

The logo for AirRunner Technologies features the word "Air" in a yellow sans-serif font, followed by "Runner" in a dark blue sans-serif font. A dark blue curved line arches over the word "Runner". Below "Runner" is the word "TECHNOLOGIES" in a smaller, dark blue, all-caps sans-serif font.

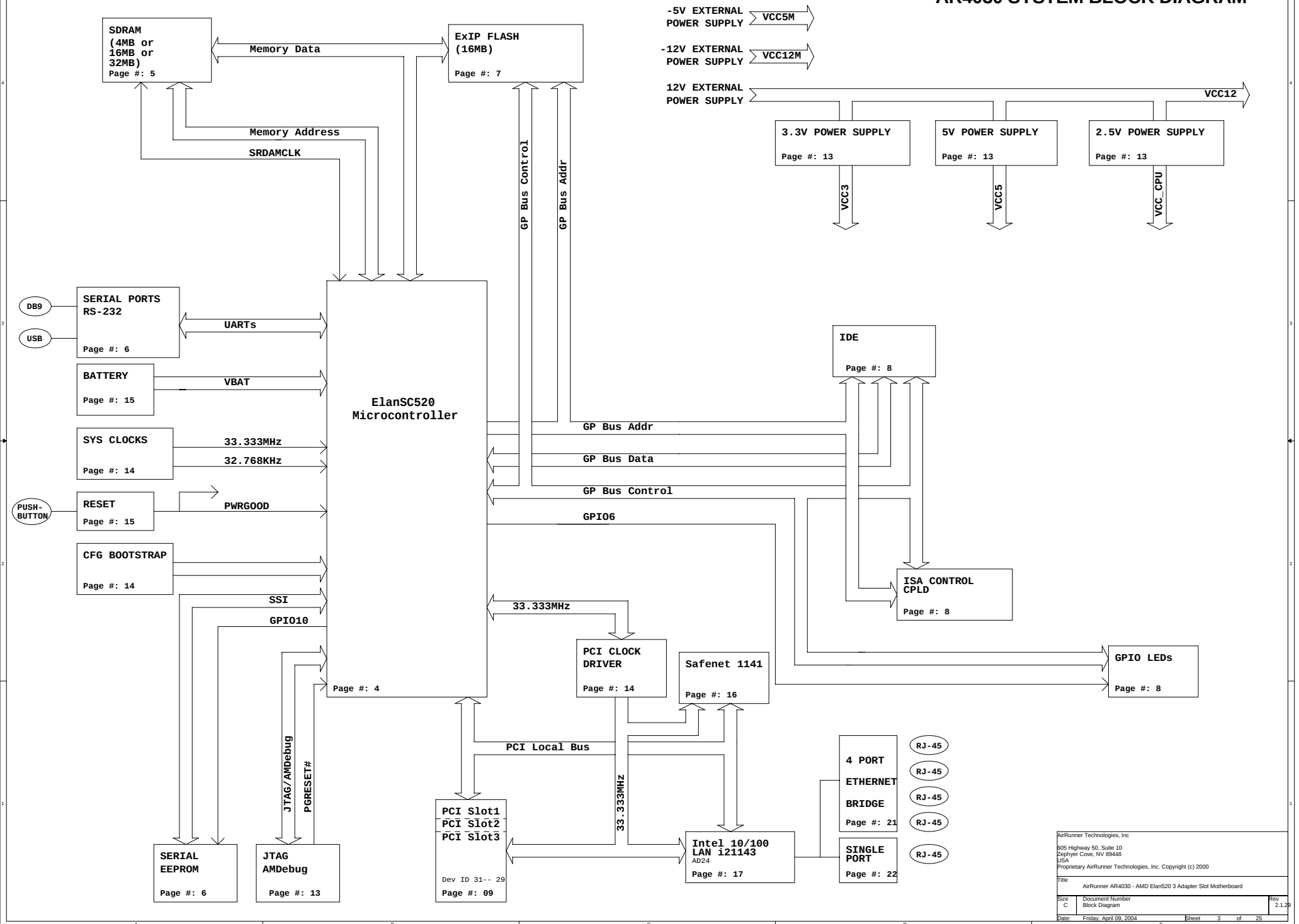
AirRunner Technologies, Inc				1
605 Highway 50, Suite 10				
South Lake Tahoe, CA 96150				
USA				
Proprietary AirRunner Technologies, Inc. Copyright (c) 2000				
Title				
AirRunner AR4030 - AMD Elan520 3 Adapter Slot Motherboard				
Size	Document Number			Rev
Customer	Revision History			2.1.29
Date:	Friday, April 09, 2004	Sheet	1 of 25	

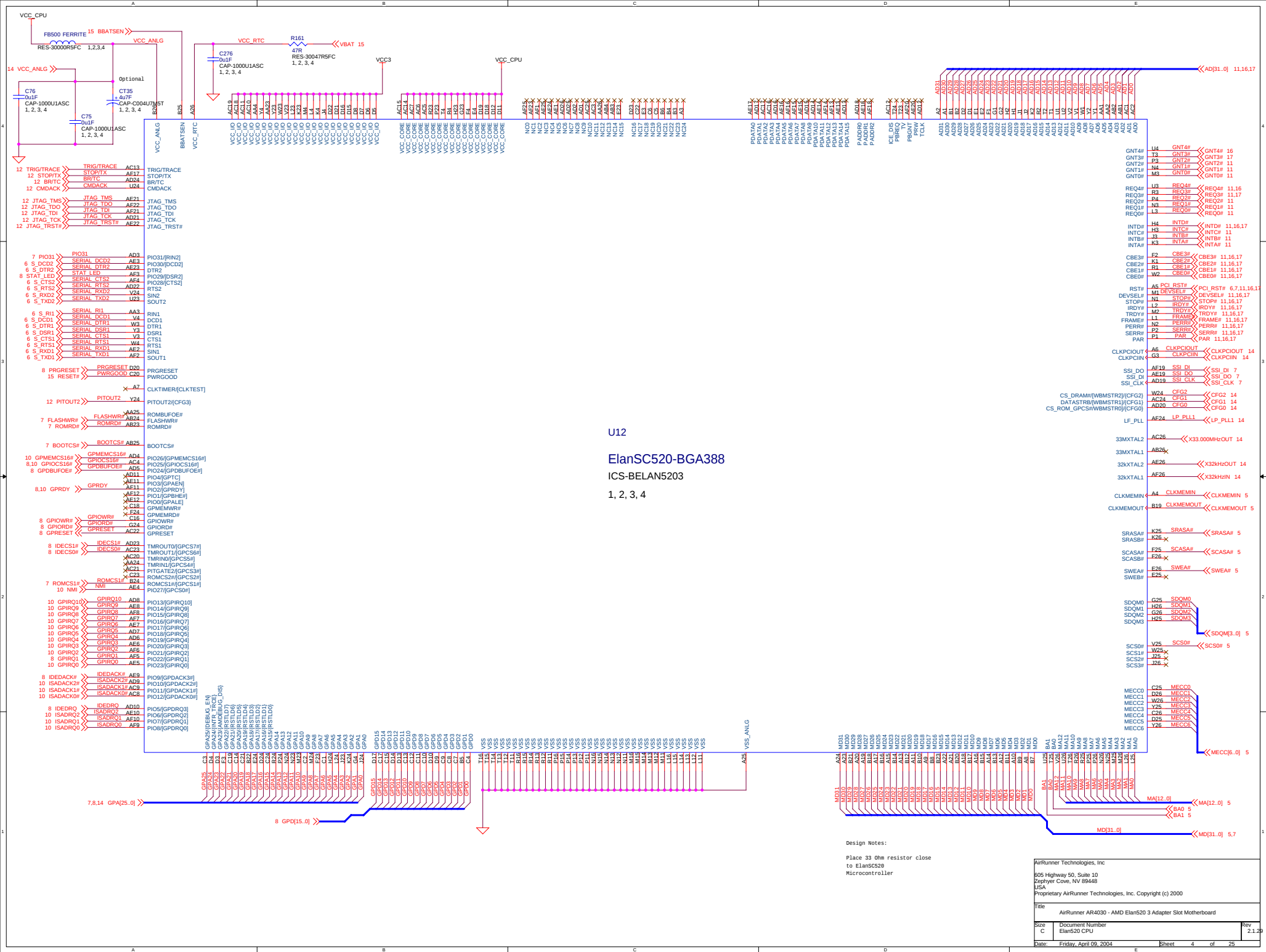
Table of Contents

Page 01	--	Cover - Revision History
Page 02	--	Table of Contents
Page 03	--	AR4000 System Block Diagram
Page 04	--	Elan SC520 Microcontroller
Page 05	--	SDRAM Main Memory Interface
Page 06	--	Serial & USB I/F
Page 07	--	Non Volatile Memory
Page 08	--	IDE Control PAL; Interplane capacitors
Page 09	--	GP Buffers
Page 10	--	Terminations
Page 11	--	PCI Bus Interface
Page 12	--	JTAG Debug I/F
Page 13	--	Main Power
Page 14	--	System Clock and Config
Page 15	--	CPU Power, Reset, Battery
Page 16	--	Safenet 1141 Encryption
Page 17	--	10/100 LAN 21143
Page 18	--	Decoupling Caps
Page 19	--	10/100 LAN Decoupling
Page 20	--	10/100 LAN Switch
Page 21	--	10/100 LAN 4 Port I/F
Page 22	--	10/100 LAN 1 Port PHY
Page 23	--	10/100 LAN 1 Port I/F
Page 24	--	Grounding
Page 25	--	Additional BOM parts

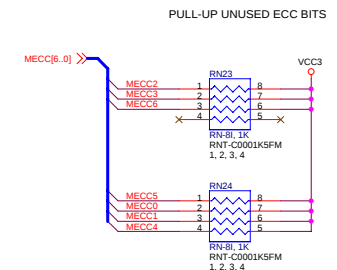
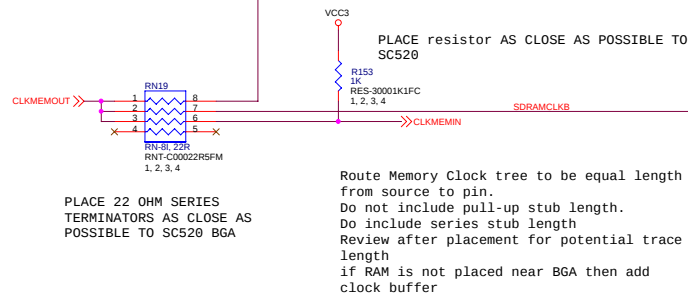
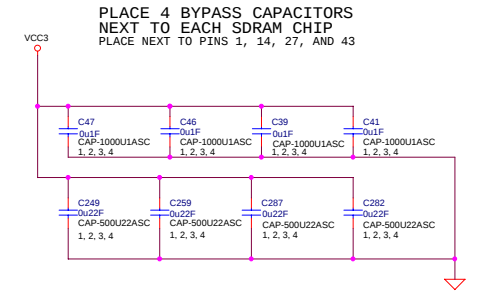
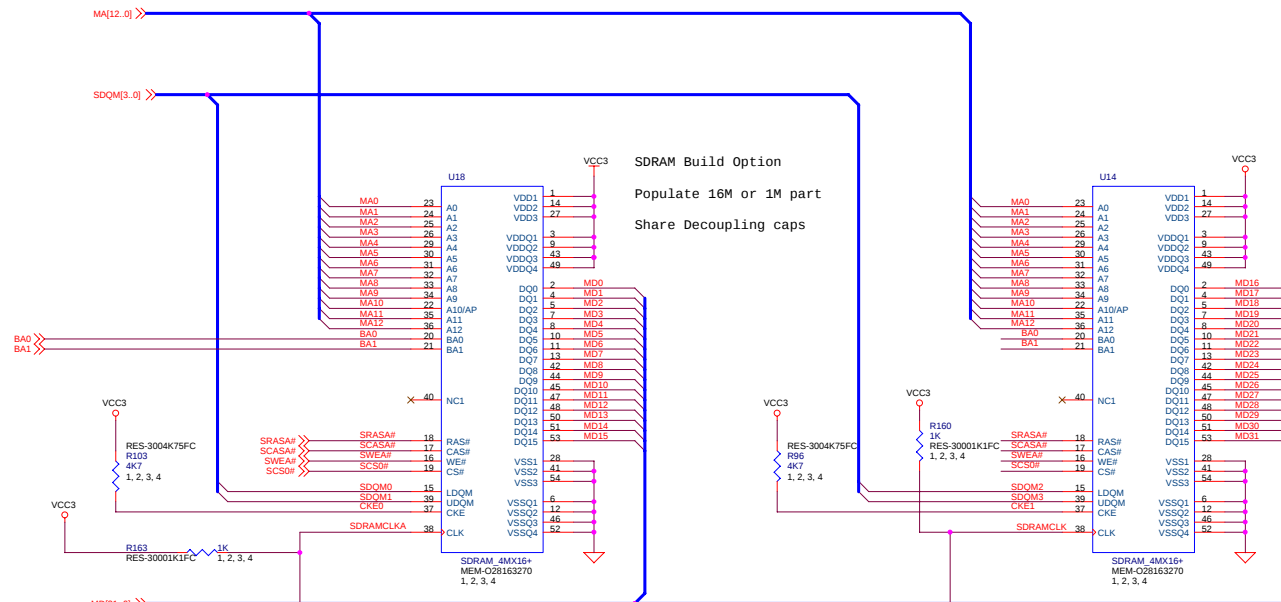
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Size B	Document Number Table of Contents	Rev 2.1.29
Date: Friday, April 09, 2004	Sheet 2	of 25

AR4030 SYSTEM BLOCK DIAGRAM





SDRAM MAIN MEMORY INTERFACE

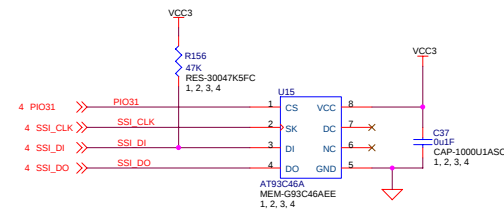
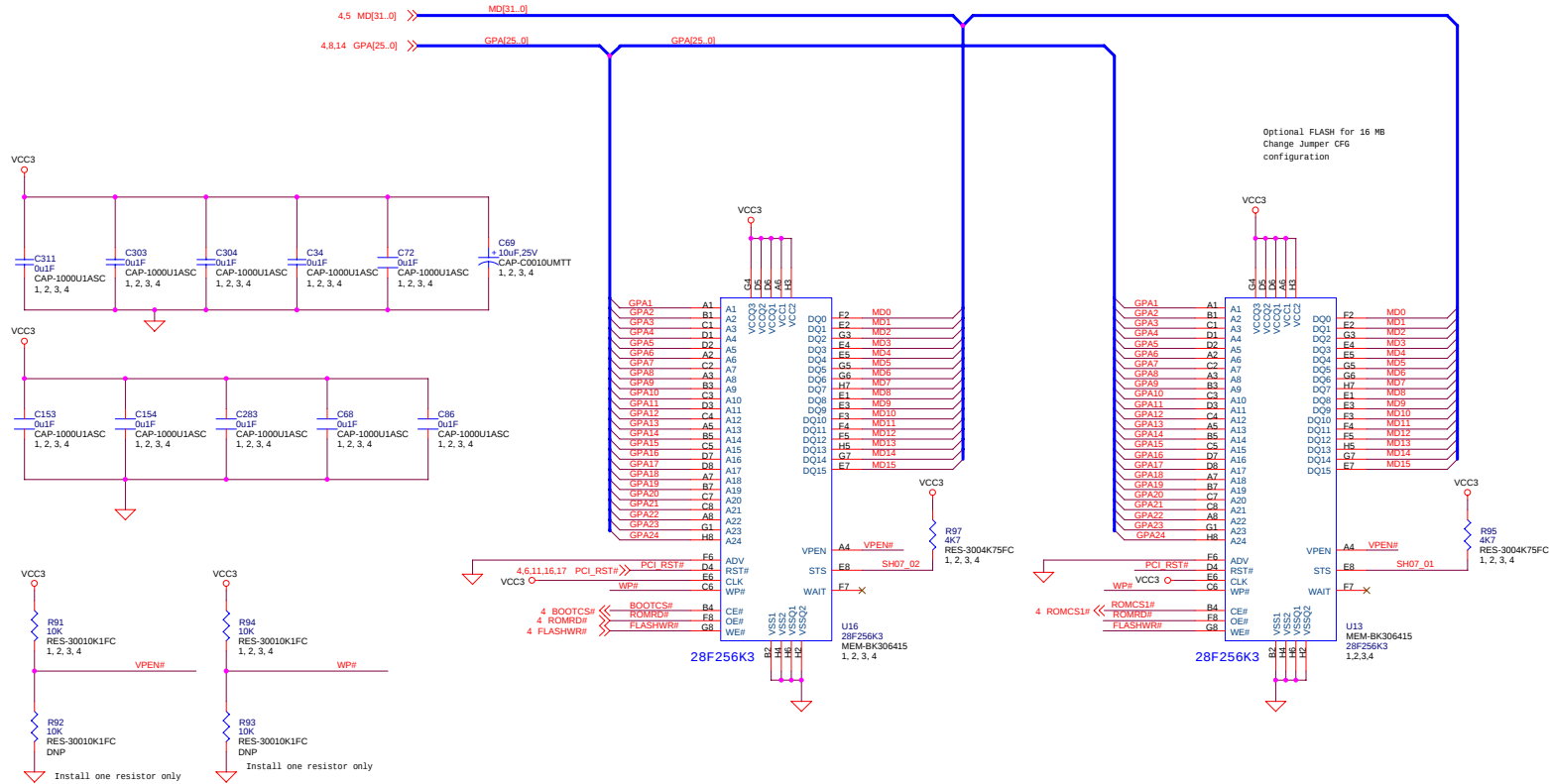


16/32 SDRAM POPULATION OPTIONS

16MBYTE SDRAM	4MX16: SAMSUNG K4S641632C
32MBYTE SDRAM	8MX16: SAMSUNG K4S281632D

Execute in Place Flash Memory (8/16/32 MByte)

Note: FLASH is located on the SDRAM BUS



1Kbit Serial EEPROM (64x16)

Synchronous Serial Interface--Microwire SEEPROM

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Size	Document Number	Rev	2.1.29
C	Non Volatile Memory		
Date:	Friday, April 09, 2004	Sheet	7 of 26

[illegible]

INTERPLANE CAPACITORS

The diagram illustrates the placement of interplane capacitors between two power planes, VCC_CPU and VCC3. Five capacitors, labeled C225, C206, C216, C217, and C223, are connected in parallel between the two planes. Each capacitor is represented by two parallel horizontal lines, with its value and tolerance specified below: 0.01F, CAP-100U0155C, and 1.4. The capacitors are positioned at regular intervals along the horizontal connection line. The text 'Place amongst signals where they cross between power planes.' is centered below the capacitors.

VCC_CPU

C225
0.01F
CAP-100U0155C
1.4

C206
0.01F
CAP-100U0155C
1.4

C216
0.01F
CAP-100U0155C
1.4

C217
0.01F
CAP-100U0155C
1.4

C223
0.01F
CAP-100U0155C
1.4

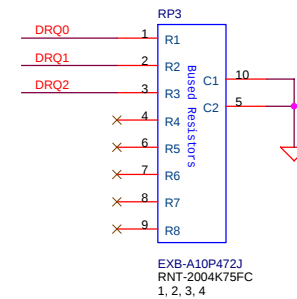
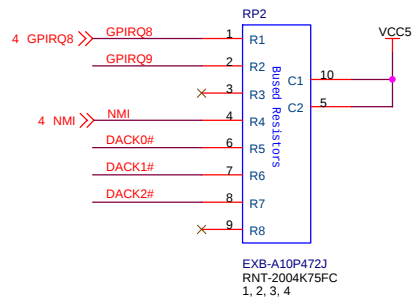
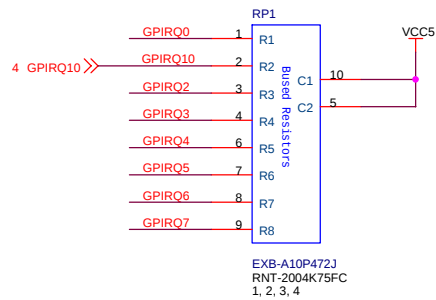
VCC3

Place amongst signals where they cross
between power planes.

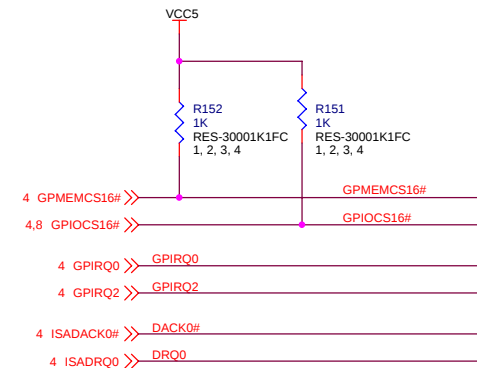
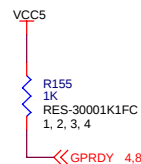
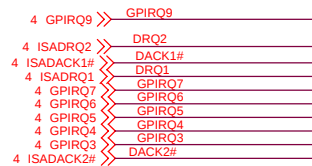
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805 Highway 50, Suite 10 Zephyr Cove, NV 89448 USA Proprietary AirRunner Technologies, Inc. Copyright (c) 2000			
Title AirRunner AR4030 - AMD ElanS20 3 Adapter Slot Motherboard			
Size C	Document Number IDE Control PAL	Rev 2.1.2a	
Date:	Friday, April 09, 2004	Sheet	8 of 25

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Size C	Document Number GP_Buffer	Rev 2.1.29
Date: Friday, April 09, 2004	Sheet 9	of 26



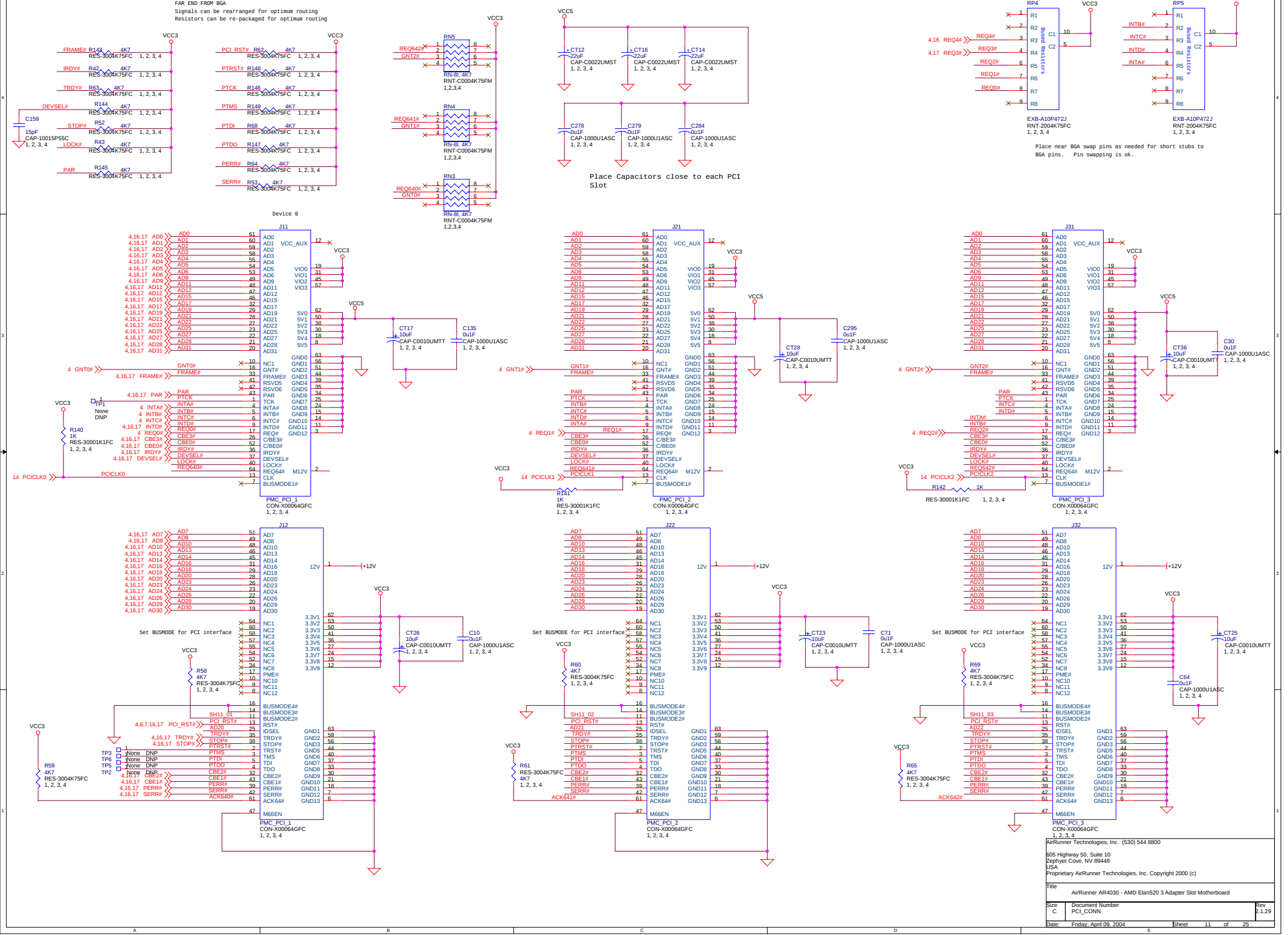
Design Notes:
Note: Pull-up Rs on IRQs



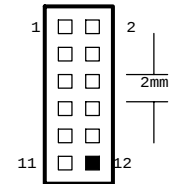
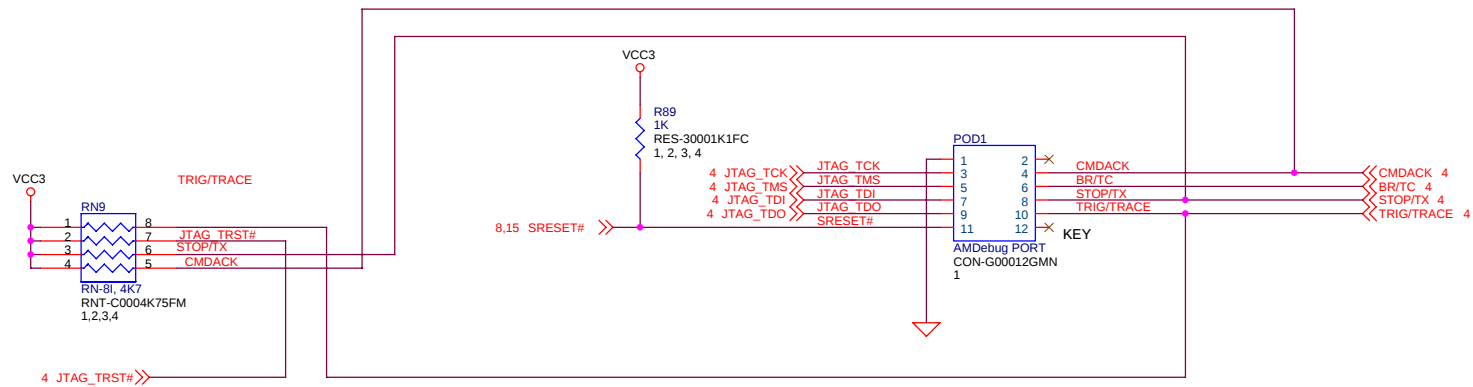
Remove ISA bus
Leave pull-ups for control signals from CPU

PCI Connectors

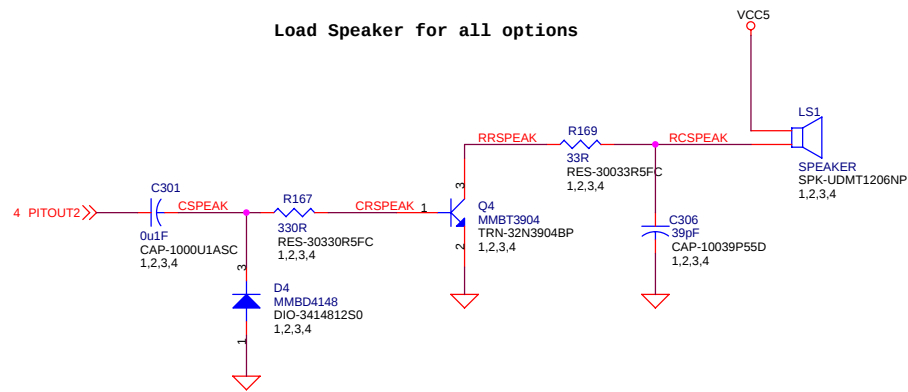
Resistors placed at end of chain
FAR END FROM BGA
Signals can be rearranged for optimum routing
Resistors can be re-packaged for optimum routing



JTAG & AMDebug Port



Load Speaker for all options



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B

Document Number
JTAG Debug I/F

Rev
2.1.29

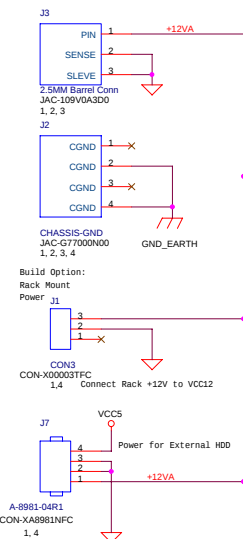
Date: Friday, April 09, 2004

Sheet 12 of 25

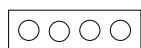
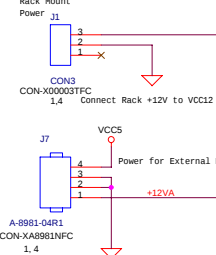
Power Connector
Use 12V Power Cube
Mfg X/ Part Number
X

MAIN POWER

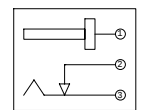
Build Option: Desktop Power



Build Option:
Rack Mount
Power



Build Option:
Disk Drive
Power Order#:
15-24-4041



SOT-23 LED
(COMPONENT SIDE VIEW)

MRB0520LT1
CATHODE (2)



ANODE (1)

MRBS340T3
CATHODE (2)

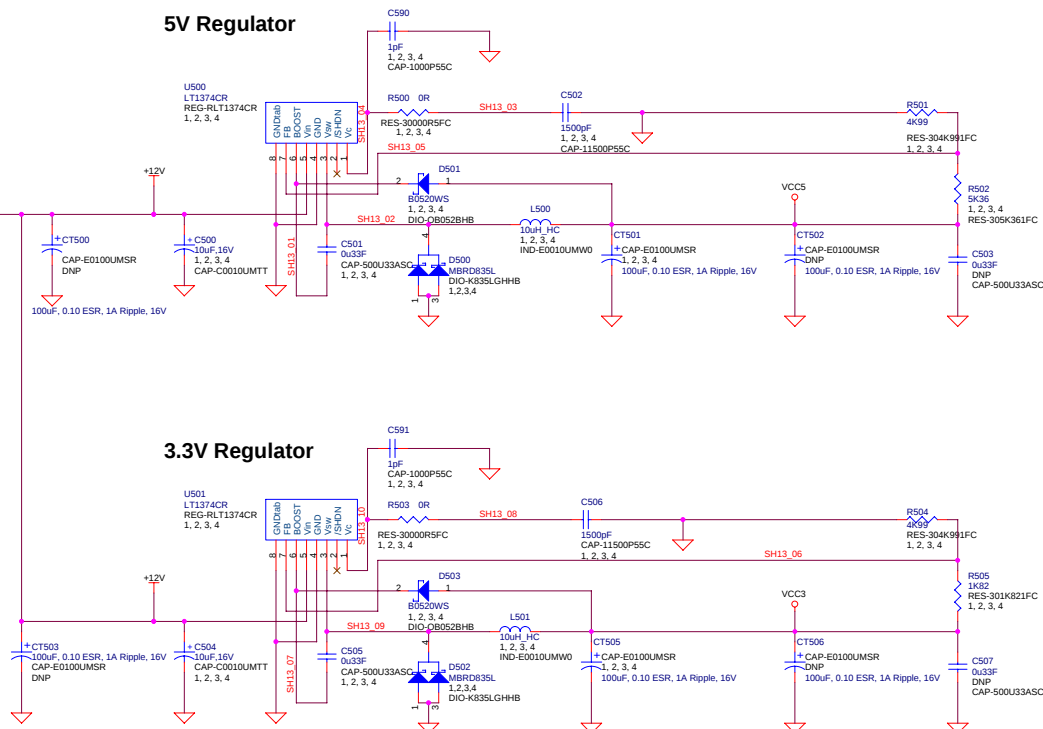


ANODE (1)

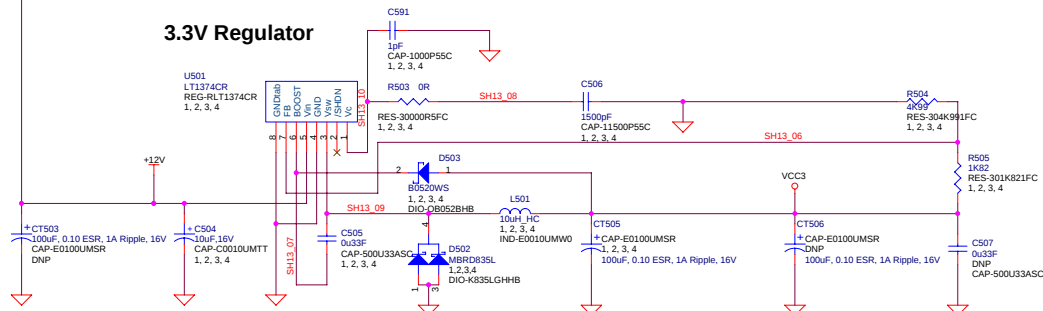
API Delevan
L1
Bead: SMR2.5-2.9.5A
FER-E0000RST
1, 2, 3, 4

Follow Linear
Technologies
design notes
and demo board
layout for
LT1374CR.

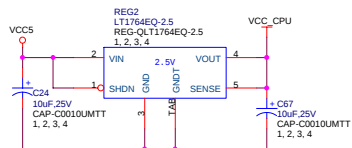
5V Regulator



3.3V Regulator

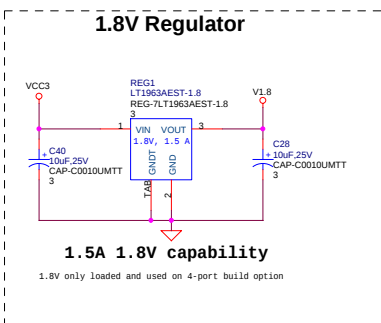


2.5V Regulator



3A 2.5V capability

1.8V Regulator



1.5A 1.8V capability

1.8V only loaded and used on 4-port build option

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Title			AirRunner AR4030 - AMD Elan520 3 Adapter Slot Motherboard
Size	Document Number	Rev	2.1.29
C	Main Power		
Date:	Friday, April 09, 2004	Sheet	13 of 26

System Configuration - FLASH Memory Size

Build Options for FLASH

- 4 CFG0 → CFG0: R157 2 1K RES-30001K1FC 1, 2, 3, 4
- 4 CFG1 → CFG1: R158 2 1K DNP
- 4 CFG2 → CFG2: R159 2 1K RES-30001K1FC 1, 2, 3, 4

S1 Chip Configuration:

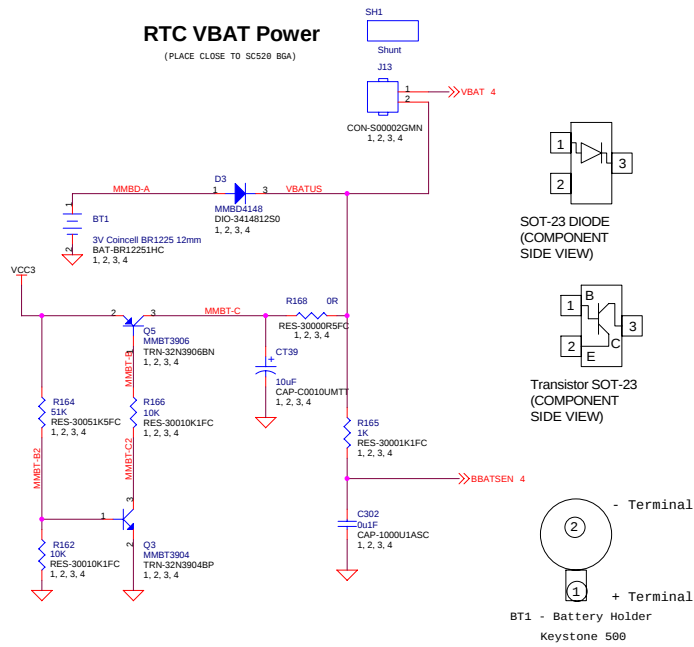
- CAK SDA04H0SK
- SWT-GSDA04H0S
- R86 10K RES-30010K1FC DNP
- R84 10K RES-30010K1FC 2, 3, 4
- R83 10K RES-30010K1FC 2, 3, 4
- DEBUG ENTER
- INST TRCE
- ANDER G2 DIS
- SW SPARE
- RN10 8 10K RNT-C0010K5FM 1
- RN8 10K RNT-C0010K5FM 1

Build Options for Debug - Do not include in production

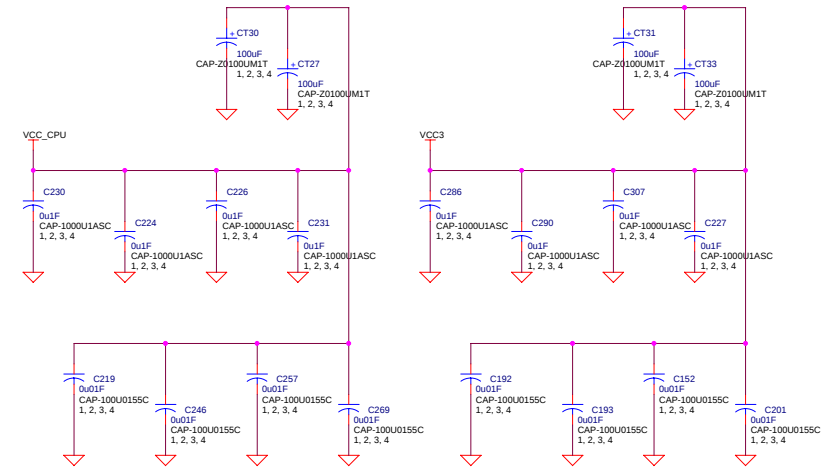
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Size C	Document Number SYS_CLOCK		Rev 2.129
Date	Friday, April 09, 2004	Sheet	14 of 25

RTC VBAT Power

(PLACE CLOSE TO SC520 BGA)

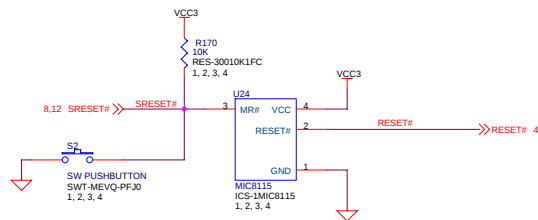


VCC_CPU Decoupling

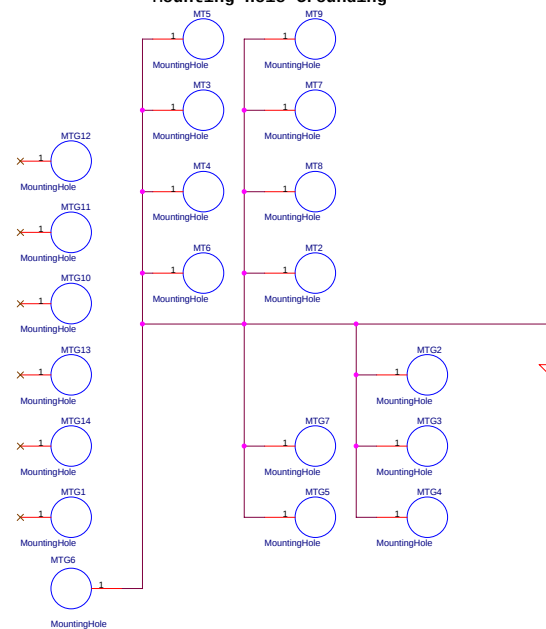


Place the above Caps under the
BGA (Back side of the board)
Check on tants about rear
placement - maybe height
restrictions

System Reset Control



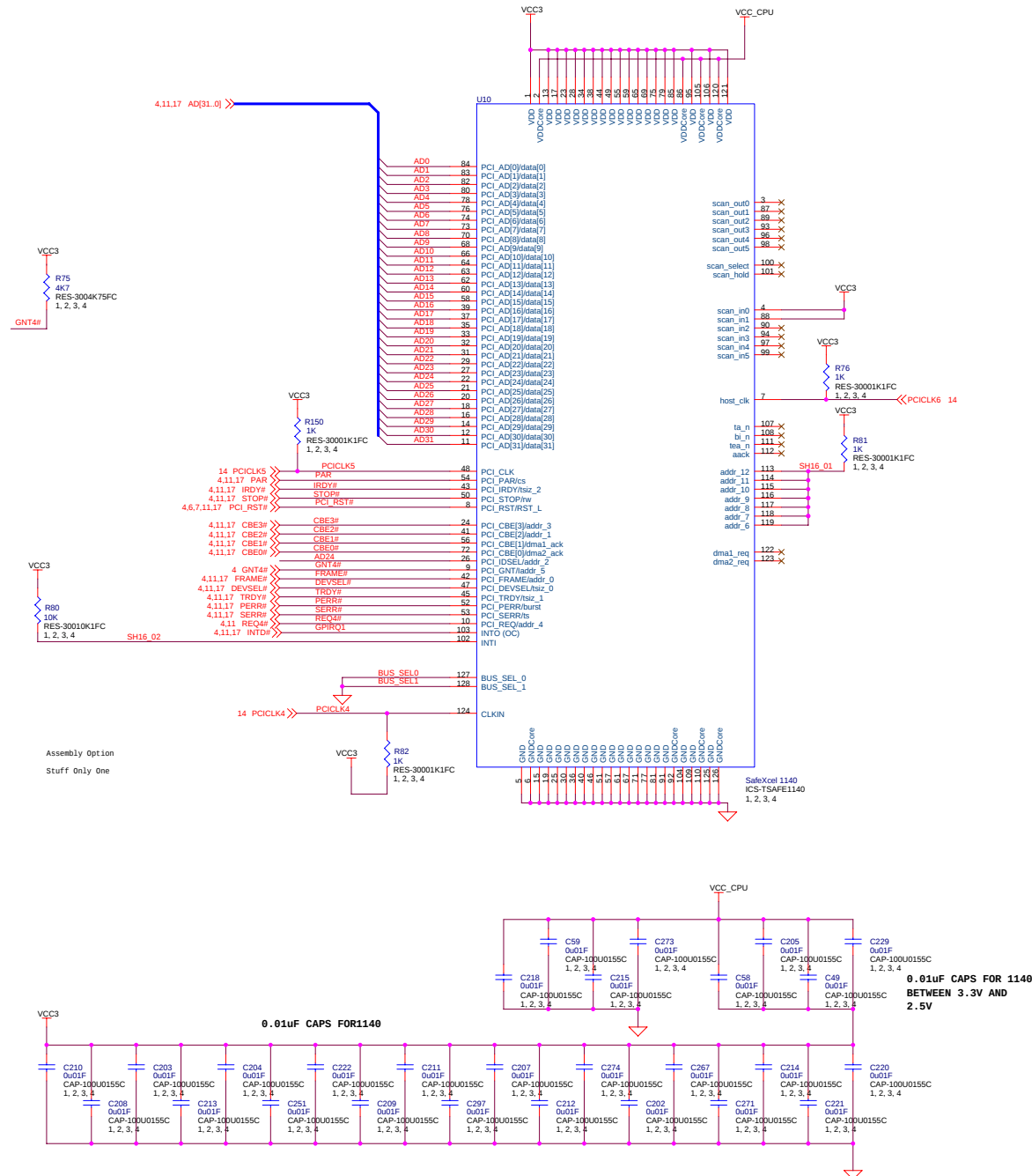
Mounting Hole Grounding

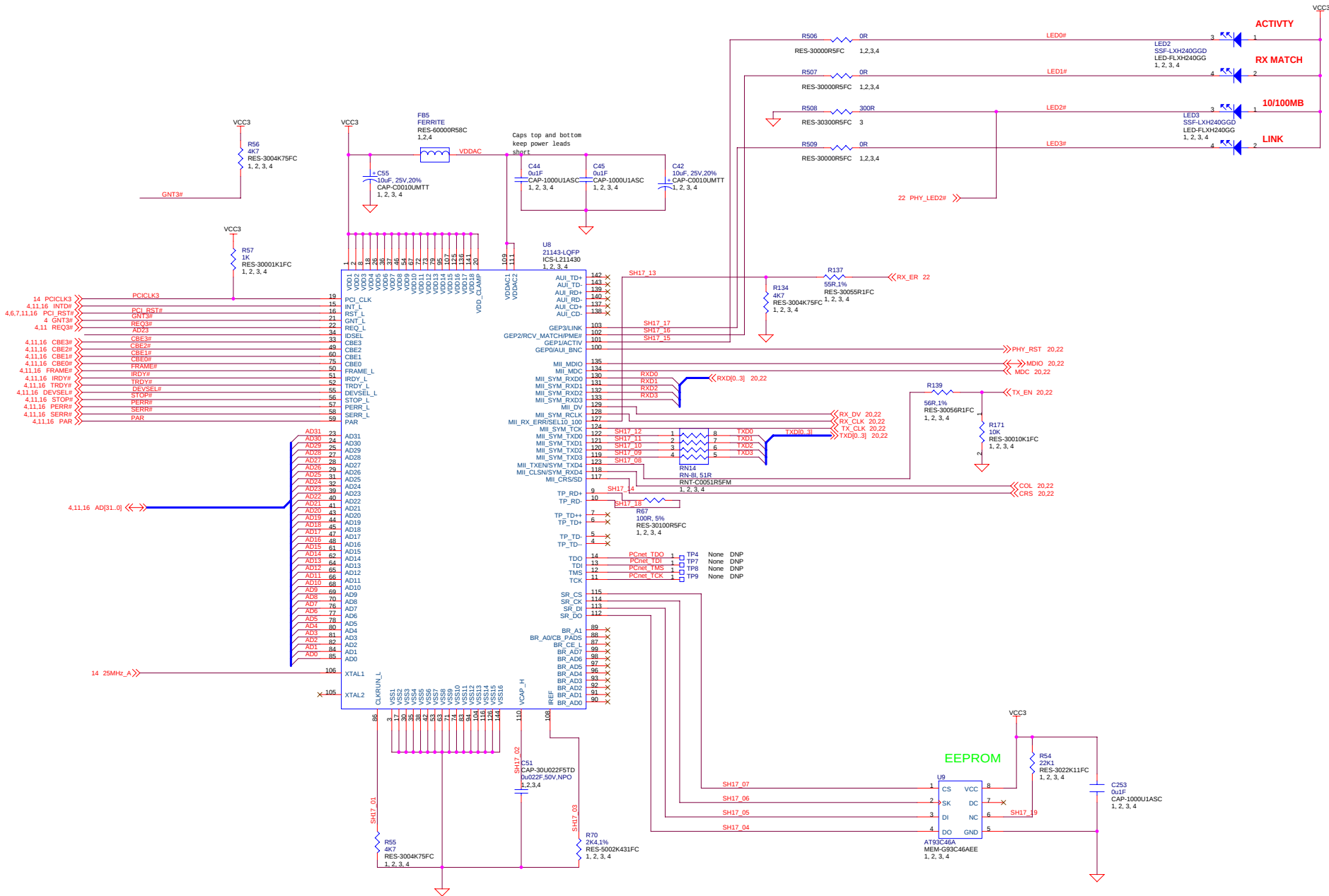


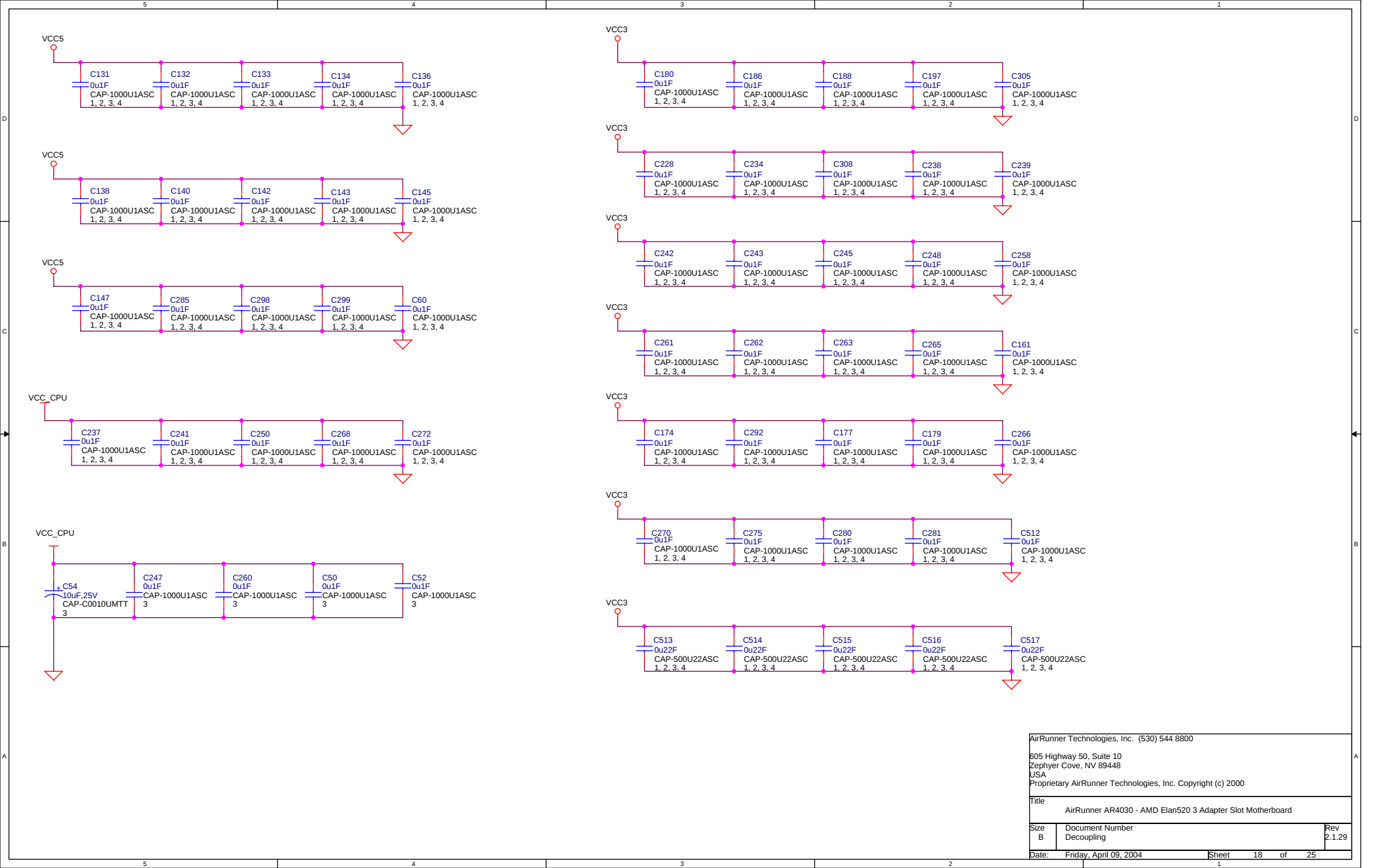
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Title			AirRunner AR4030 - AMD Elan520 3 Adapter Slot Motherboard	
Size	Document Number			Rev
C	CPU Power, Reset, Battery			2.1.29
Date:	Friday, April 09, 2004	Sheet	15	of 26

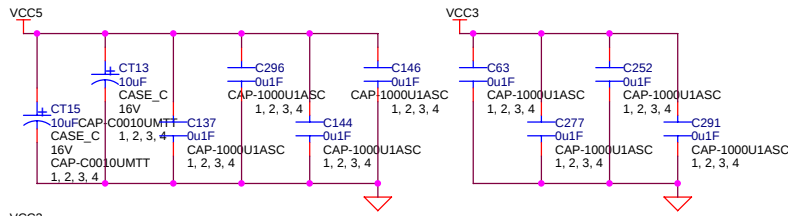
SafeNet CRYPTO CORE





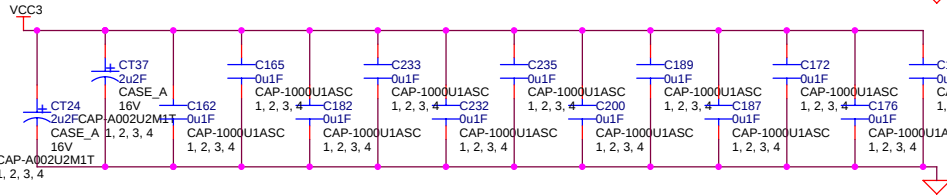
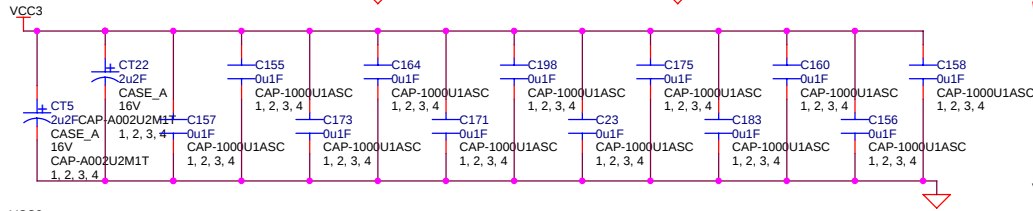


PCI BUS
PAGE



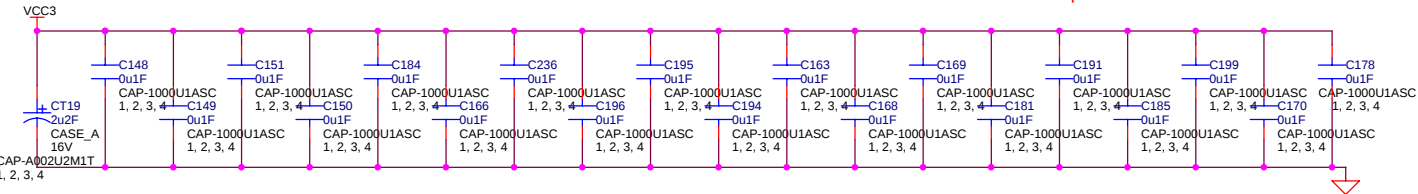
NOTE: Place caps
where +5V_PCI & +3VR
planes split

LAN
CONTROLLER

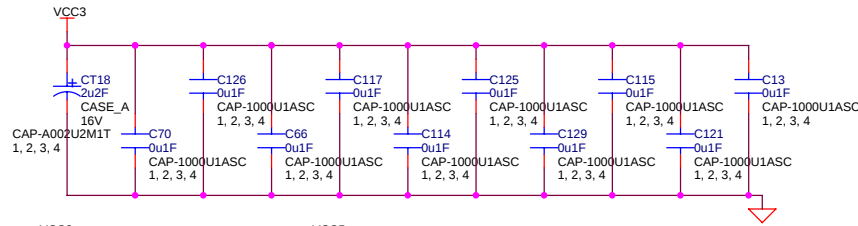


NOTE: Place caps
where +3VR &
+5V_PCI planes
split

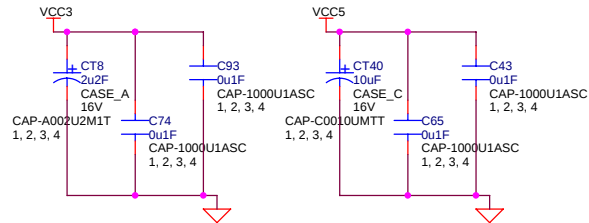
SSRAM
PAGE



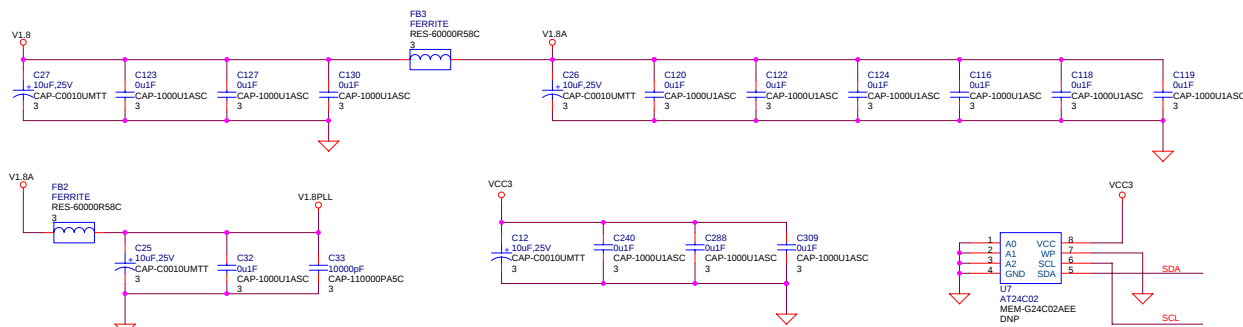
NetPHY-1LP



NETWORK
INTERFACE

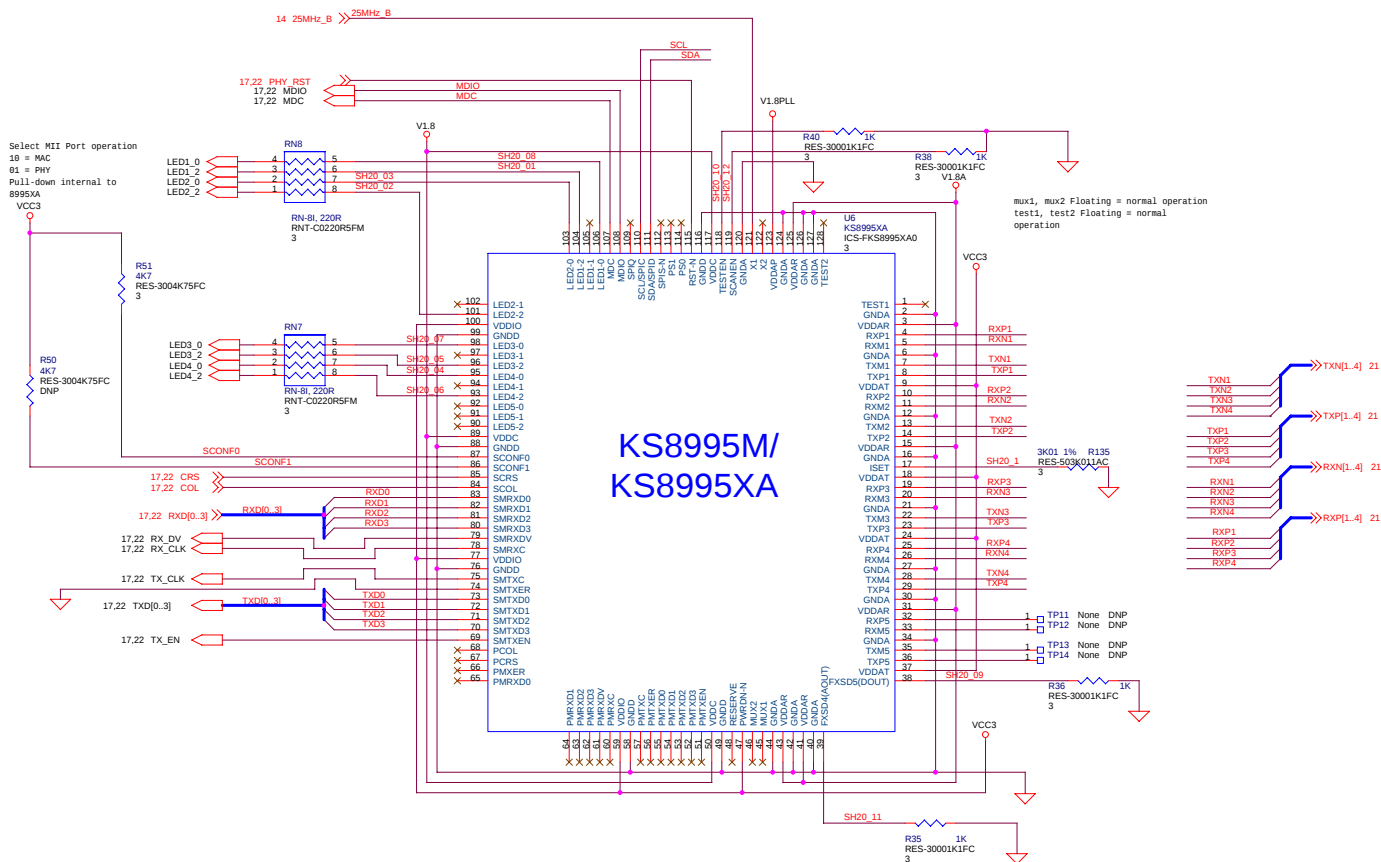


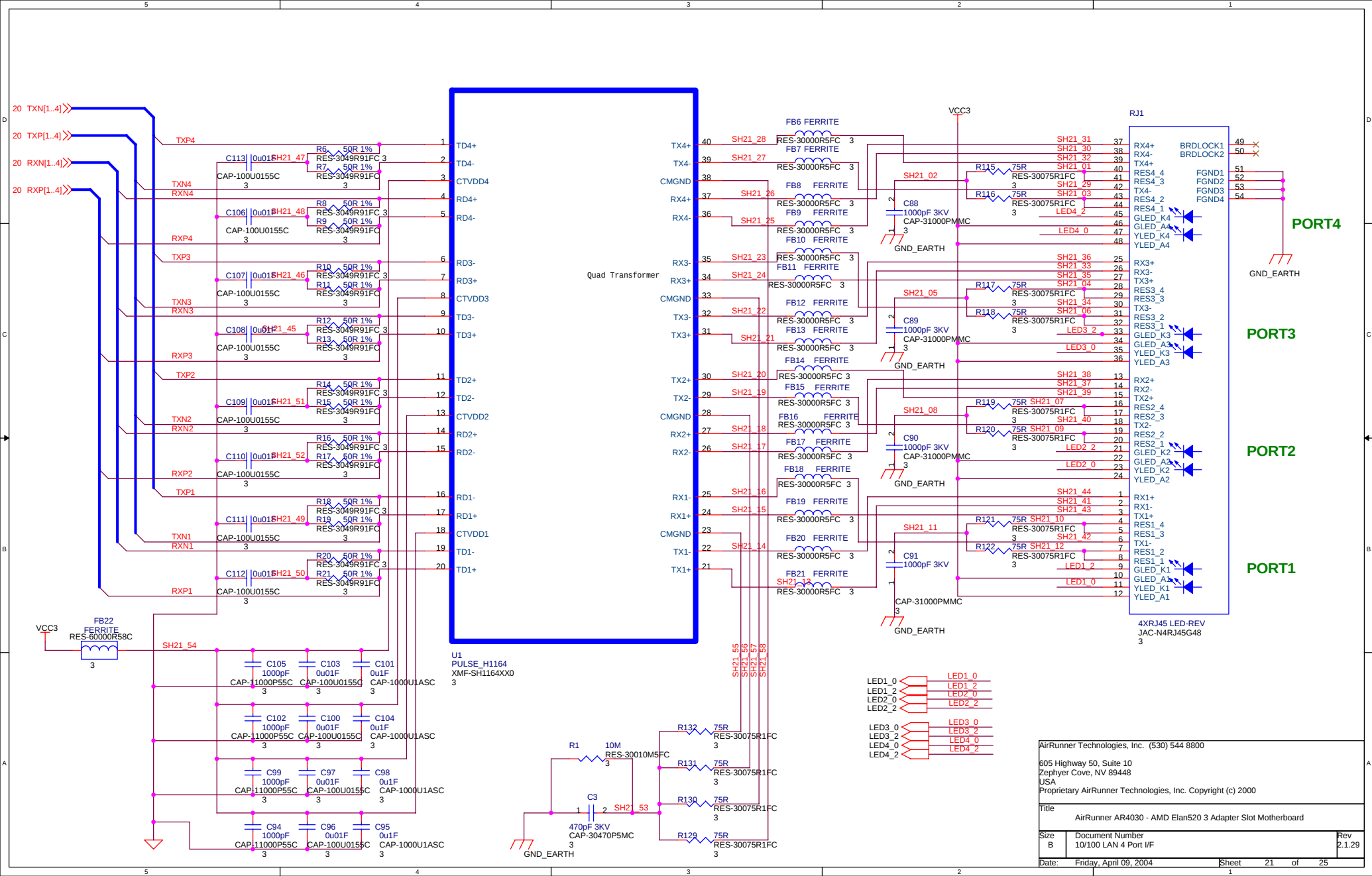
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Size B	Document Number 10/100 LAN Decoupling	Rev 2.1.29
Date: Friday, April 09, 2004	Sheet 19	of 25

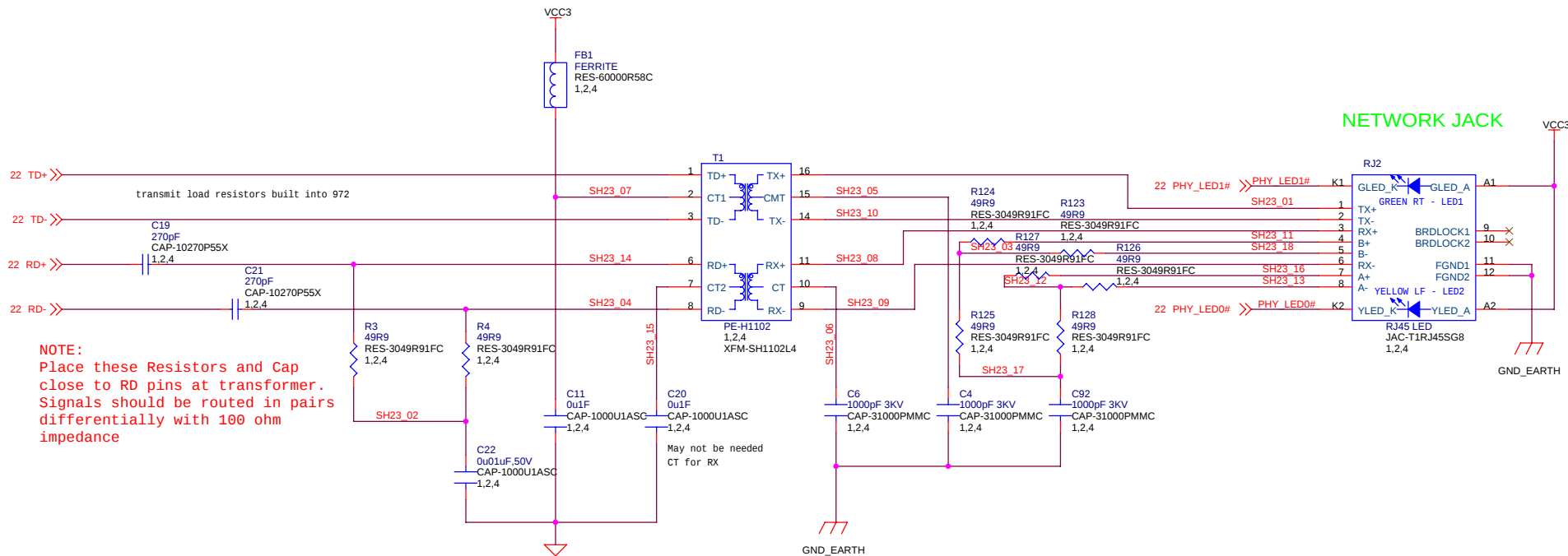


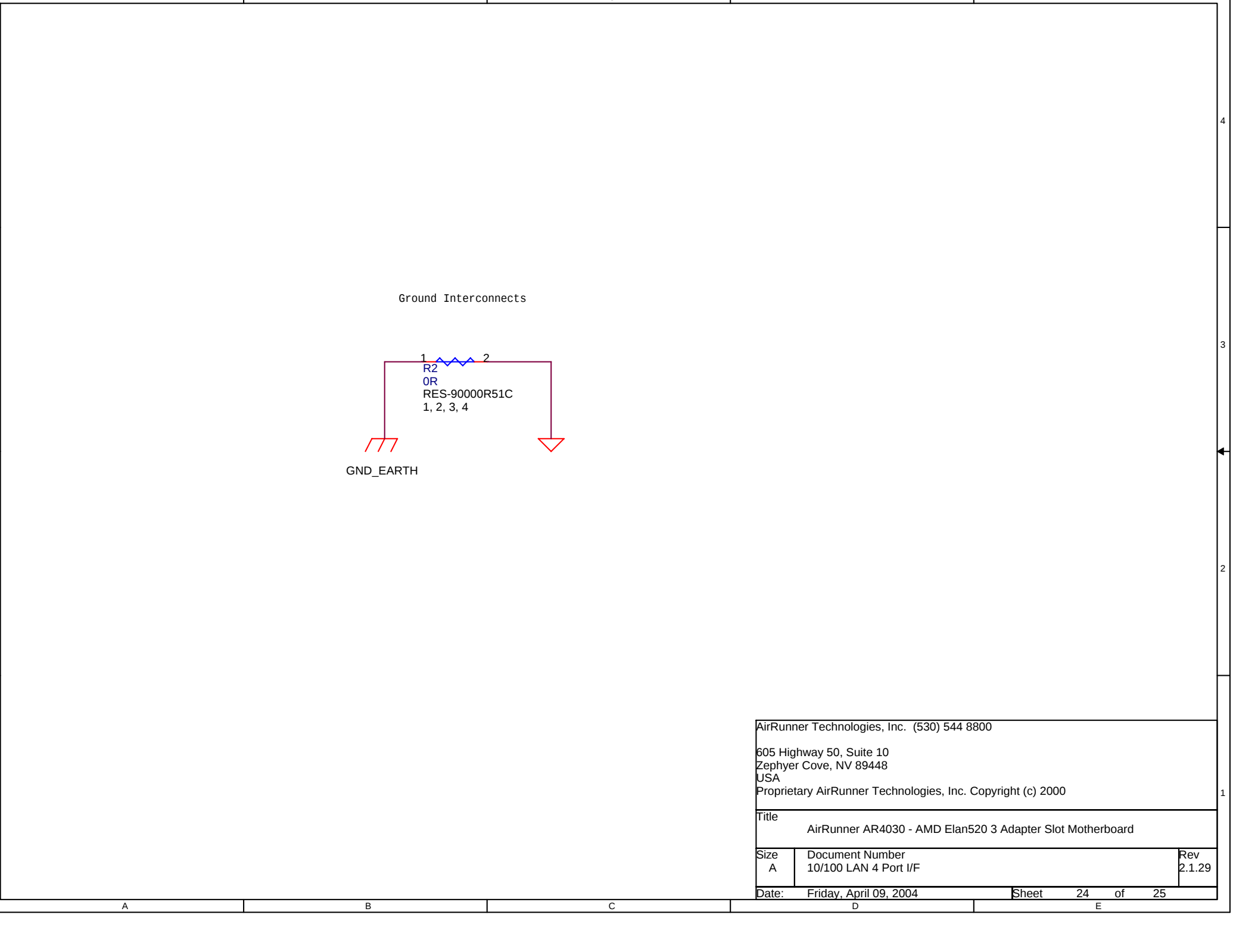
- Configured For:
1. Auto MDI/MDIX Crossover
 2. AUTONEG for all copper ports
 3. Port 0 is Reverse MII at 100 MBPS, Full Duplex
 4. LED display mode 3

Build Option: For 4 Port Ethernet net - Load P/S parts regardless

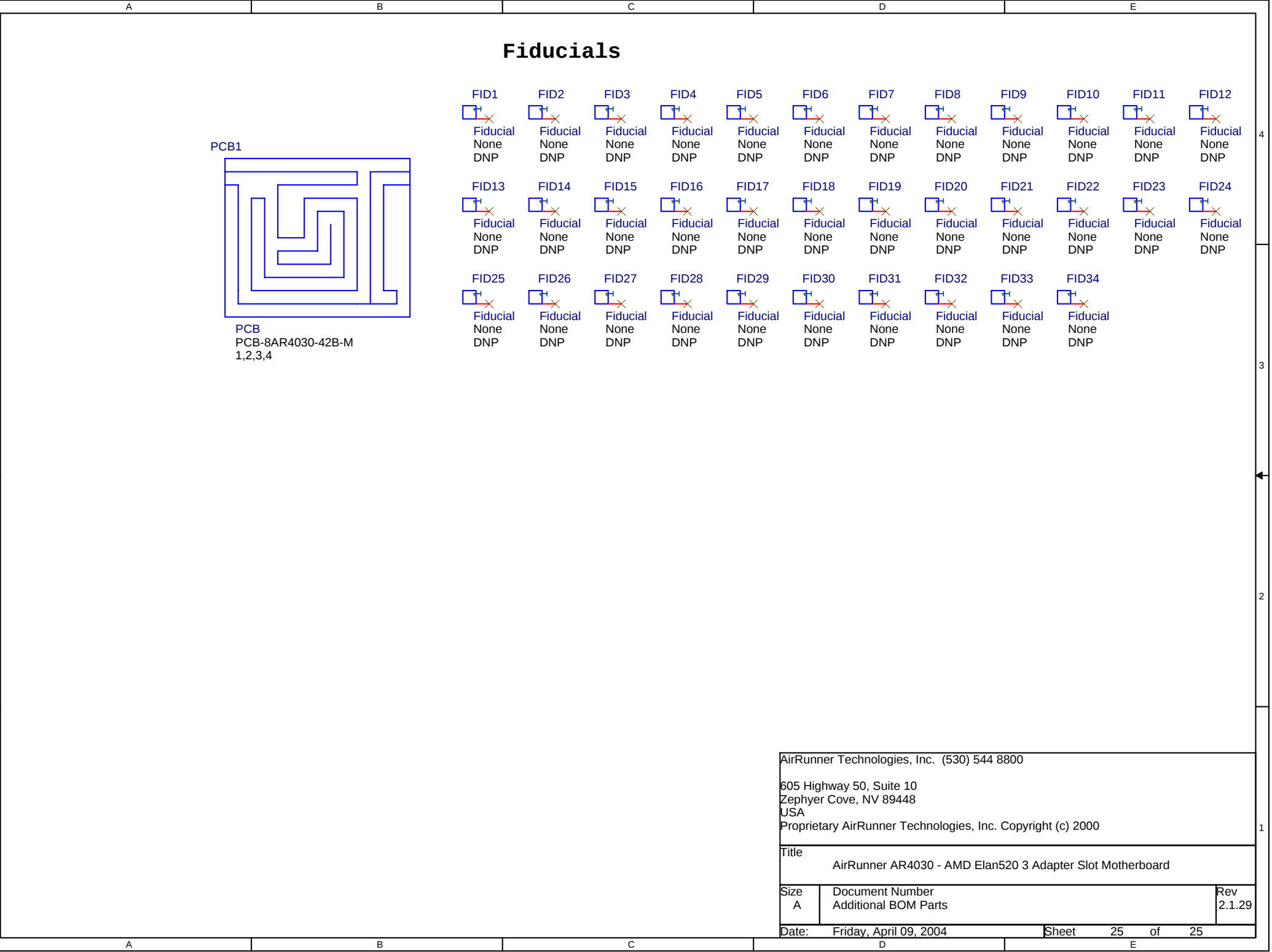








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Size A	Document Number 10/100 LAN 4 Port I/F	Rev 2.1.29
Date: Friday, April 09, 2004	Sheet 24 of 25	



Fiducials

FID1 Fiducial None DNP	FID2 Fiducial None DNP	FID3 Fiducial None DNP	FID4 Fiducial None DNP	FID5 Fiducial None DNP	FID6 Fiducial None DNP	FID7 Fiducial None DNP	FID8 Fiducial None DNP	FID9 Fiducial None DNP	FID10 Fiducial None DNP	FID11 Fiducial None DNP	FID12 Fiducial None DNP
FID13 Fiducial None DNP	FID14 Fiducial None DNP	FID15 Fiducial None DNP	FID16 Fiducial None DNP	FID17 Fiducial None DNP	FID18 Fiducial None DNP	FID19 Fiducial None DNP	FID20 Fiducial None DNP	FID21 Fiducial None DNP	FID22 Fiducial None DNP	FID23 Fiducial None DNP	FID24 Fiducial None DNP
FID25 Fiducial None DNP	FID26 Fiducial None DNP	FID27 Fiducial None DNP	FID28 Fiducial None DNP	FID29 Fiducial None DNP	FID30 Fiducial None DNP	FID31 Fiducial None DNP	FID32 Fiducial None DNP	FID33 Fiducial None DNP	FID34 Fiducial None DNP		

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Title AirRunner AR4030 - AMD Elan520 3 Adapter Slot Motherboard		
Size A	Document Number Additional BOM Parts	Rev 2.1.29
Date: Friday, April 09, 2004	Sheet 25 of 25	