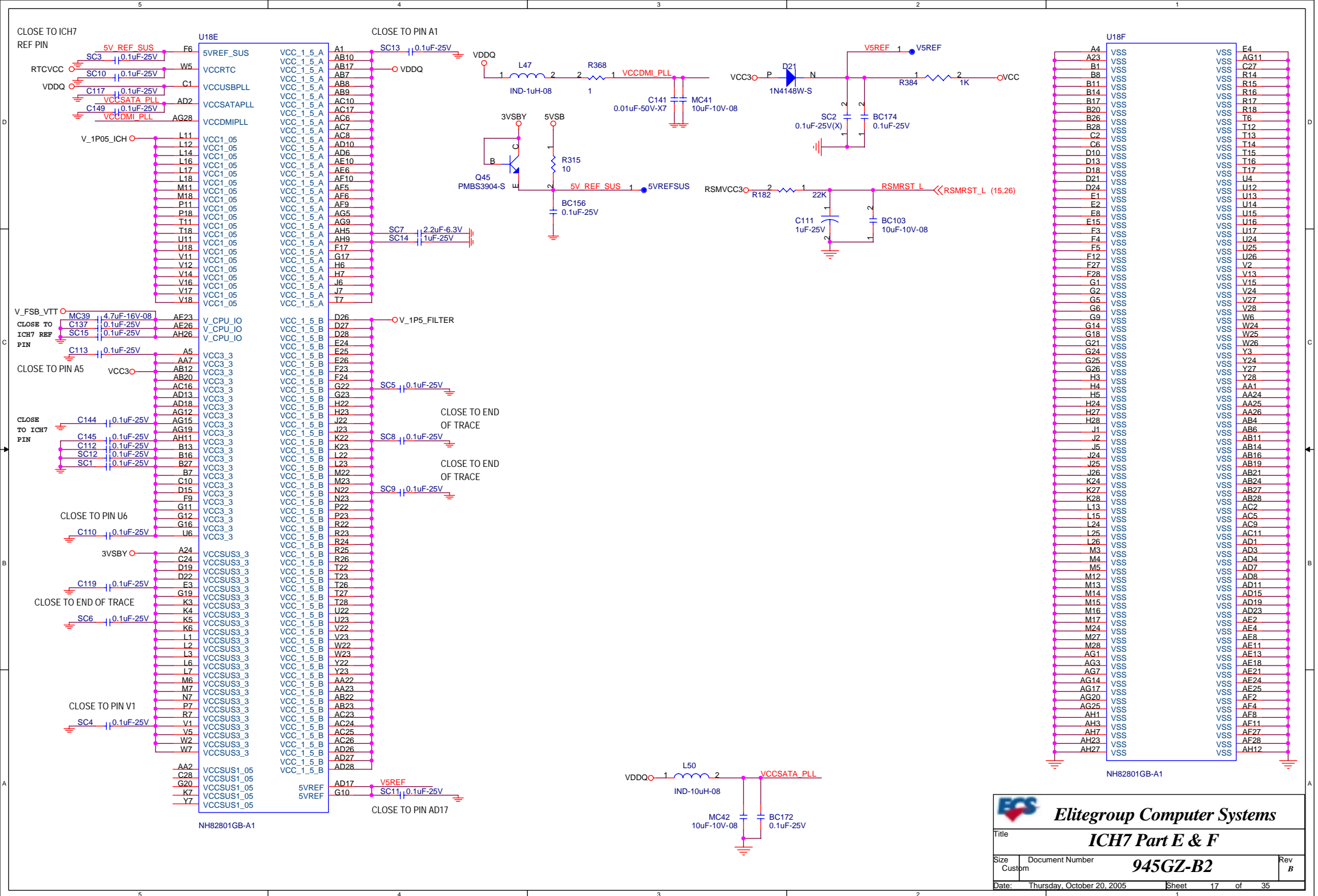
V_2P5_MCH(100mA)

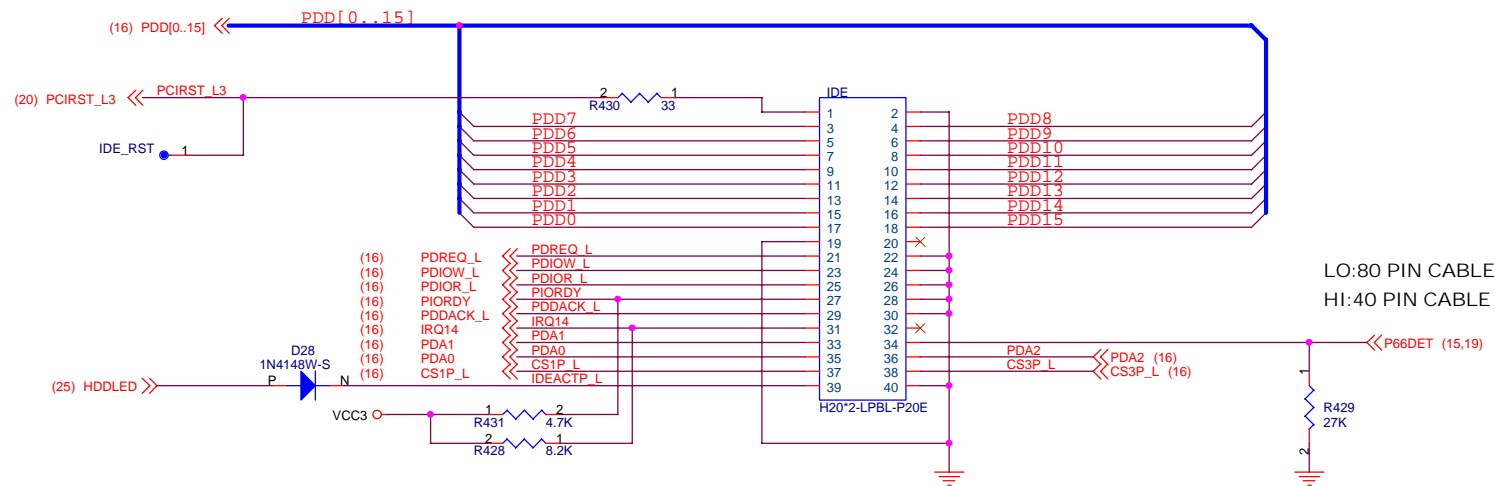


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| Title | | | |
| DDR & V_FSB_VTT Power | | | |
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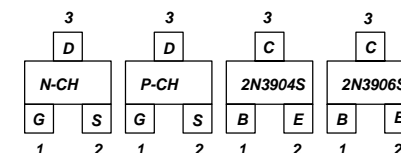
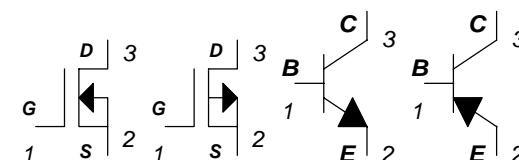




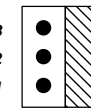


DATA LINES SHOULD BE MATCHED TO STROBES (XDIOV_L, XIORDY_L) WITHIN +/- 250 MIL,
STROBES SHOULD BE MATCHED TO THEIR COMPLEMENT WITHIN +/- 10MIL.

Top View SOT-23

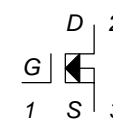


Fan Header

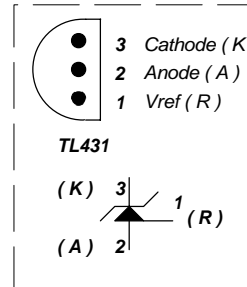


AMP640456-3

TO-263 / TO-252



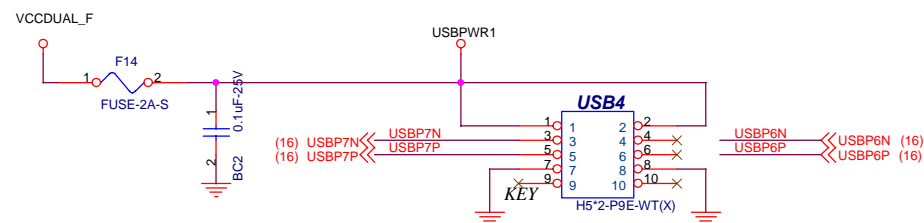
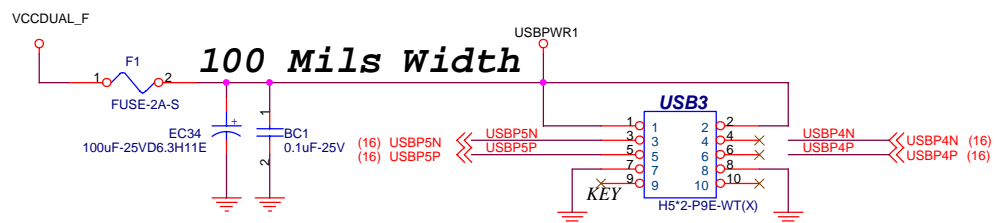
Top View



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| Title | | | IDE Connector | | |
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USB PORT INTERFACE



GPI1:

High:10/100 Install

Low: 10/100/1000

GPI2:

High:1394 Install

Low:1394 xxx

GPI3:

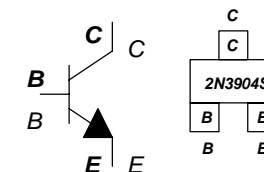
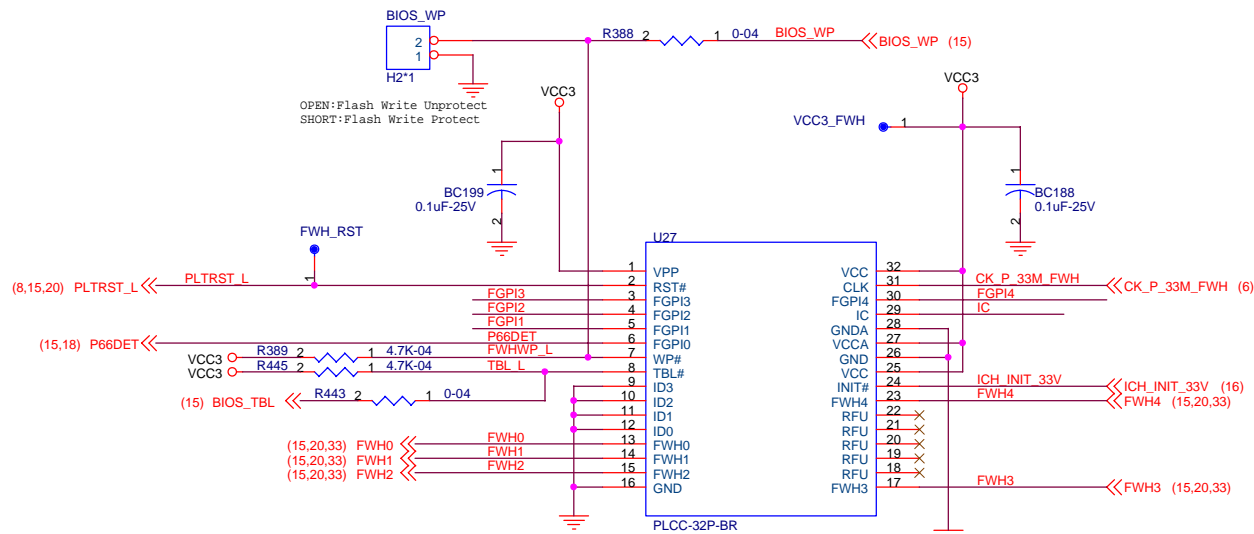
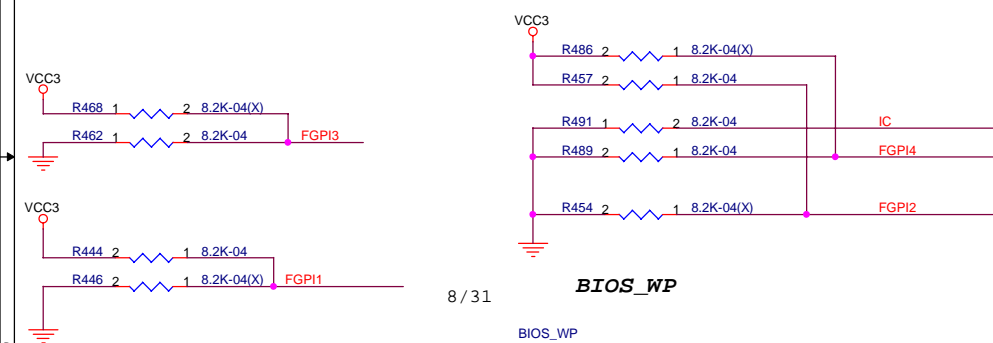
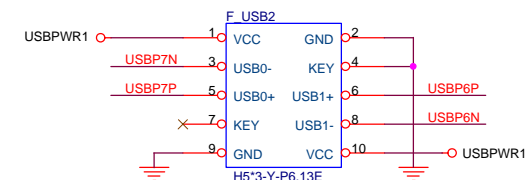
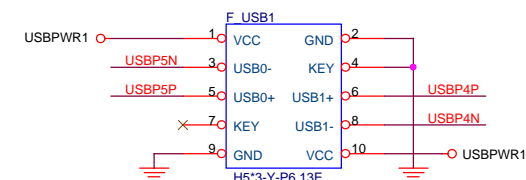
High:Suspend xxx

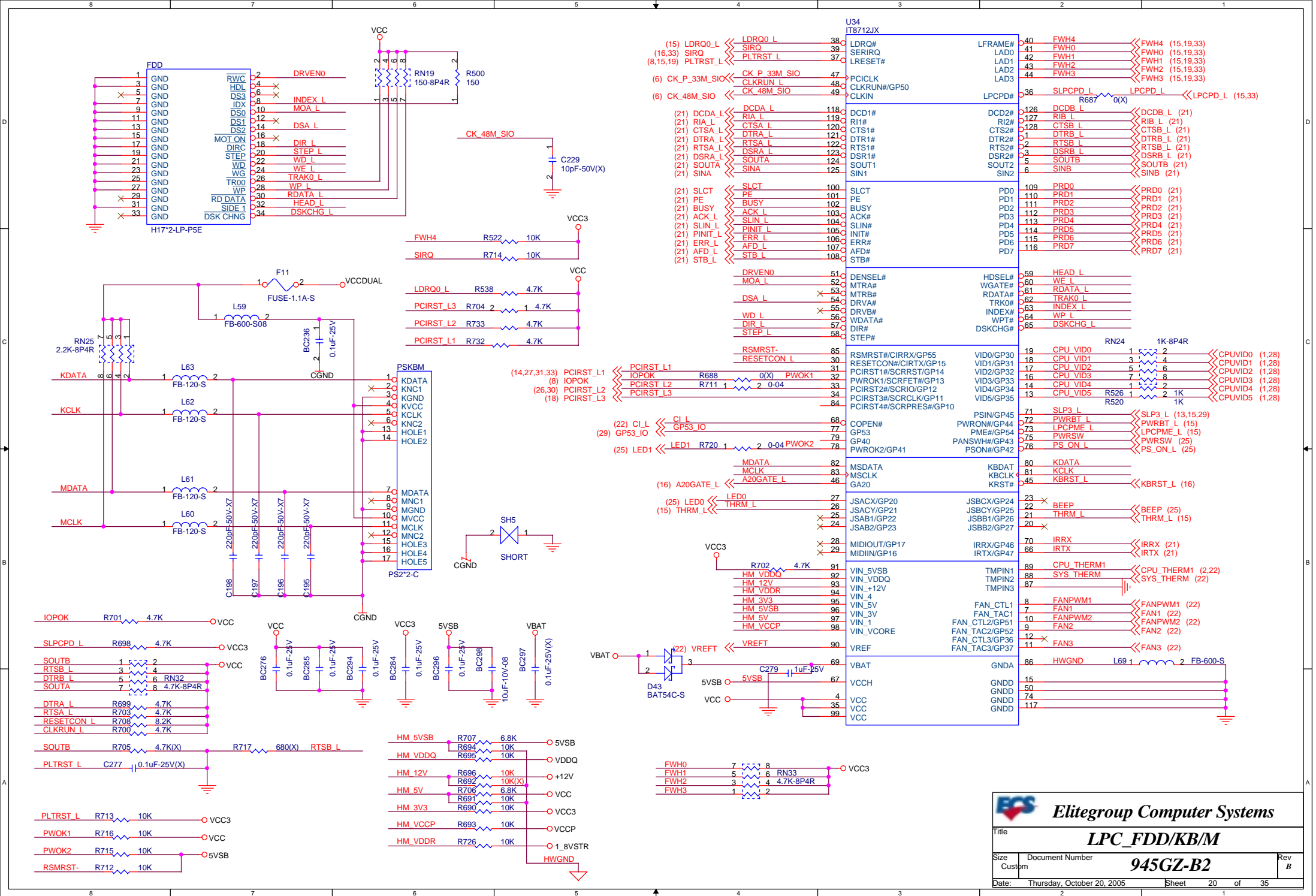
Low:suspend install

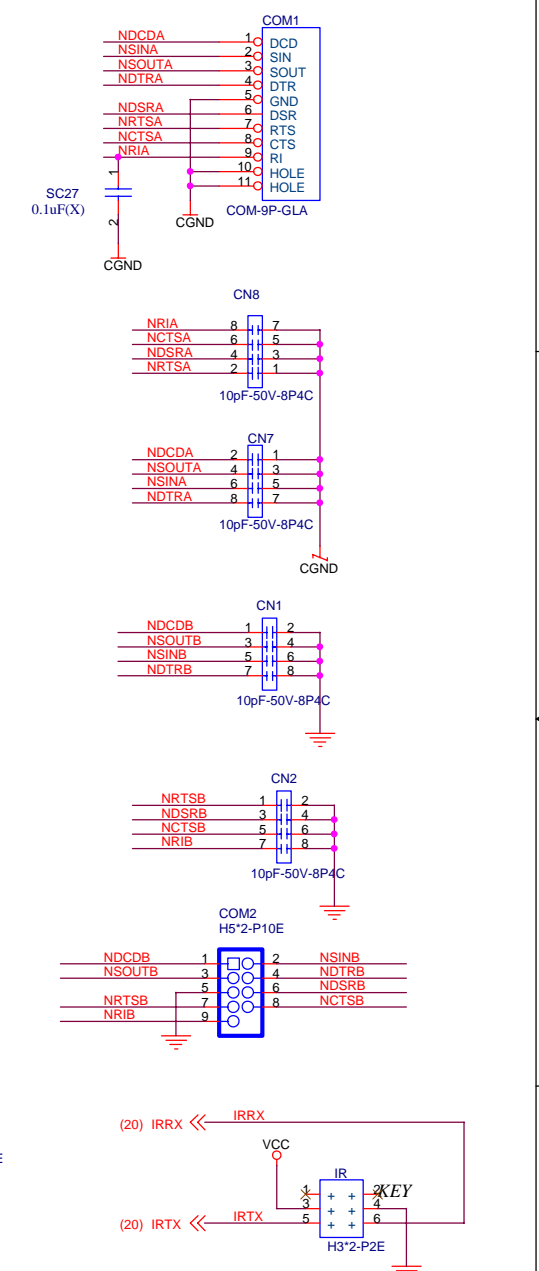
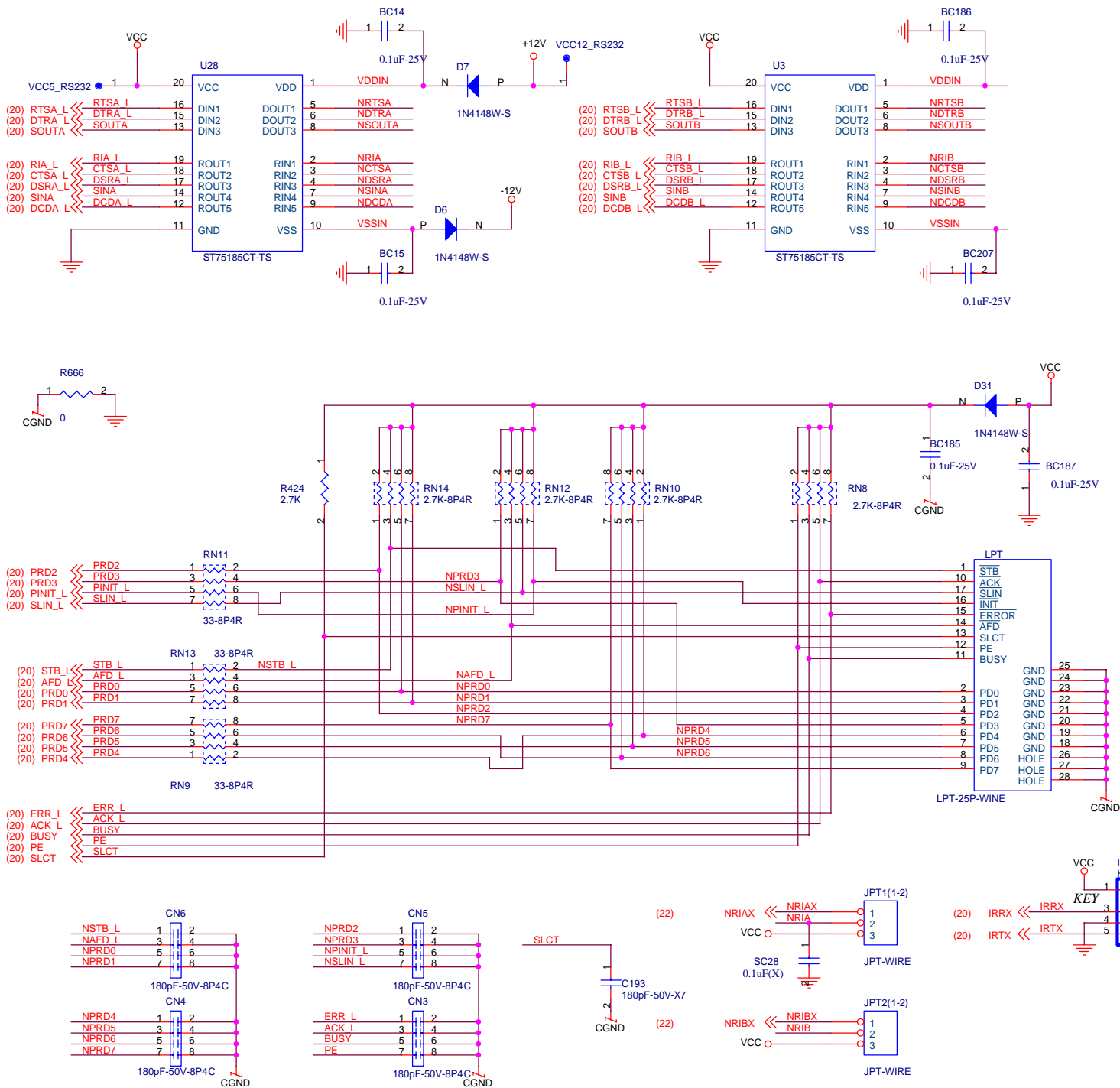
GPI4:

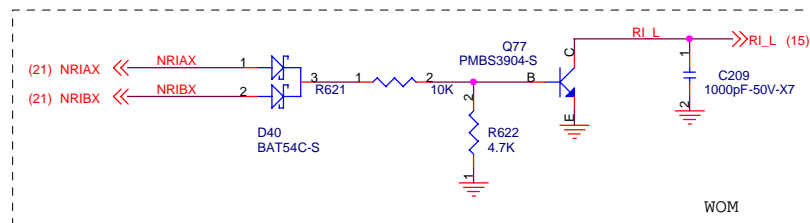
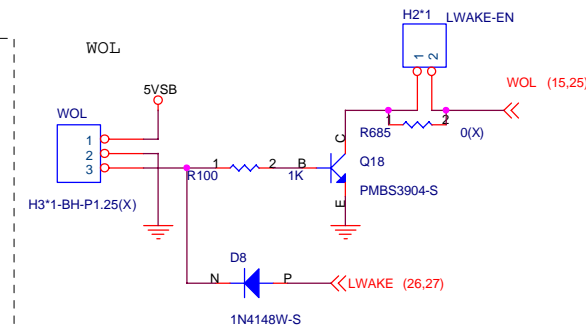
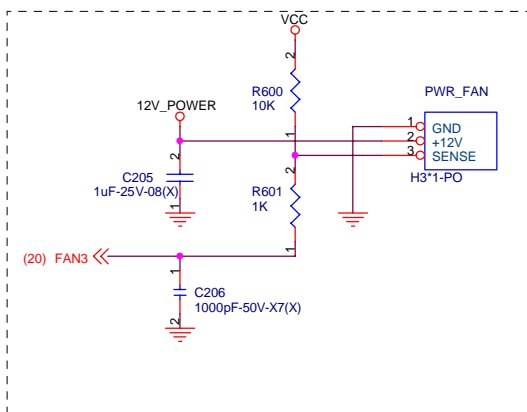
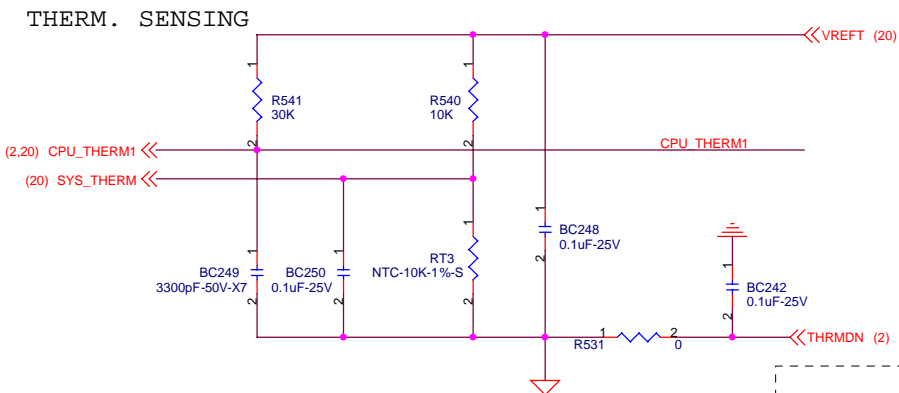
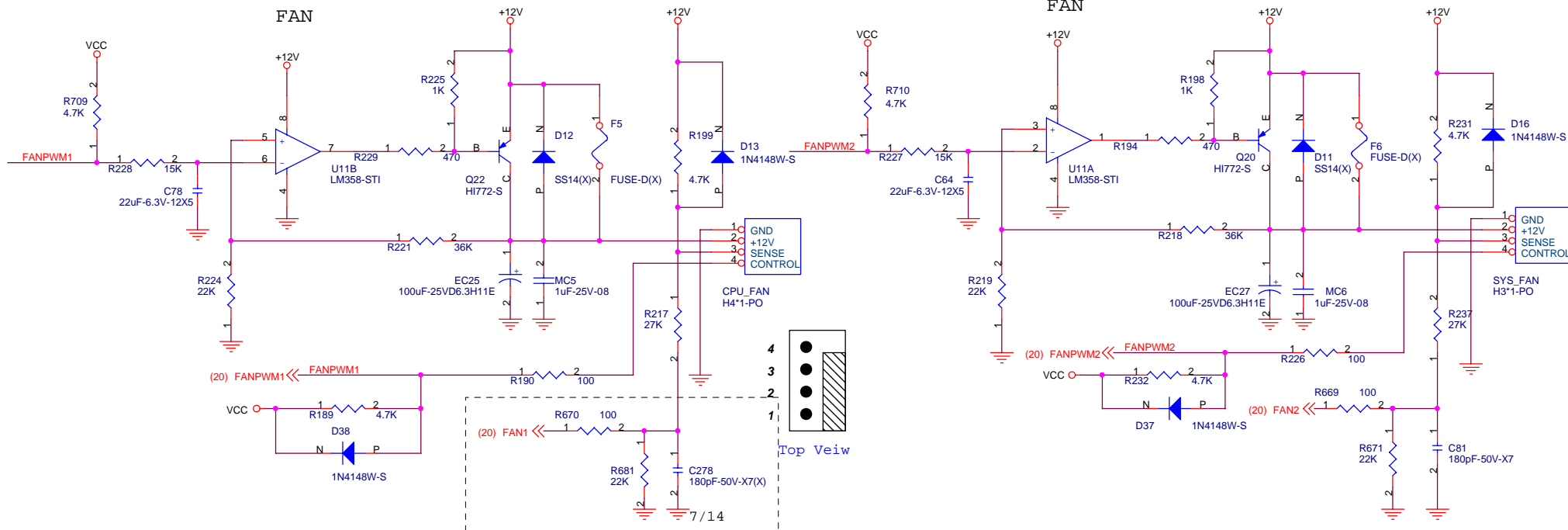
High: Intel Lan Install

Low:Realtek PCI Lan install

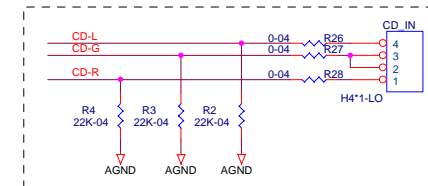
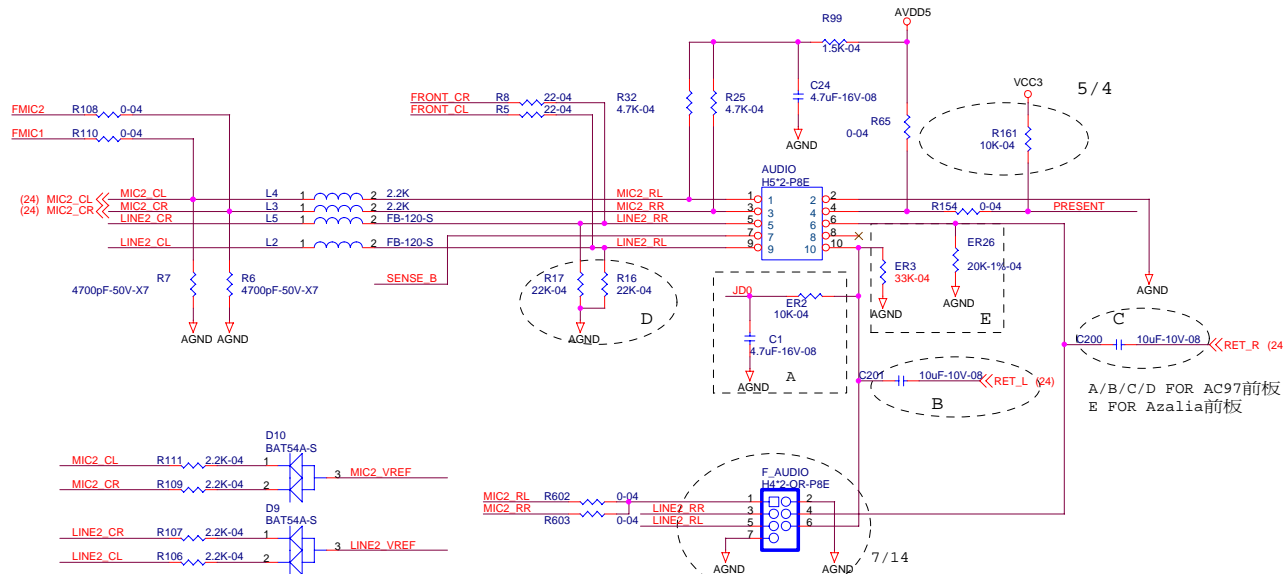
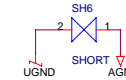
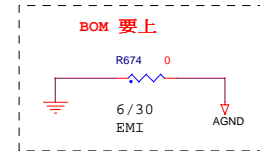
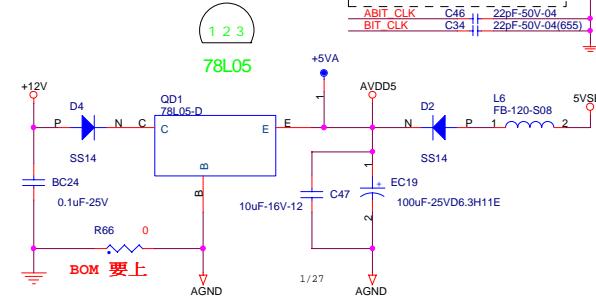
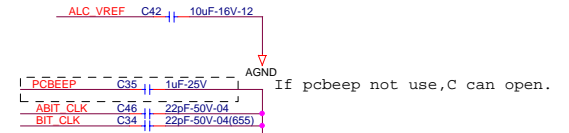
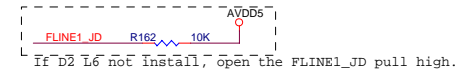
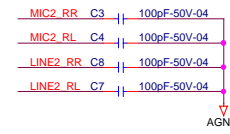
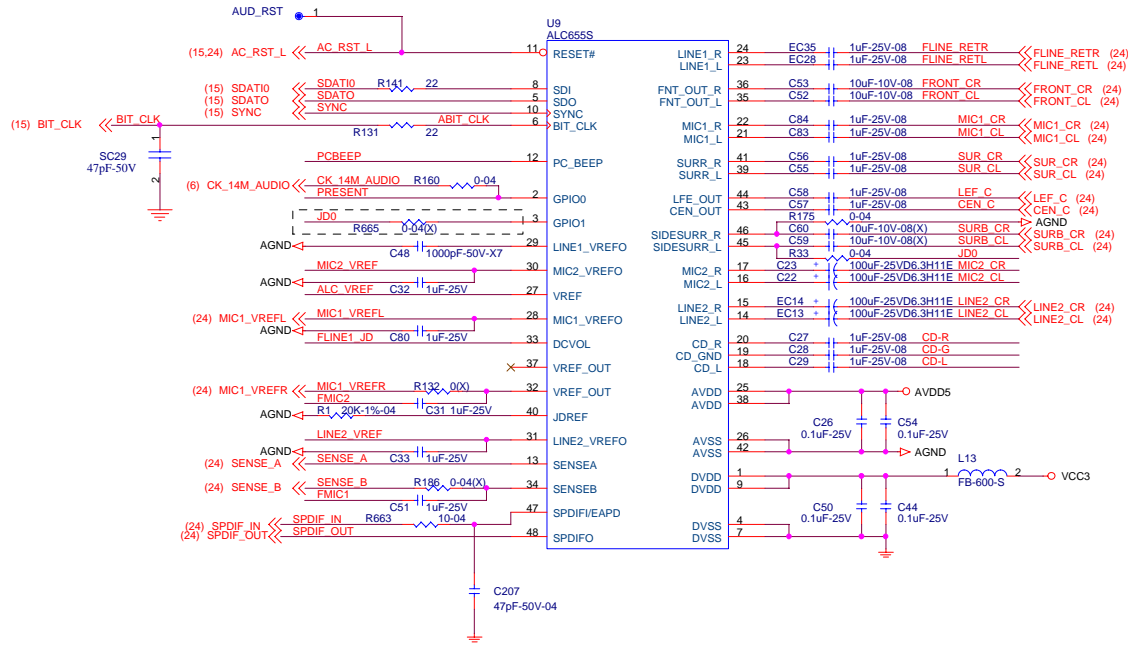








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| Smart FAN | | | |
| Size | Document Number | Rev | |
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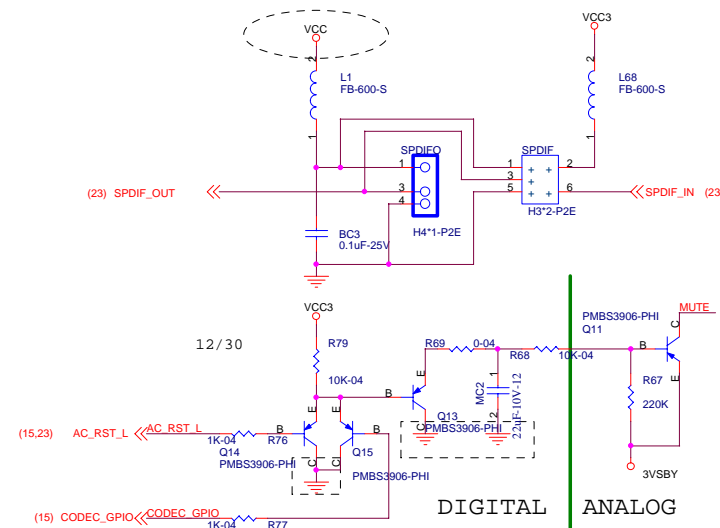
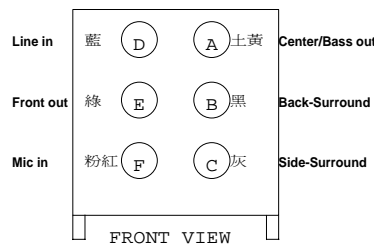
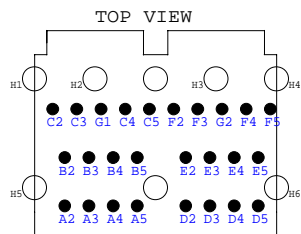
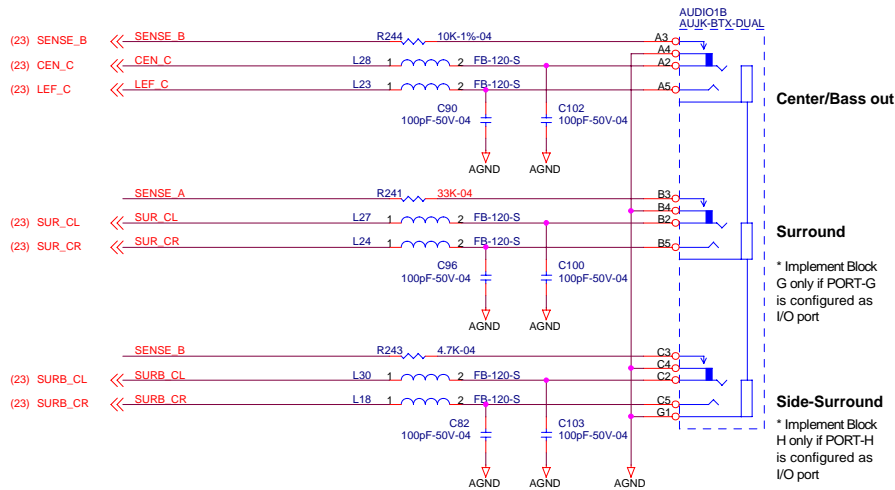
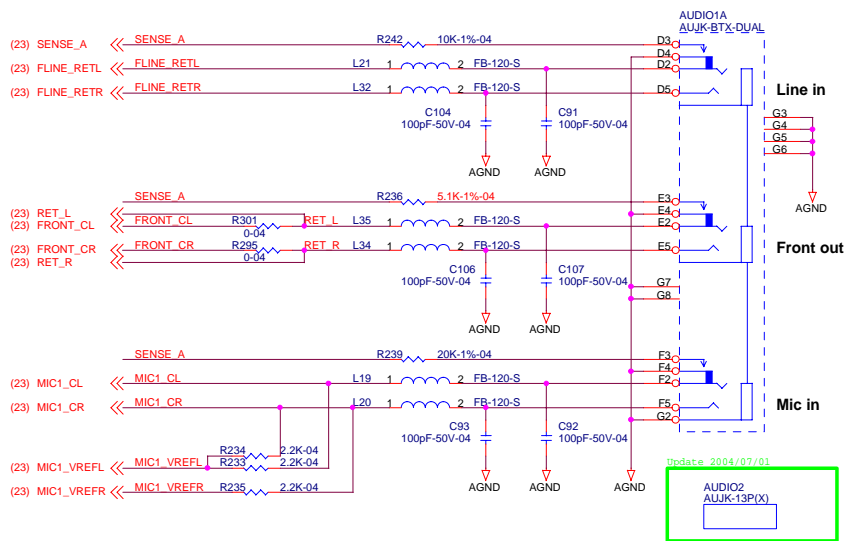


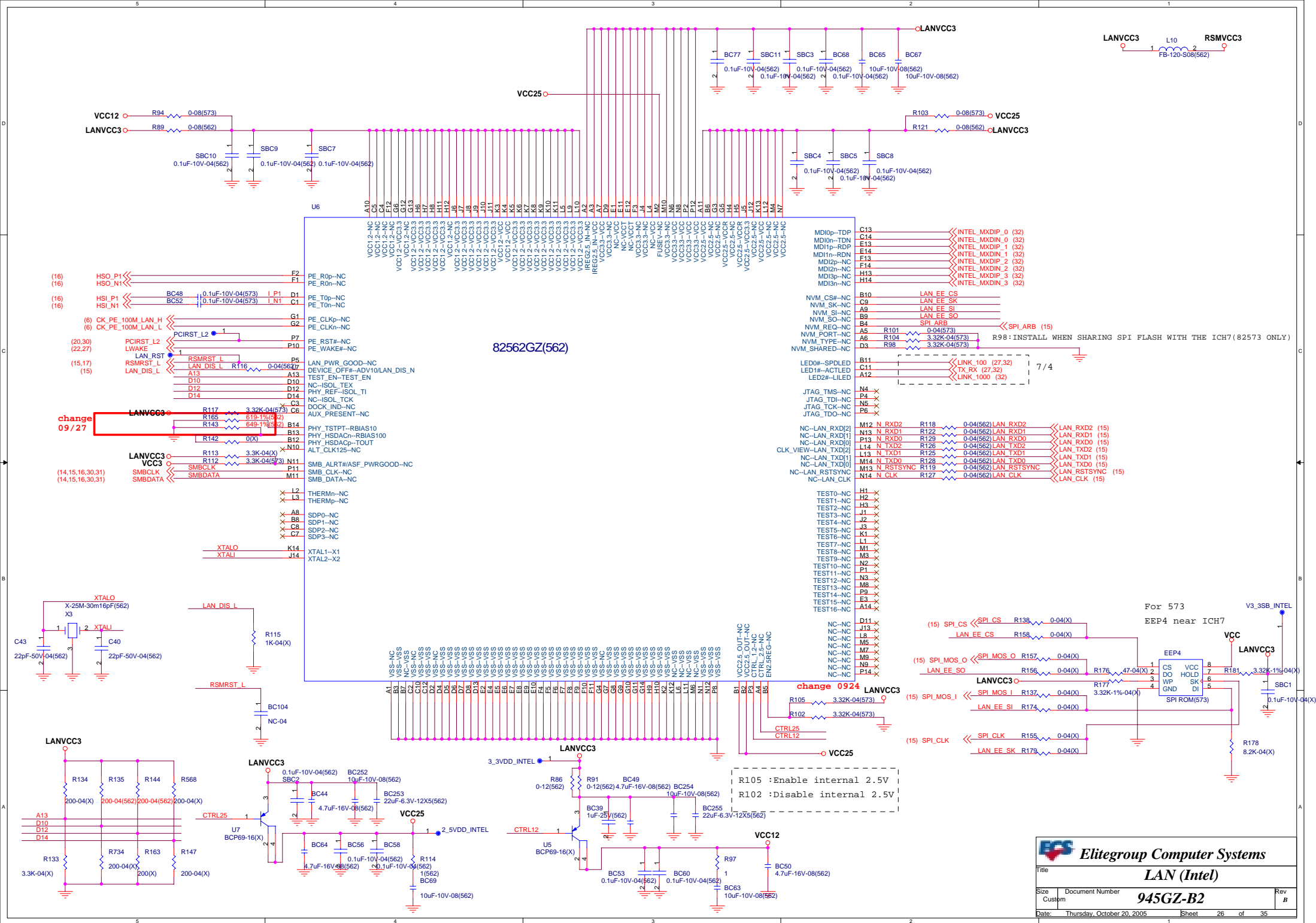
Elitegroup Computer Systems

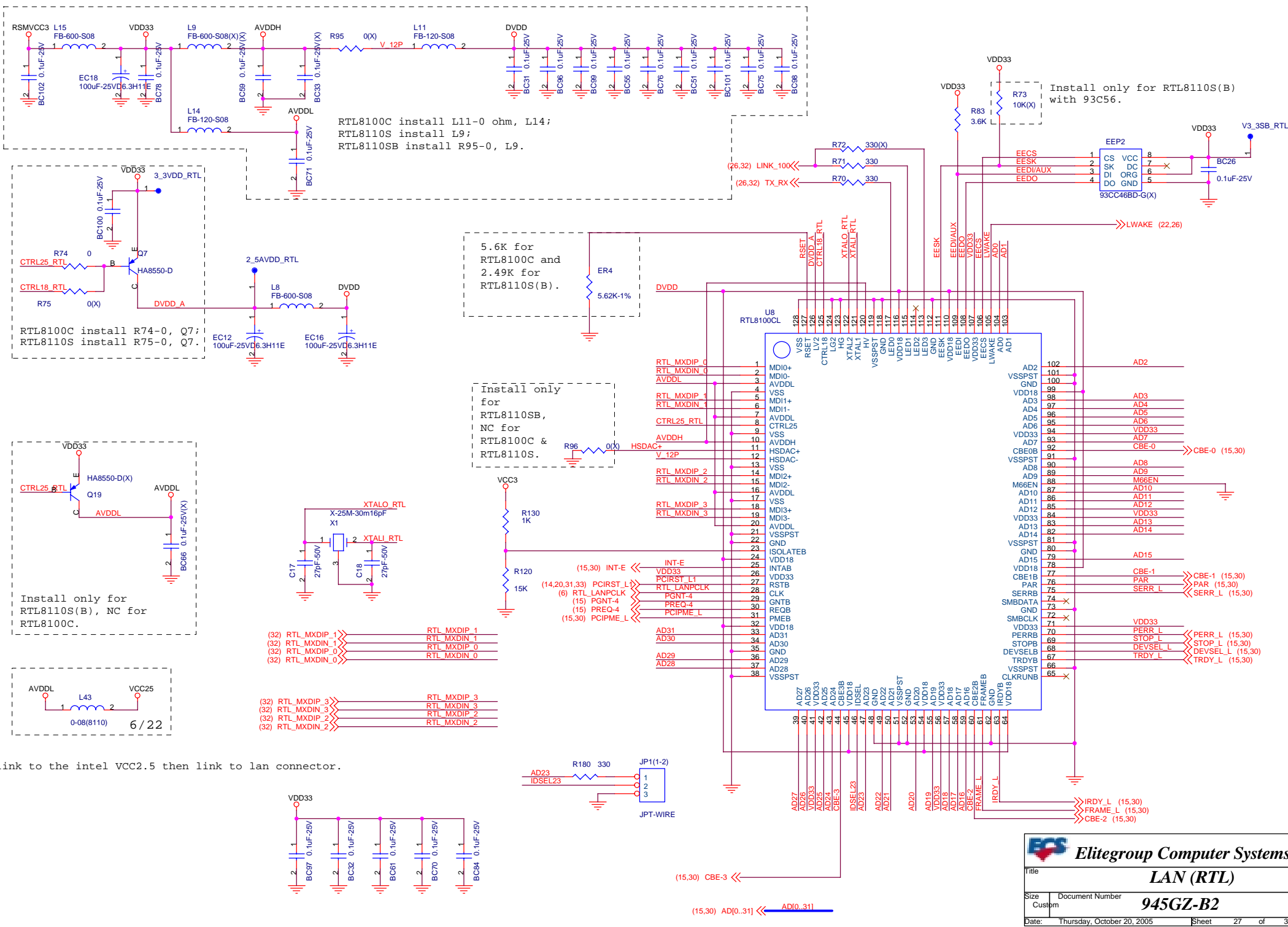
Title **Audio Codec**

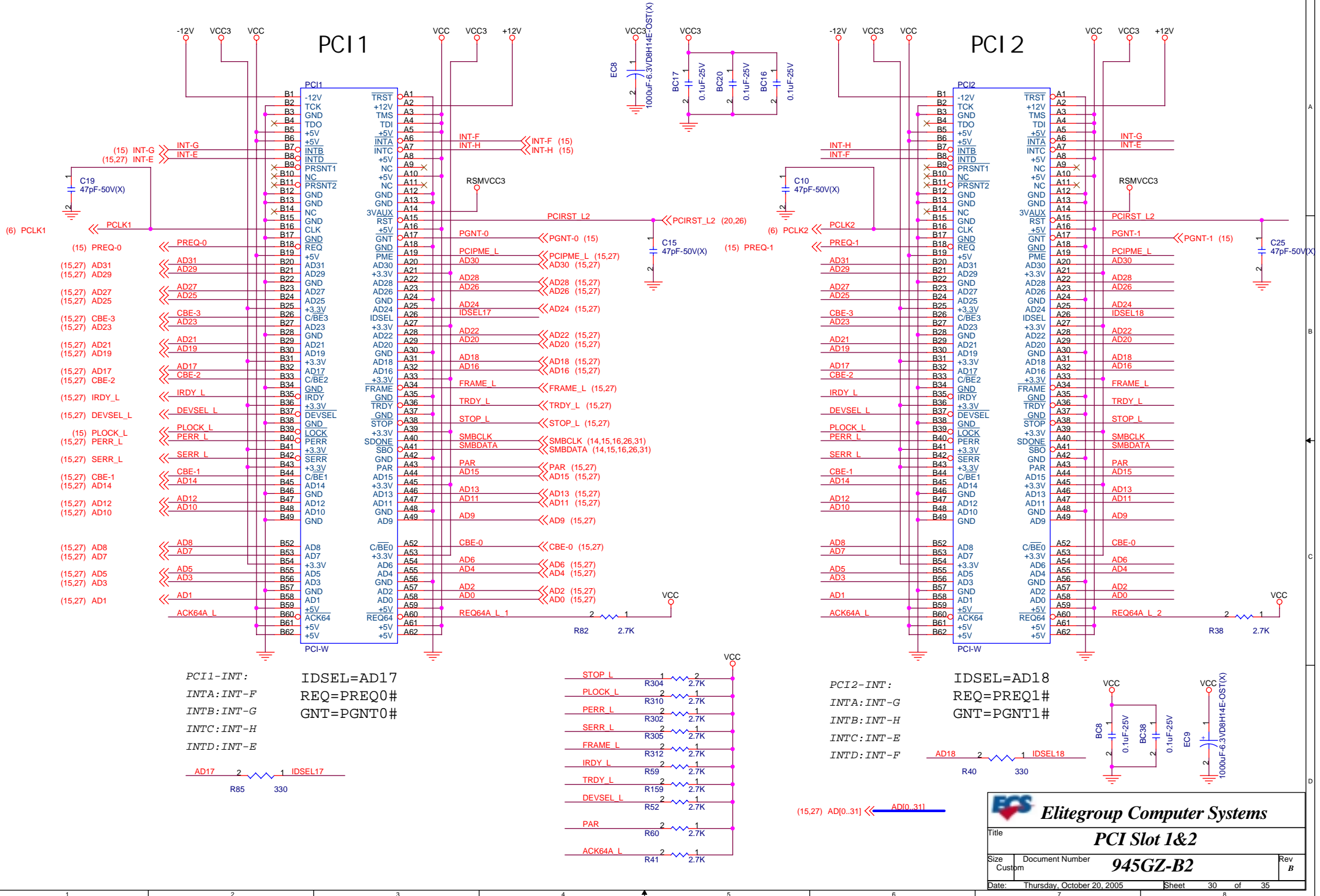
Size Custom Document Number **945GZ-B2** Rev **B**

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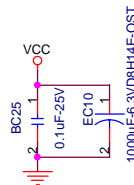
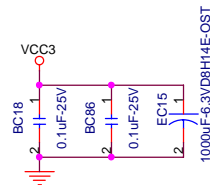
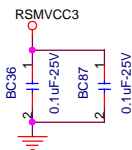
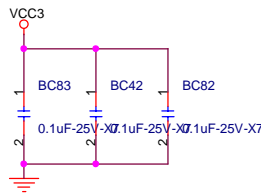
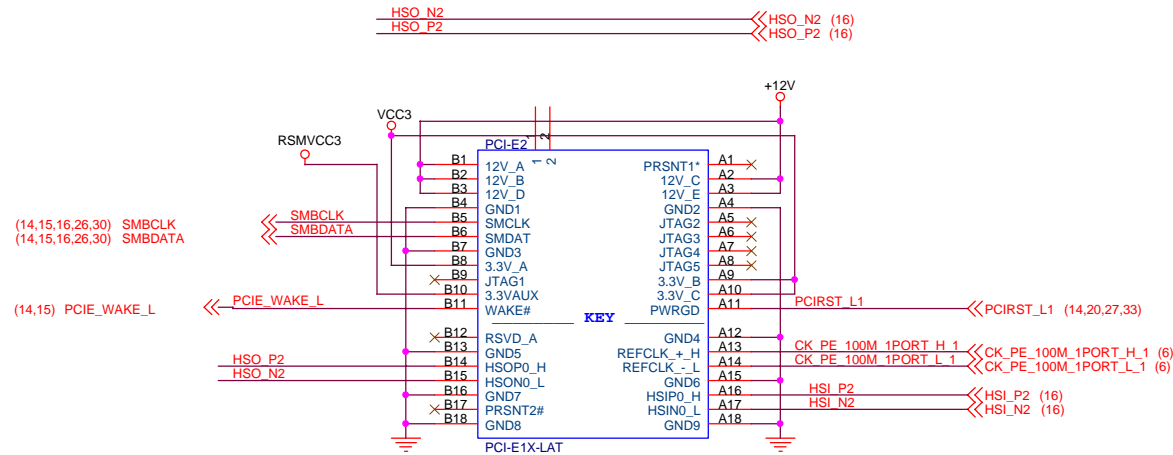









PCI Express SLOT1



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|  Elitegroup Computer Systems | | | |
| Title PCIE x1 Slot | | | |
| Size Custom | Document Number 945GZ-B2 | | Rev B |
| Date: Thursday, October 20, 2005 | Sheet 31 | of 35 | 1 |

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Rev: B

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| B | B | 35 | | 10/07/2005 |
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| DEVICE | IDSEL | INT# | REQ# | GNT# |
|--------|-------|---------|--------|--------|
| PCI1 | 17 | F/G/H/E | PREQ-0 | PGNT-0 |
| PCI2 | 18 | G/H/E/F | PREQ-1 | PGNT-1 |
| | | | | |
| LAN | 23 | E | PREQ-4 | PGNT-4 |

PCB : 244 x 244 mm ; 4 layers

INTEL
P4 Processor
PSC, Smithfield -
LGA 775 pin

BW : 4.1GB/s @ FSB : 533MHz & Freq : 133MHz
BW : 6.4GB/s @ FSB : 800MHz & Freq : 200MHz
BW : 6.4GB/s @ FSB : 1066MHz & Freq : 266MHz

INTEL
Intel945PL
1210pin FC-BGA

BW : 10.7GB/s @ DDR2 :533/667MHz

DDIMM1: DDR2 Socket 240P

DDIMM3: DDR2 Socket 240P

VGA (G only)

Analong Display
RAMDAC: 400MHz
Resolutions Up To 2048x1536@75Hz

BW : 2GB/s (Support Lsoch)

INTEL
ICH7
652pin EPGA

PCIEx1

BW : 133MB/s @ Freq : 33MHz

PCI1 Slot 120pin @ AD17
PCI2 Slot 120pin @ AD18

USB1 2 ports
USB2 2 ports
USB3 2 ports
USB4 2 ports

USB V2.0

Up to Ultra ATA/100
One IDE Channel

IDE1 40pin

Audio Codec
ALC655

Azalia I/F

LPC bus

intel
FWH
32pin PLCC

Super I/O
IT8712JX
128pin PQFP


INTEL or Realtek
10/100 Lan
10/100/1000 Lan

USBLAN
RJ45

Line in
Line out
Mic in
Center/Bass out
Surround
Side-Surround

SATA1 7Pin
SATA2 7pin
SATA3 7Pin
SATA4 7pin

BW : 150MB/s



Elitegroup Computer Systems

Title

System Block Diagram

Size

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