

Project: **StreetRacer RBX1600**

TABLE OF CONTENTS

SHEET	DESCRIPTION
1	Cover Page
2	POWER
3	CPU CARD INTERFACE
4	SERIAL/SWITCH/LEDS & USB
5	SLINK & IR
6	DIGITAL AUDIO BUFFERS
7	DIGITAL AUDIO INPUT
8	DIGITAL AUDIO OUTPUT
9	ETHERNET

NOTES

1. Components marked with a dashed and crossed box will not be installed during assembly.



2. Please refer to the Bill of Material (BOM) which provides all necessary component information for the final assembly.

3. The following parameters will apply to all components unless otherwise stated in the BOM or Schematic.

Resistor: +/- 5% or better, 1/16 Watt, 0603

Capacitor, non - polarized: Ceramic, +/- 20%, 0603

Capacitor, polarized: Tantalum, +/- 20%

Inductance: +/- 10%

4. Bypass capacitors shall be distributed evenly amongst power pins of the IC power and GND pin.

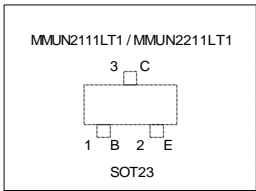
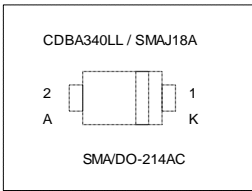
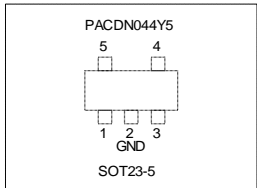
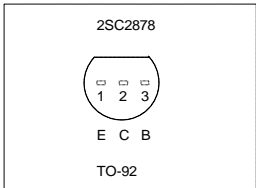
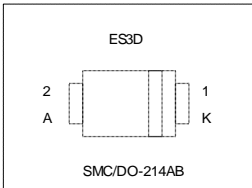
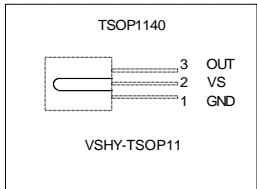
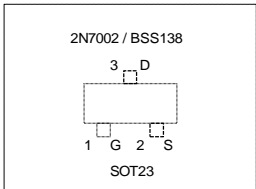
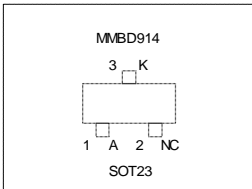
5. Always observe layout guidelines and documentation from the component manufacturers

Schematic Statistics:

Parts: 00
Library Parts: 00
Nets: 00
Pins: 00

LAST REFERENCES USED

REF.	Last used	Not used
ANT	n/a	n/a
BR	n/a	n/a
BT	n/a	n/a
C	C137	C100,C101
CN	n/a	n/a
CON	n/a	n/a
D	D8	n/a
F	n/a	n/a
FB	FB25	n/a
FL	n/a	n/a
J	J12	n/a
JP	n/a	n/a
K	n/a	n/a
L	L7	n/a
LED	LED2	n/a
M	n/a	n/a
MH	MH1	n/a
MT	MT26	MT6,MT12 MT15 - MT24
OPT	OPT5	n/a
P	P1	n/a
PB	n/a	n/a
Q	Q10	n/a
R	R102	R49, R87-R99
RN	n/a	n/a
SW	n/a	n/a
T	n/a	n/a
TP	TP12	n/a
U	U18	U7,U8
X	X19	X10
XP	n/a	n/a
Y	Y1	n/a



VERSION	DATE	DESCRIPTION	NAME
0.1	10-14-2003	Preliminary Design	M. Daroy
0.2	11-25-2003	Preliminary Design 2	M. Daroy
0.3	12-05-2003	Re-designed Ethernet Circuitry	M. Daroy
0.4	12-08-2003	Updates and Changes per Design Review Notes.	M. Daroy
0.5	12-15-2003	Added Ethernet Address, Data and Control Signal Test Ports.	M. Daroy
1.0	12-16-2003 12-23-2003 01-07-2004	Added replacement part attributes. First release for PCB Design. Added Chassis Ground Connection.	M. Daroy
1.1	02-05-2004	Corrected Ethernet PHY connection.	M. Daroy
2.0	02-17-2004 02-19-2004	Added TVS Diode on the Power Input Circuit. Released for Rev. B PCB Design. Edited the Power Input Jack Symbol to match part pins. Added SMB Footprint for the TVS Diode.	M. Daroy
3.0	06-10-2004	Added EMI Filter on the Power Input Circuit. Added 1206 size Footprint connecting DGND and Chassis. Replaced the Switching Regulator Output Caps to Low ESR Ceramic and added caps on the input and output. Added Bulk and bypass caps on the Card Edge Connector. Added termination caps on unused CPU signals. Added EMI Filter on the Power Switch Header. Added Caps on the USB Connector. Added Caps accross SLINK Cable pairs and isolated Digital Ground from Chassis on the Header Connector. Moved J7-8 connection from AGND_ETH to Chassis. Added Bulk Cap before FB17 and combined AGND_ETH to DGND. Added a series resistor on the Ethernet Crystal Output.	M. Daroy
3.1	06-15-2004	Moved the TVS Diode (D6) on the Cathode side of the Reverse Voltage Protection Diode (D1). Tied the Ground Return Path of the SLINK Cables to a single Ferrite Bead, isolating it from the Digital Ground.	M. Daroy
3.2	06-23-2004	Added Optional Power Supply Circuitry as recommended by the parts Manufacturer. Added Chassis and Digital Ground connection points.	M. Daroy
3.3	06-25-2004	Marked the DNI (Do Not Install) Parts for Assembly BOM generation. Added Mounting Hole connection to the Ground Plane.	M. Daroy
3.4	06-28-2004	Connected J4-4 directly to Chassis Ground and deleted FB6. Changed Audio Output Filter Caps ground connection from AGND_DAC to Chassis Ground. Replaced R49 with FB25 to Chassis Ground.	M. Daroy
4.0	10-20-2004	Connected J6-1 to AGND_DAC through a Ferrite Bead. Added AC bypass Cap for J6-1 to Chassis Ground. Changed Cap Value on C3 and C7 to 10uF.	M. Daroy

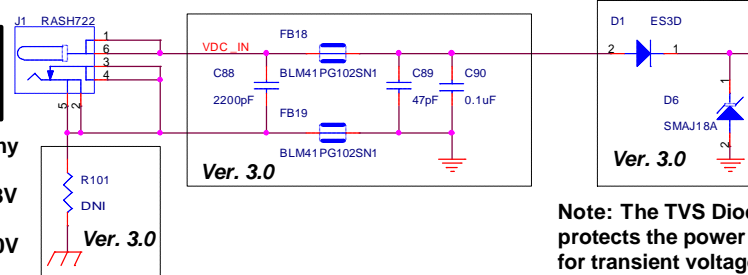
STREETRACER RBX1600

DWN: Mario Daroy		
ENG: Mario Daroy		
REV: D		
DATE: Wednesday, October 20, 2004	TITLE	STREETRACER RBX1600
SHEET 1 of 9	DWG. No.	ST08-01-03D
Vytek Confidential and Proprietary		12670 High Bluff Drive, San Diego CA 92130-2013

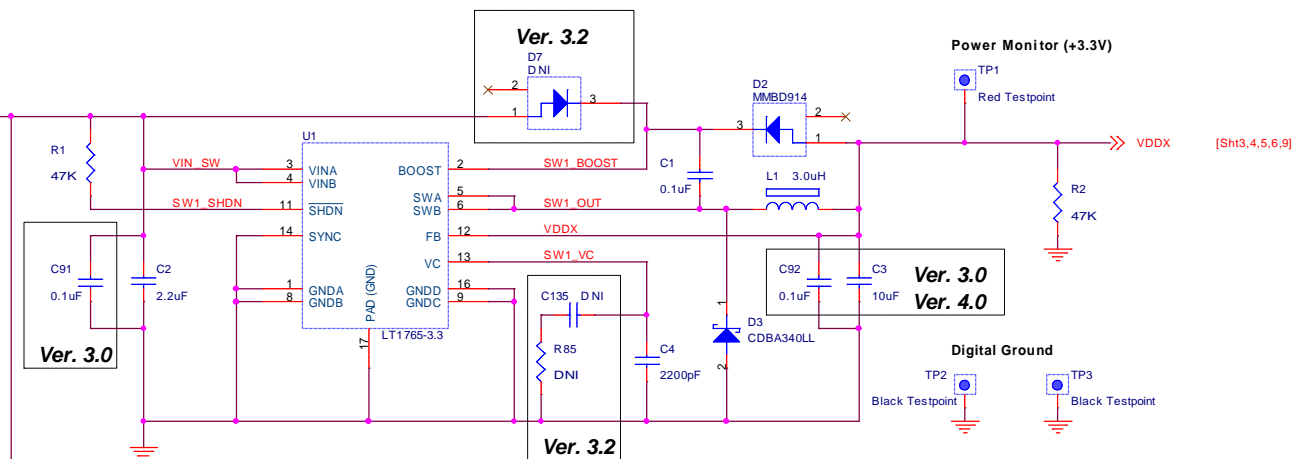
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**+ 9.0V
1.0A
DC IN**

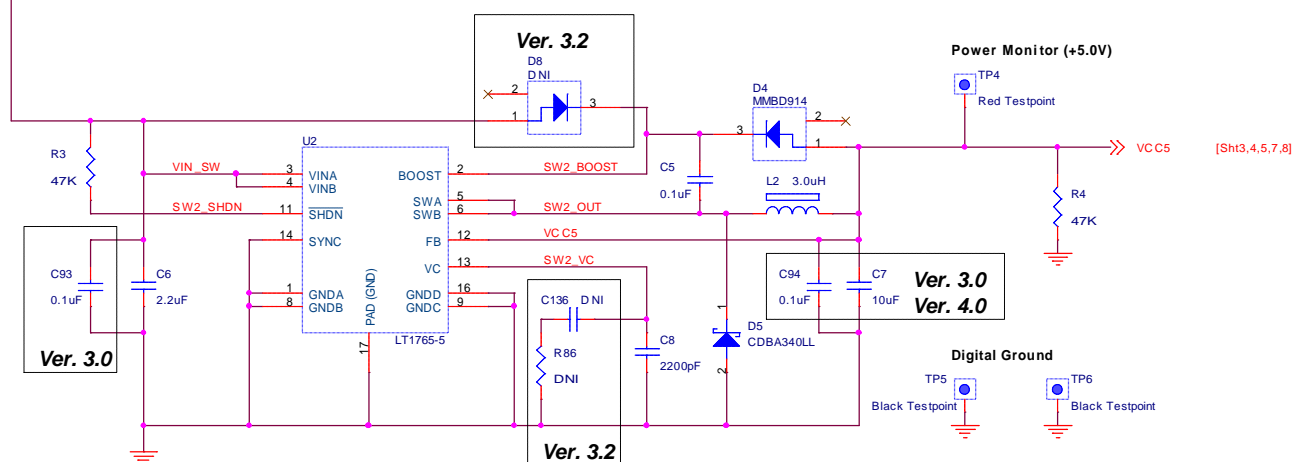
Note: DCIN can be any
Regulated Voltage
between +7.0V to +18V
OR any Unregulated
Voltage between +9.0V
to +12V. Minimum
Power Rating is 9W.



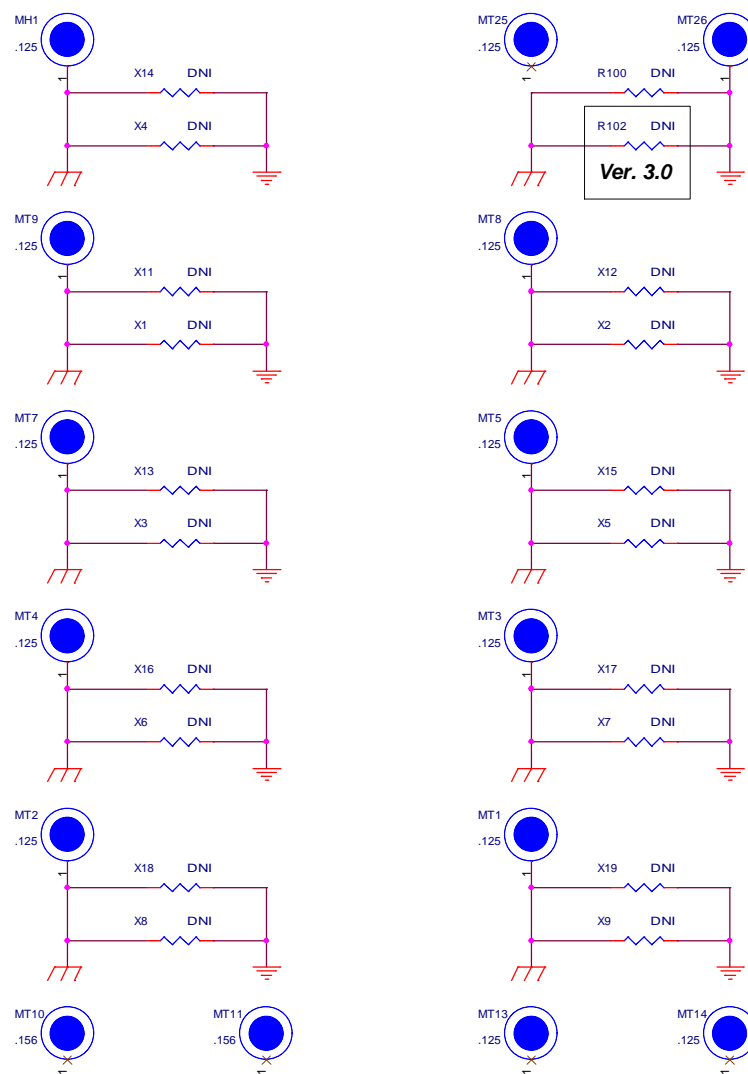
Note: The TVS Diode
protects the power circuitry
for transient voltages higher
than 22V.



PCB Design Note: Please follow PCB Layout Recommendations from the LT1765 Data Sheet.




Mouting Holes

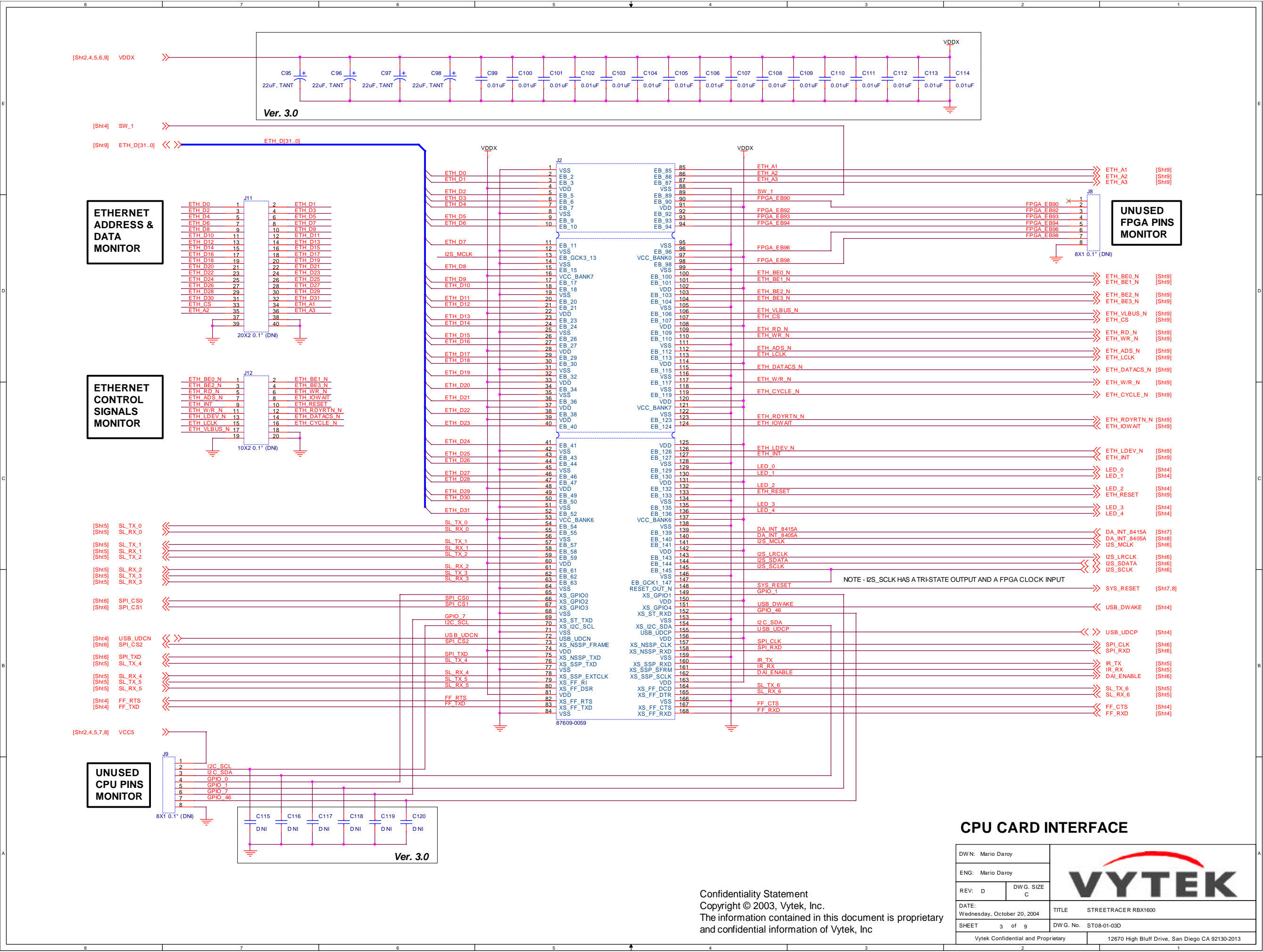


Ver. 3.3

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POWER

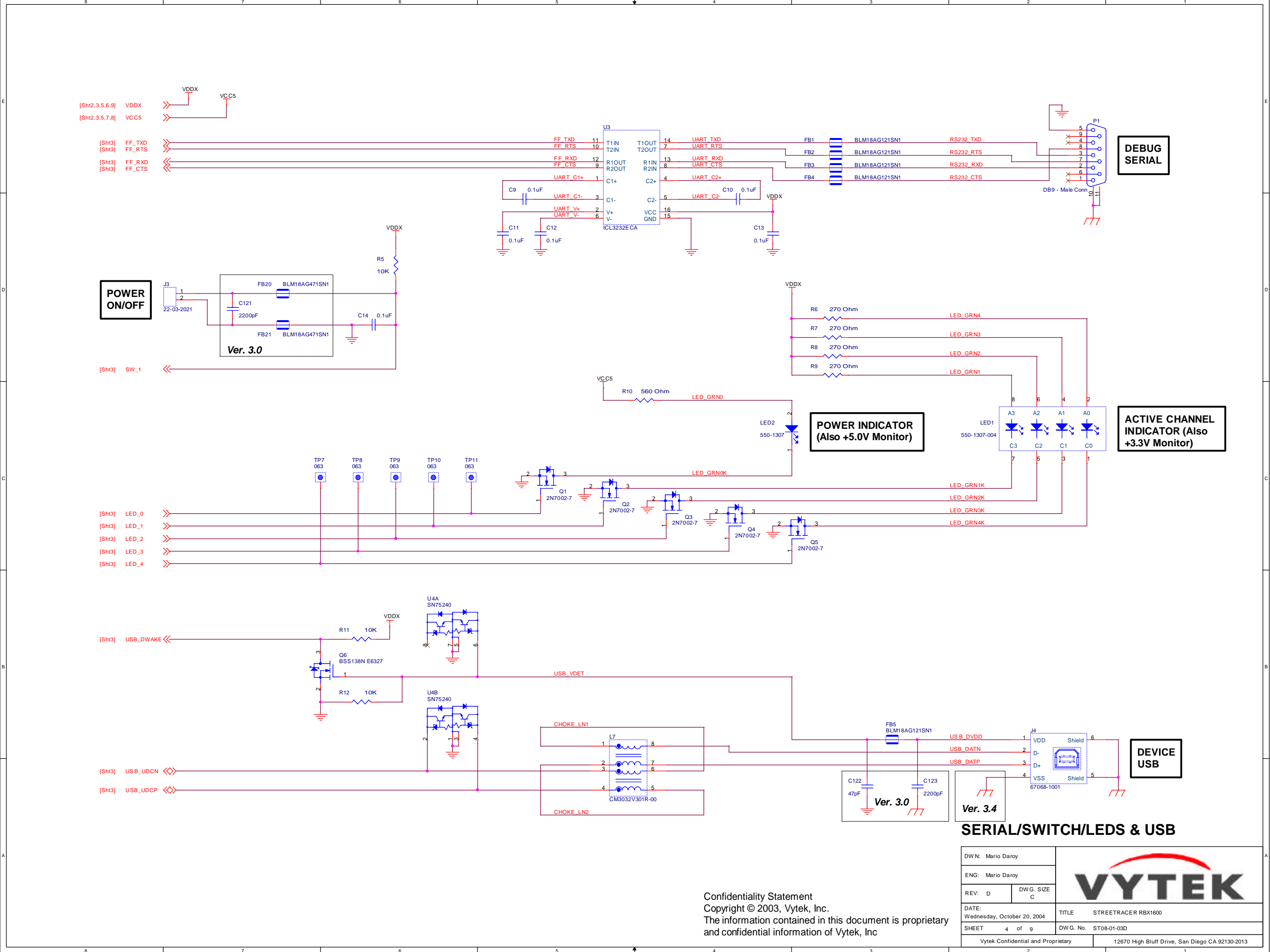
DWN: Kevin Emery		
ENG: Kevin Emery		
REV: D	DWG. SIZE C	
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CPU CARD INTERFACE

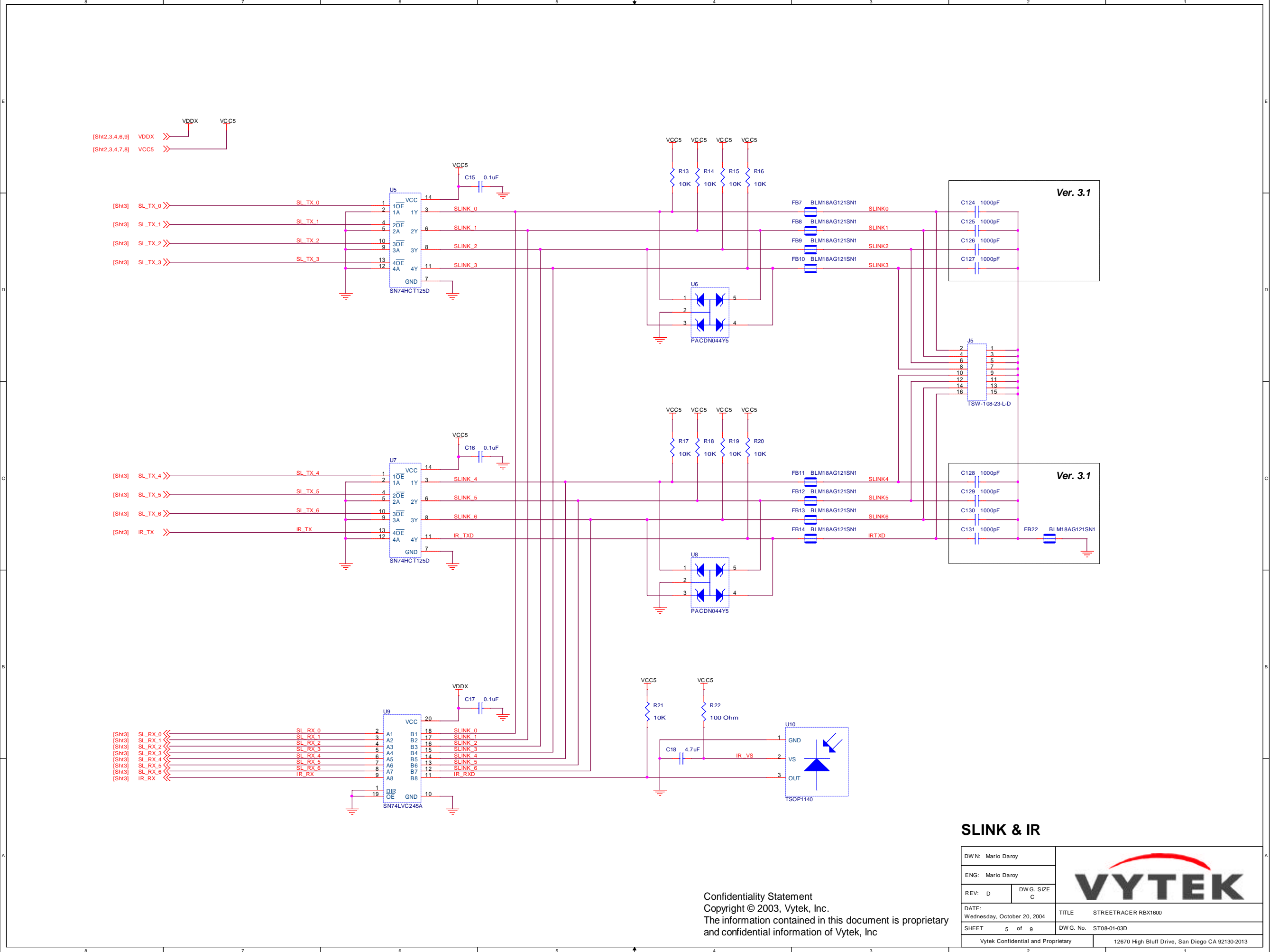
DWN: Mario Daroy			
ENG: Mario Daroy			
REV: D	DWG. SIZE C		
DATE: Wednesday, October 20, 2004		TITLE	STREETRACER RBX1600
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SERIAL/SWITCH/LEDS & USB

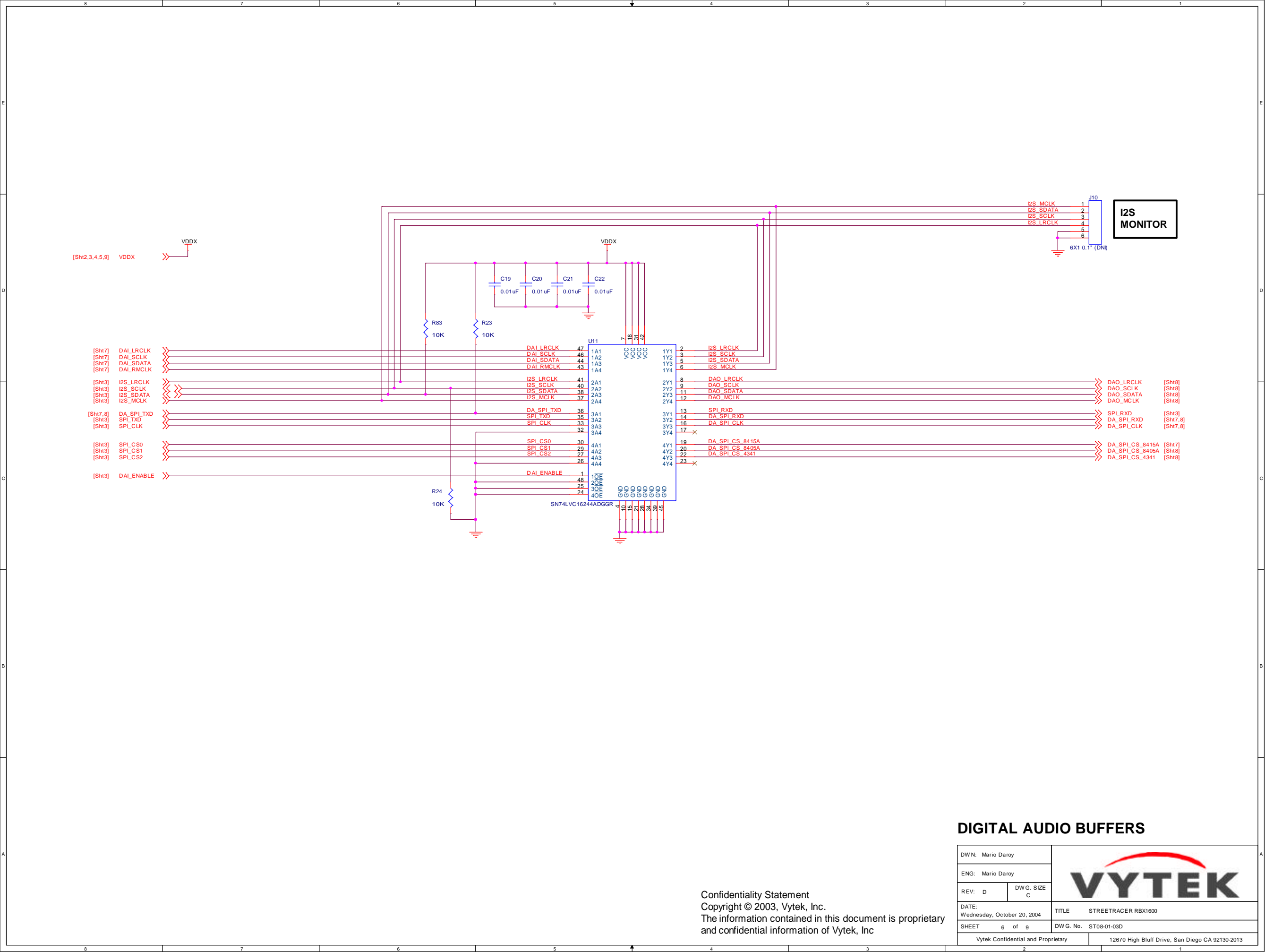
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DATE: Wednesday, October 20, 2004		
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SLINK & IR


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ENG: Mario Daroy		
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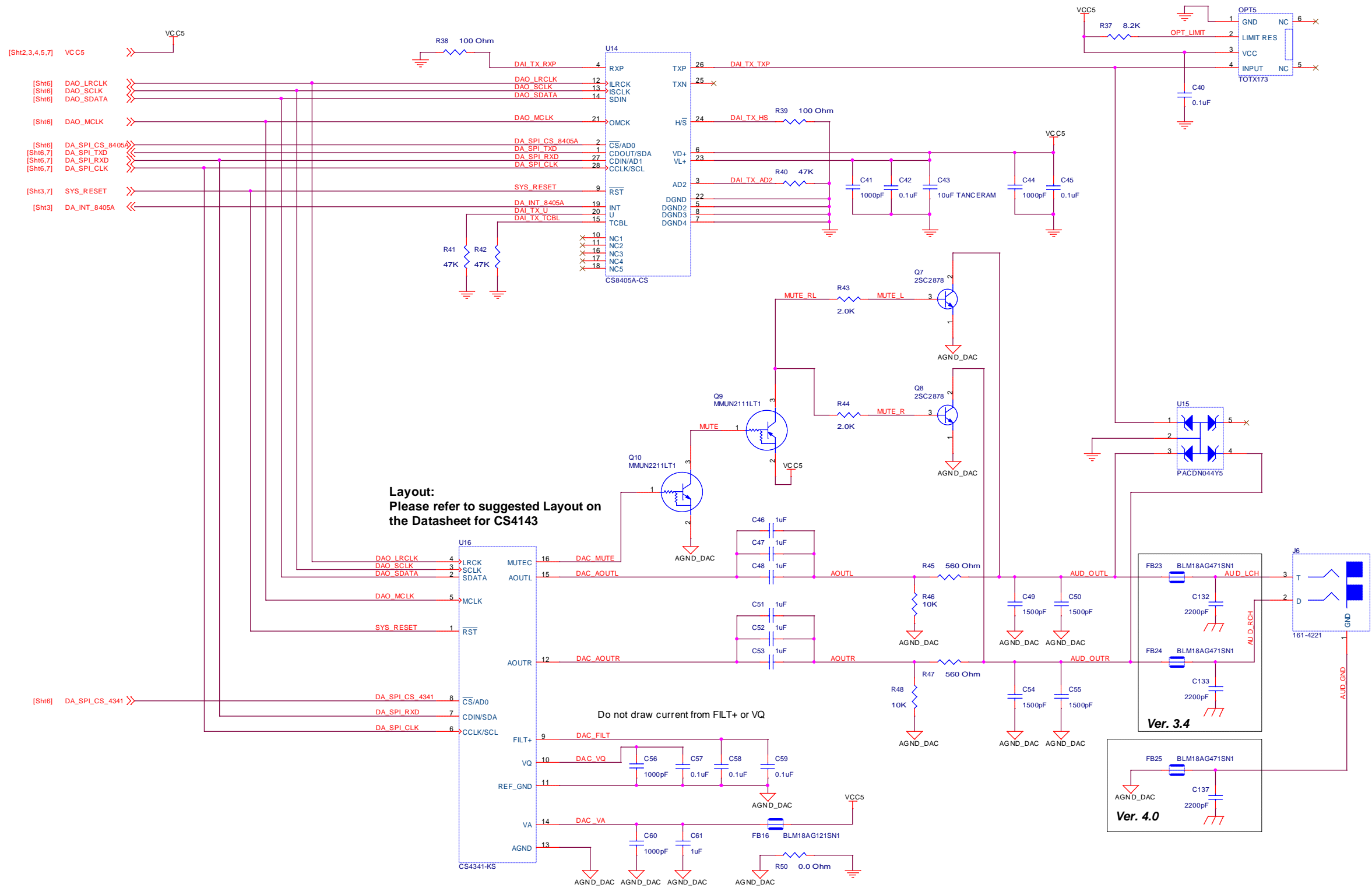
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DIGITAL AUDIO BUFFERS

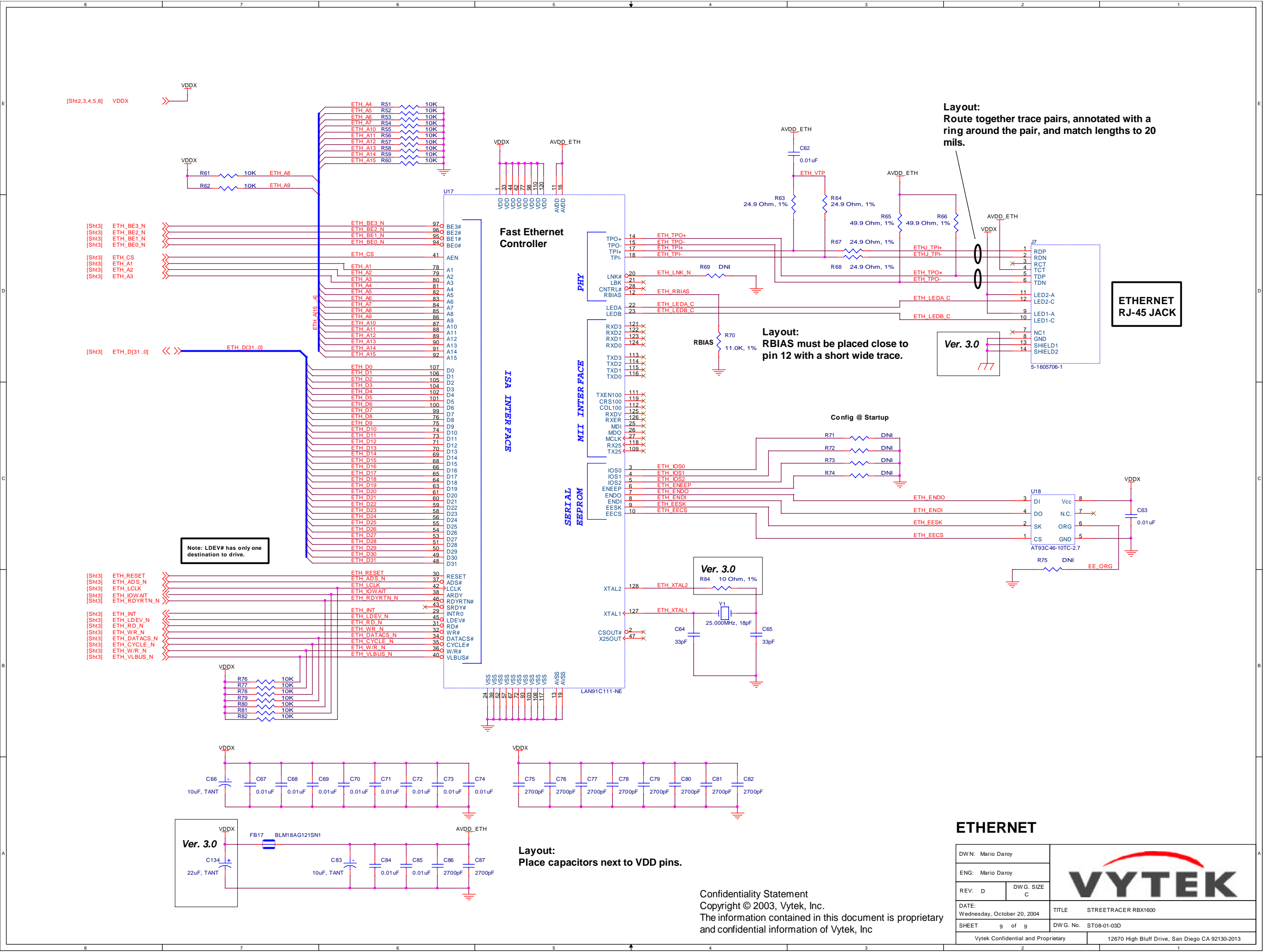
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DIGITAL AUDIO OUTPUT

DWN: K. Emery / M. Daroy			
ENG: K. Emery / M. Daroy			
REV: D	DWG. SIZE C		
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ETHERNET

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ENG: Mario Daroy			
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