Power

9V battery
5 V buck boost 2 A>
3V3 1 A
1V8 1 A
1V2 1 A
Power up sequence
5 V Current limiter
5V on/off
Current measurement on overall current
Voltage check on Batteries
5V BURN OUT

See page 11

TIAM1808

MCU

Ram Flash uSD

mDDR 1,8V 64 Mbyte 16 bit Wide
uSD CARD HC version up to 32 Gbyte
I2C boot ROM for secure boot
SPI flash 3V3 16Mbyte

See page 2 and 3

USB Host Client

USB Client 1,5 , 12 and 480 MBit
USB Host 1,5, 12 Mbit
5 Volt +500 mA (1,2A MAX)
Current limiter
Apple Autentic IC + Decoding MCU

See page 2 and 3

Display Button GUI

Display, B&W, 178X128 Reflective
6 Buttons UP, DOWN, L, R, ACK/ON, BACK
R and G Diodes
Sound out

See page 2 and 3

Input

4 Input ports (see page 4):
Port 1: PixyCam (see page 5)
Port 2: Gyro sensor (see page 6)
Port 3: Color sensor (see page 7)
Port 4: Ultrasonic (see page 8)

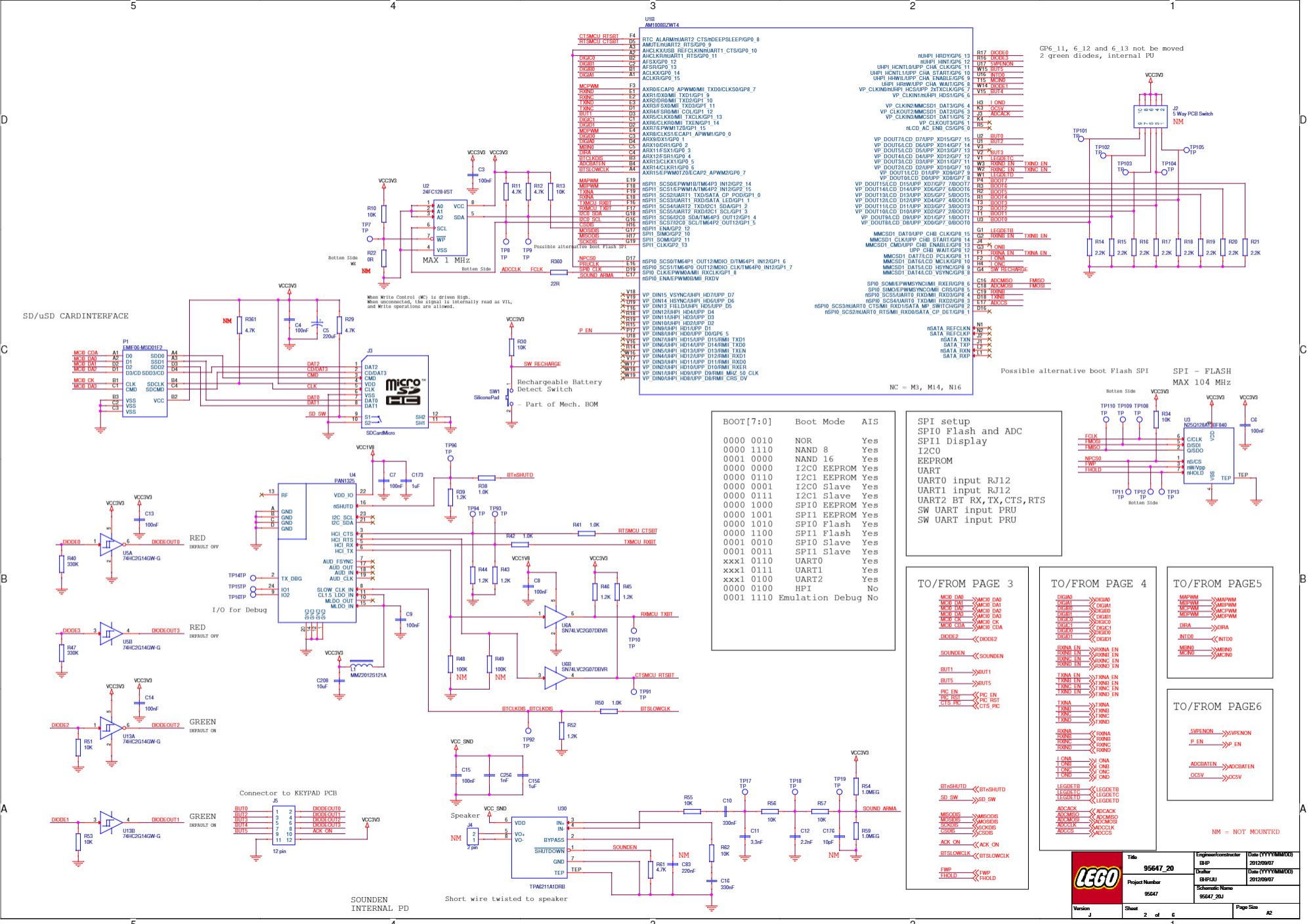
Output

4 Output ports (see page 9):
Port A: Medium motor (Drive)
Port B: Medium motor (Drive)
Port C: Medium motor (Steering)
(Motors schemes are on page 10)

Buttons
Diodes
are on the KEYPAD PCB

Note:
PU = Pull Up
PD = Pull Down
SDA = Seriel DATA
SCK = Seriel Clock
ADC = Analog Digital Converter
USB = Universal Serial Bus
UART = Universal Asynchronous Receiver/Transmitter
PWM = Pulse Wide Modulation
GUI = Graphical User Interface
B&W = Black and White
mDDR = Mobile Double Data Rate synchronous DRAM
R = Red
G = Green
uSD = micro Secure Digital
I2C = Inter-Integrated Circuit
SPI = Serial Peripheral Interface Bus
PCB = Printed Circuit Board

LEGO	Title: 95647_20	Engineer/constructor: BHP	Date (YYYY/MM/DD): 2012/09/07
	Project Number: 95647	Drafter: BHP/JU	Date (YYYY/MM/DD): 2012/09/07
		Schematic Name: 95647_20J	
Version: J	Sheet: 1 of 6		Page Size: A2


SD/uSD CARDINTERFACE
SDCardMicro
RED
DEFAULT OFF
GREEN
DEFAULT ON
I/O for Debug
Connector to KEYPAD PCB
12 pin
Rechargeable Battery
Detect Switch
- Part of Mech. BOM
MAX 1 MHz
Possible alternative boot Flash SPI
SPI - FLASH
MAX 104 MHz
NC = M3, M14, N16
GP6_11, 6_12 and 6_13 not be moved
2 green diodes, internal PU
BOOT[7:0] Boot Mode AIS
0000 0010 NOR Yes
0000 1110 NAND 8 Yes
0001 0000 NAND 16 Yes
0000 0000 I2C0 EEPROM Yes
0000 0110 I2C1 EEPROM Yes
0000 0001 I2C0 Slave Yes
0000 0111 I2C1 Slave Yes
0000 1000 SPI0 EEPROM Yes
0000 1001 SPI1 EEPROM Yes
0000 1010 SPI0 Flash Yes
0000 1100 SPI1 Flash Yes
0001 0010 SPI0 Slave Yes
0001 0011 SPI1 Slave Yes
xxx1 0110 UART0 Yes
xxx1 0111 UART1 Yes
xxx1 0100 UART2 Yes
0000 0100 HPI No
0001 1110 Emulation Debug No
SPI setup
SPI0 Flash and ADC
SPI1 Display
I2C0
EEPROM
UART
UART0 input RJ12
UART1 input RJ12
UART2 BT RX,TX,CTS,RTS
SW UART input PRU
SW UART input PRU
TO/FROM PAGE 3
TO/FROM PAGE 4
TO/FROM PAGE5
TO/FROM PAGE6
SOUNDEN
INTERNAL PD
Speaker
Short wire twisted to speaker
NM = NOT MOUNTED
Title
95647_20
Project Number
95647
Engineer/constructor
BHP
Drafter
BHP/JU
Schematic Name
95647_20J
Date (YYYY/MM/DD)
2012/09/07
Version
J
Sheet
2 of 6
Page Size
A2

TO/FROM PAGE 2

MCI0_DA0 <> MCI0_DA0
MCI0_DA1 <> MCI0_DA1
MCI0_DA2 <> MCI0_DA2
MCI0_DA3 <> MCI0_DA3
MCI0_CK <> MCI0_CK
MCI0_CDA <> MCI0_CDA

DIODE2 <> DIODE2

SOUNDEN <> SOUNDEN

BUT1 <> BUT1
BUT5 <> BUT5
ACK_ON <> ACK_ON

PIC_EN <> PIC_EN
PIC_RST <> PIC_RST
CTS_PIC <> CTS_PIC

MISODIS <> MISODIS
MOSIDIS <> MOSIDIS
SCKDIS <> SCKDIS
CSDIS <> CSDIS

BTnSHUTD <> BTnSHUTD

SD_SW <> SD_SW

BTSLOWCLK <> BTSLOWCLK

FWP <> FWP

FHOLD <> FHOLD

TO/FROM PAGE 4

LEGDETA <> LEGDETA

TO/FROM PAGE 5

DIRB <> DIRB
DIRC <> DIRC
DIRD <> DIRD

DETA0 <> DETA0
DETB0 <> DETB0
DETC0 <> DETC0
DETD0 <> DETD0

MAIN0 <> MAIN0
MAIN1 <> MAIN1
MBIN1 <> MBIN1

MCN1 <> MCN1
MDN0 <> MDN0
MDN1 <> MDN1

INTA0 <> INTA0
INTB0 <> INTB0
INTC0 <> INTC0

TO/FROM PAGE 6

5VSTEPPERON <> 5VSTEPPERON
RESET <> RESET

VCC9VBIAT
R77 100K
Q4B PUMD6
Q4A PUMD6
5VSTEPPERON
TP TP86
R76 100K
Protection for Vbat below 2.7 V And no 9 Volt on the 3V3 rail during Power up
VCC3V3
R79 10K
D4 BAV99
Q5 BC857
ACK_ON
R81 10K
BUT1
TP TP95
R82 3.3K

VCC5V
C2 220uF
C1 100nF
MAX 12 Mbps
J1 USB A
V+ D- D+ GND
USB A
USB1DN
USB1DP
D3 CDSOT236-0502
TP3 TP TP5 TP

HW Version Identification

HWD 0101

R322 4.7K R323 4.7K R324 4.7K R325 4.7K
R83 4.7K R84 4.7K R85 4.7K R86 4.7K
HWD3 HWD2 HWD1 HWD0

JTAG-ARM-20

TP24 TP25 TP26 TP27 TP28 TP29 TP30 TP31 TP
nTRST TDI TMS TCK RTCK TDO RESET_1
C32 100nF
R93 10K R94 10K R95 10K R96 10K R97 10K
R109 22R
R110 22R
R111 0R
R112 10K
TP32 TP

RESET DELAY
U9 TLV803S
VCC RESET GND
VCC3V3
BUT5 BUT1
U25 SN74AHC1G08DBV
R348 470R
R304 680K
D34 BAW56
Q21 BC847C
R303 680K
C78 100nF
C184 10uF
C37 10nF
3 SEC delay

Compatible Devices:
CAT803SSDI-GT3
ADM803SAKS-XXXX
and more

240 mS delay open drain SC70

R101 10K R103 10K
TP33 TP RESET_TP Botten Side

ON and BACK HOLD BUTTON RESET DELAY

VCC3V3
J6 16 pin
LCD Module (count from right)
16 - VC
15 - XV0
14 - V0
13 - VM
12 - VDDA
11 - GND
10 - GND
09 - VD1
08 - VDD1
07 - EXTB
06 - CS
05 - RST
04 - A0
03 - SDA
02 - SCL
01 - VPP
C17 1uF
C18 100nF
C19 1uF
C20 1uF
C21 1uF
TP116 TP117 TP118 TP20
CSDIS RSTDIS MISODIS MOSIDIS SCKDIS
R358 27R
R359 27R
TP119 TP120
TP21 TP
LCD FPC Connector

U1A
AM1808BZWT4

MCI0_CK MCI0_CDA MCI0_DA0 MCI0_DA1 MCI0_DA2 MCI0_DA3
DETD0 SD_SW INTC0
INTA0 MDN0 MCN1 INTB0 CTS_PIC
DETA0 MDN1 FWP
RSTDIS
DIRB DIRD
MAIN1 HWD0 HWD1 PIC_EN HWD2
PIC_RST
HWD3 BTnSHUTD
DIRC MAIN0 FHOLD
DETB0
LEGDETA
MBIN1 DETC0
TDI TDO TMS TCK nTRST
RTCK1 RSVDN SOUNDEN RESET DIODE2

EMA_A23/MMCSD0_CLK/GP4_7
EMA_A22/MMCSD0_CMD/GP4_6
EMA_A21/MMCSD0_D0/GP4_5
EMA_A20/MMCSD0_D1/GP4_4
EMA_A19/MMCSD0_D2/GP4_3
EMA_A18/MMCSD0_D3/GP4_2
EMA_A17/MMCSD0_D4/GP4_1
EMA_A16/MMCSD0_D5/GP4_0
EMA_A15/MMCSD0_D6/GP5_15
EMA_A14/MMCSD0_D7/GP5_14
EMA_A13/GP5_13
EMA_A12/GP5_12
EMA_A11/GP5_11
EMA_A10/GP5_10
EMA_A9/GP5_9
EMA_A8/GP5_8
EMA_A7/GP5_7
EMA_A6/GP5_6
EMA_A5/GP5_5
EMA_A4/GP5_4
EMA_A3/GP5_3
EMA_A2/GP5_2
EMA_A1/GP5_1
EMA_A0/GP5_0
EMA_BA1/GP2_9
EMA_BA0/GP2_8
EMA_D15/GP3_7
EMA_D14/GP3_6
EMA_D13/GP3_5
EMA_D12/GP3_4
EMA_D11/GP3_3
EMA_D10/GP3_2
EMA_D9/GP3_1
EMA_D8/GP3_0
EMA_D7/GP4_15
EMA_D6/GP4_14
EMA_D5/GP4_13
EMA_D4/GP4_12
EMA_D3/GP4_11
EMA_D2/GP4_10
EMA_D1/GP4_9
EMA_D0/GP4_8
EMA_CLK/GP2_7
EMA_SDCKE/GP2_6
nEMA_CS5/GP3_12
nEMA_CS4/GP3_13
nEMA_CS3/GP3_14
nEMA_CS2/GP3_15
nEMA_CS0/GP2_0
nEMA_WE/GP3_11
nEMA_OE/GP3_10
EMA_A_R/W/GP3_9
nEMA_RAS/GP2_5
nEMA_CAS/GP2_4
EMA_WEN_DQM1/GP2_2
EMA_WEN_DQM0/GP2_3
EMA_WAIT1/GP2_1
EMA_WAIT0/GP3_8
TDI TDO TMS TCK nTRST
EMU1 EMU0 RTCK/GP8_0 RSVDN nRESETOUT/mUHPI_HAS/GP6_15 nRESET CLKOUT/mUHPI_HDS2/GP6_14

DDR_A13 DDR_A12 DDR_A11 DDR_A10 DDR_A9 DDR_A8 DDR_A7 DDR_A6 DDR_A5 DDR_A4 DDR_A3 DDR_A2 DDR_A1 DDR_A0
DDR_BA2 DDR_BA1 DDR_BA0
DDR_D15 DDR_D14 DDR_D13 DDR_D12 DDR_D11 DDR_D10 DDR_D9 DDR_D8 DDR_D7 DDR_D6 DDR_D5 DDR_D4 DDR_D3 DDR_D2 DDR_D1 DDR_D0
DDR_CLKP DDR_CLKN DDR_CKE
nDDR_CS nDDR_WE nDDR_RAS nDDR_CAS
DDR_DQS1 DDR_DQS0
DDR_DQGATE0 DDR_DQGATE1
DDR_DQM1 DDR_DQM0
USB0_DRVVBUS USB0_VBUS USB0_DM USB0_DP USB0_ID
USB1_DN USB1_DP
RTC_XI RTC_XO
OSCIN OSCOUT

mDDR_A13 mDDR_A12 mDDR_A11 mDDR_A10 mDDR_A9 mDDR_A8 mDDR_A7 mDDR_A6 mDDR_A5 mDDR_A4 mDDR_A3 mDDR_A2 mDDR_A1 mDDR_A0
BA1 BA0
mDDR_D15 mDDR_D14 mDDR_D13 mDDR_D12 mDDR_D11 mDDR_D10 mDDR_D9 mDDR_D8 mDDR_D7 mDDR_D6 mDDR_D5 mDDR_D4 mDDR_D3 mDDR_D2 mDDR_D1 mDDR_D0
R341 22R R340 22R R339 22R R338 22R R337 22R R336 22R R335 22R R334 22R R333 22R R332 22R R331 22R R330 22R R329 22R R328 22R R327 22R R326 22R
mDDR_CK mDDR_nCK mDDR_CKE
R342 10R R343 10R
nCS nWE nRAS nCAS
mDDR_UDQS mDDR_LDQS
R344 22R R345 22R
R87 0R
mDDR_STRBEN mDDR_STRBEN_DEL
mDDR_UDQM mDDR_LDQM
R346 22R R347 22R
R90 1.0K
USB0_DRVVBUS USB0_VBUS
USB0_DM USB0_DP
USB1DN_1 USB1DP_1
R88 24.9R R104 24.9R
R107 15K R108 15K
RTC_XI RTC_XOUT
X1 32.768KHz
C33 18pF C34 18pF
OSCIN OSCOUT
X2 24MHz
C35 22pF C36 22pF

NC = M3, M14, N16

X1 Alternate Component :
FSX327LF

X2 Alternate Component :
CS10-24.000MABJ-UT

U8
MT46H32M16LFBF-5
VCC1V8
mDDR_A0 mDDR_A1 mDDR_A2 mDDR_A3 mDDR_A4 mDDR_A5 mDDR_A6 mDDR_A7 mDDR_A8 mDDR_A9 mDDR_A10 mDDR_A11 mDDR_A12 mDDR_A13
BA0 BA1
mDDR_LDQM mDDR_UDQM
mDDR_CK mDDR_nCK
mDDR_CKE
nCAS nRAS nCS nWE
mDDR_D0 mDDR_D1 mDDR_D2 mDDR_D3 mDDR_D4 mDDR_D5 mDDR_D6 mDDR_D7 mDDR_D8 mDDR_D9 mDDR_D10 mDDR_D11 mDDR_D12 mDDR_D13 mDDR_D14 mDDR_D15
mDDR_UDQS mDDR_LDQS

VCC1V8
C22 22uF C23 10uF C24 100nF C25 100nF C26 100nF C27 100nF C28 100nF C29 100nF C30 100nF C31 100nF
C213 100nF C214 10nF C215 1nF C216 10nF C217 1nF
Optional Caps. Noise Reduction

DQS1/DQS0 , DQM1/DQM0 : Target 50 ohms to GND for each signal Keep away from other signals.

CLKP/CLKN : Route Clock Signal as 100ohm.Differential Pair,match Trace length

ROUTE THIS PAIR OF SIGNALS PHYSICALLY CLOSE TO THE DATA BUS. TOTAL TRACK LENGTH OF STROBE + STROBE DEL SHOULD BE SUM OF DDR CLOCK LENGTH +AVG(DQS0 + DQS1) LENGTH. KEEP BOTH SIGNALS CLOSE TO EACH OTHER. THERE IS NO IMPEDANCE MISMATCHMENT FOR THESE SIGNALS

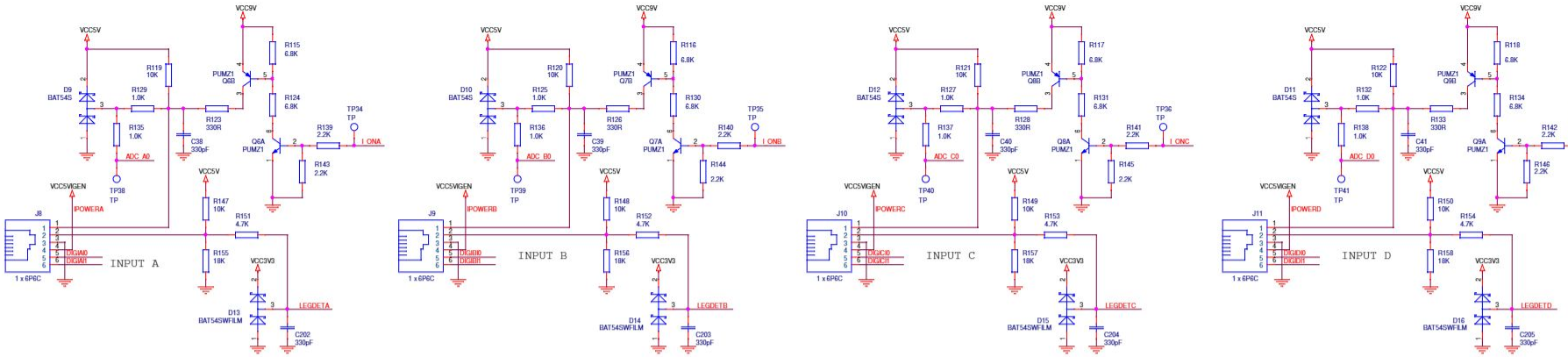
VCC3V3
R88 10K R89 10K
TP22 TP
R99 0R R92 10K
TP23 TP
R106 0R R105 0R R91 0R
NM

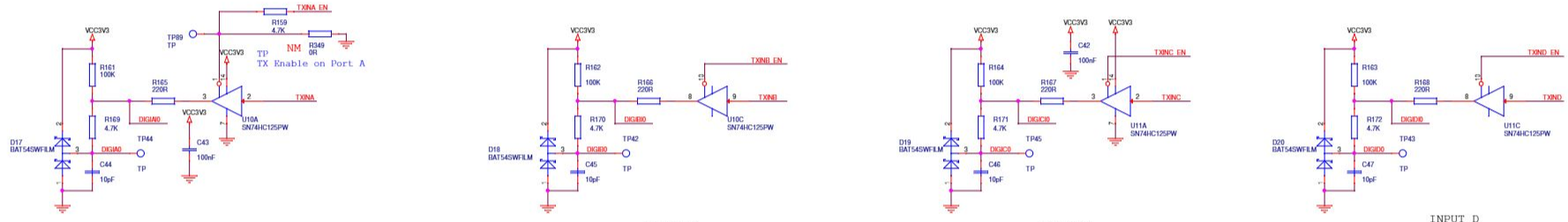
VCC5V
D7 CDSOT236-0502
J7 USB B mini
USB5V USB1DN USB1DP USB0D
V+ D- D+ ID GND
USB B
D6 CDSOT236-0502

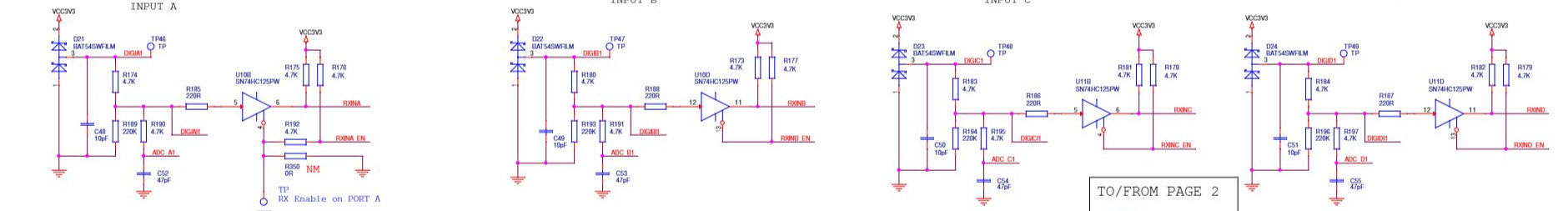
NM = NOT MOUNTED

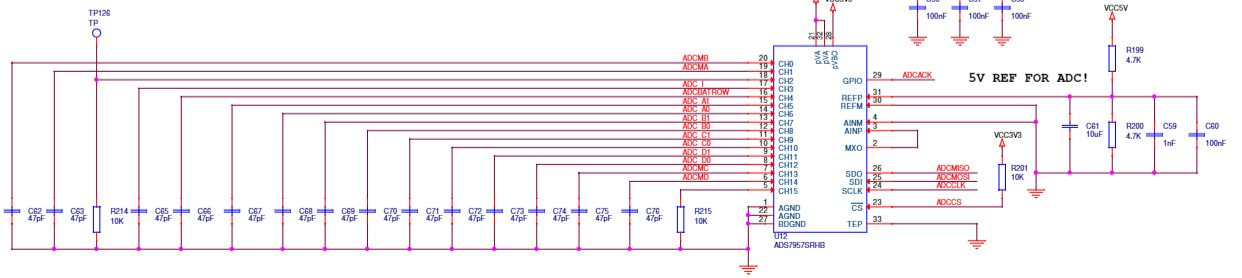
LEGO	Title: 95647_20	Engineer/constructor: BHP	Date (YYYY/MM/DD): 2012/09/07
	Project Number: 95647	Drafter: BHP/JU	Date (YYYY/MM/DD): 2012/09/07
		Schematic Name: 95647_20J	
Version: J	Sheet: 3 of 6		Page Size: A2

TO BE REDRAWN









TO/FROM PAGE 2

DIGIA0 DIGIA1 DIGIB0 DIGIB1 DIGIC0 DIGIC1 DIGID0 DIGID1
RXINA EN RXINB EN RXINC EN RXIND EN
TXINA TXINB TXINC TXIND
RXINA RXINB RXINC RXIND
I ONA I ONB I ONC I OND
LEGDETB LEGDETC LEGDETD
ADCACK ADCMISO ADCMOSI ADCCLK ADCCS

TO/FROM PAGE 3

LEGDETA

TO/FROM PAGE 6

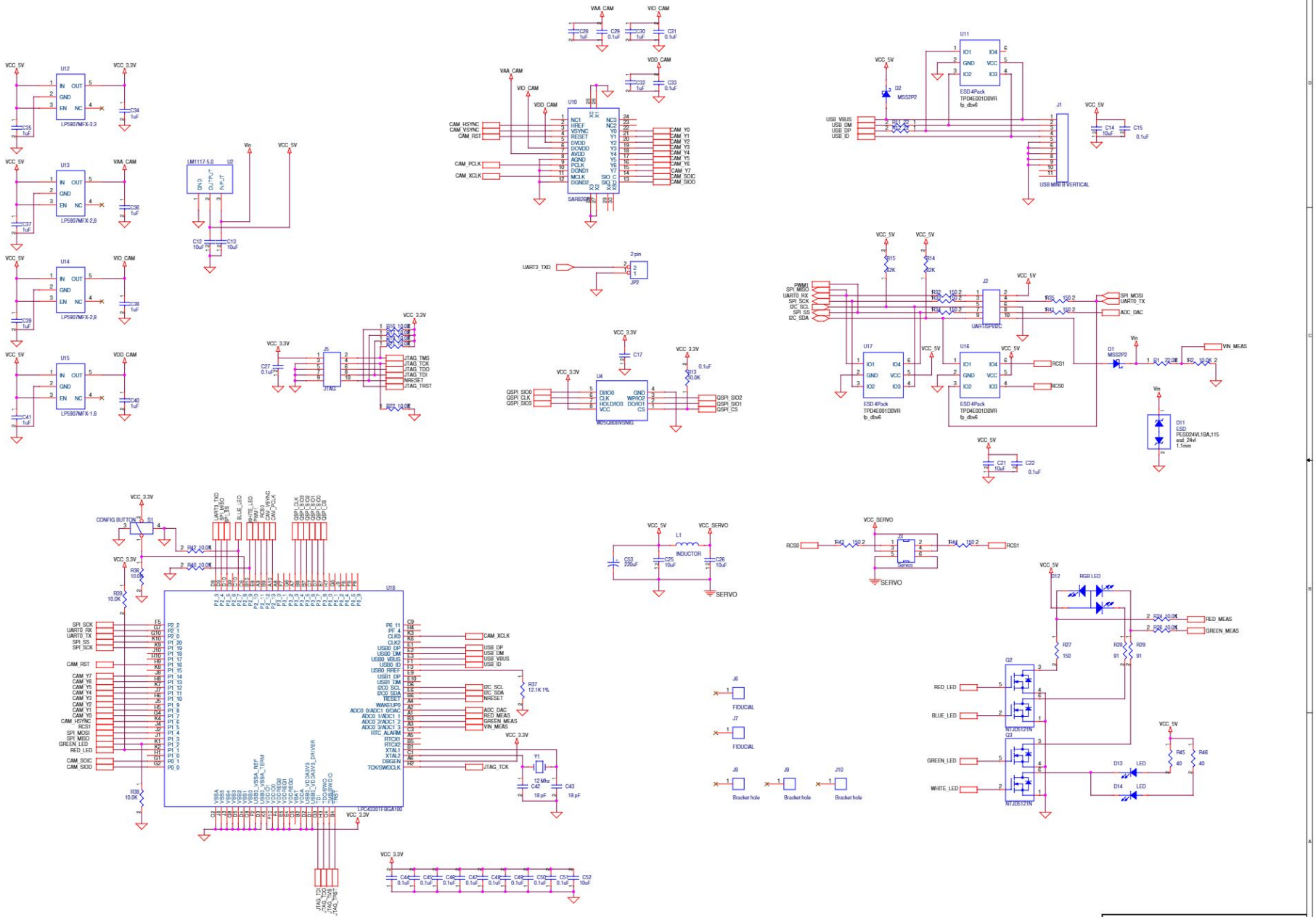
ADC_I
ADCBATROW

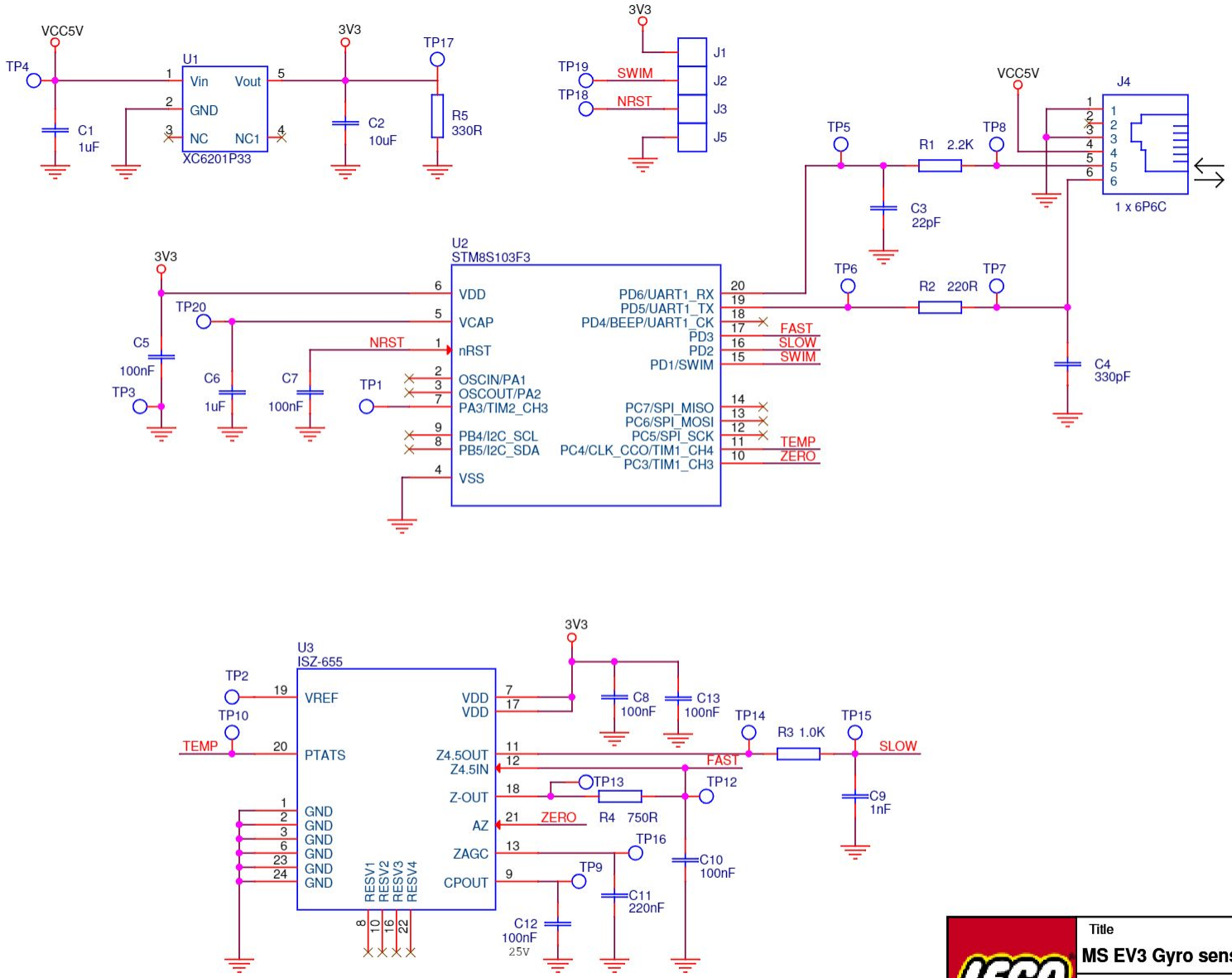
TO/FROM PAGE 5

ADCMA ADCMB ADCMC ADCMD

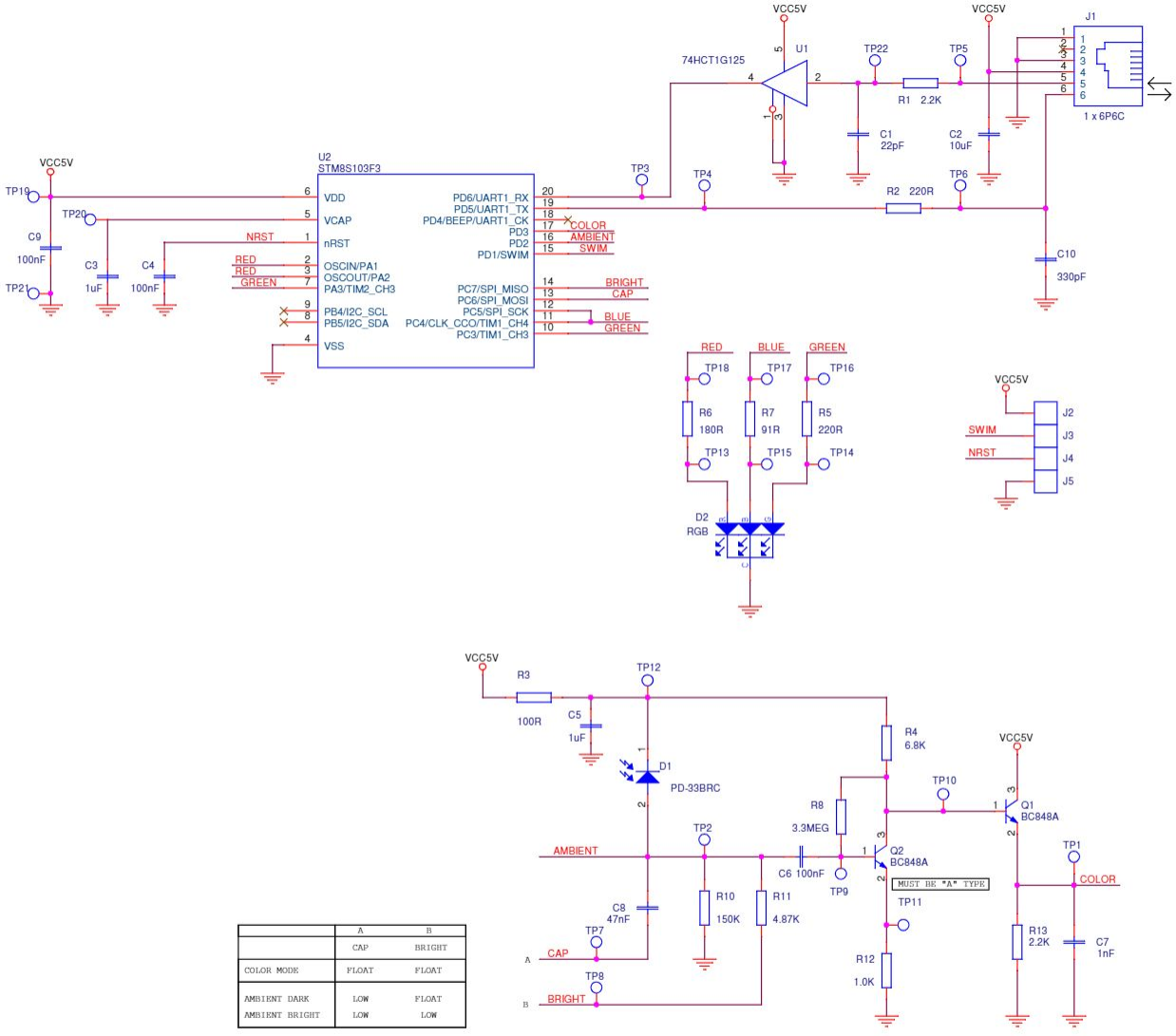
NM = NOT MOUNTED

Title: 95647_20		Engineer/constructor: BHP	Date (YYYY/MM/DD): 2012/09/07
Project Number: 95647		Drafter: BHP/JU	Date (YYYY/MM/DD): 2012/09/07
		Schematic Name: 95647_20J	
Version: J	Sheet: 4 of 6		Page Size: A2


VCC_5V
VCC_3.3V
VAA_CAM
VIO_CAM
VDD_CAM
LP5907MFX-3.3
LP5907MFX-2.8
LP5907MFX-1.8
LM1117-5.0
CAM_HSYNC
CAM_VSYNC
CAM_RST
CAM_PCLK
CAM_XCLK
CAM_Y0
CAM_Y1
CAM_Y2
CAM_Y3
CAM_Y4
CAM_Y5
CAM_Y6
CAM_Y7
CAM_SIOC
CAM_SIOD
USB_VBUS
USB_DM
USB_DP
USB_ID
ESD 4Pack
TPD4E001DBVR
USB MINI B VERTICAL
UART3_TXD
2 pin
JTAG_TMS
JTAG_TCK
JTAG_TDO
JTAG_TDI
NRESET
JTAG_TRST
QSPI_SIO0
QSPI_CLK
QSPI_SIO3
QSPI_SIO2
QSPI_SIO1
QSPI_CS
PWM1
SPI_MOSI
UART0_RX
SPI_SCK
SPI_SS
I2C_SCL
I2C_SDA
UART0_TX
ADC_DAC
UART3SPI/I2C
RCS1
RCS0
VIN_MEAS
MSS2P2
PESD24VL1BA,115
esd_24vl
1.1mm
CONFIG BUTTON
BLUE_LED
WHITE_LED
CAM_PCLK
GSPI_CLK
GSPI_SIO3
GSPI_SIO2
GSPI_SIO1
GSPI_CS
SPI_SCK
UART0_RX
UART0_TX
SPI_SS
SPI_SCK
CAM_RST
CAM_Y7
CAM_Y6
CAM_Y5
CAM_Y4
CAM_Y3
CAM_Y2
CAM_Y1
CAM_Y0
CAM_HSYNC
RCS1
SPI_MOSI
SPI_MISO
GREEN_LED
RED_LED
CAM_SOIC
CAM_SIOD
CAM_XCLK
USB_DP
USB_DM
USB_VBUS
USB_ID
I2C_SCL
I2C_SDA
NRESET
ADC_DAC
RED_MEAS
GREEN_MEAS
VIN_MEAS
JTAG_TCK
LPC43301FBGA100
INDUCTOR
SERVO
VCC_SERVO
RGB LED
RED_LED
BLUE_LED
GREEN_LED
WHITE_LED
RED_MEAS
GREEN_MEAS
FIDUCIAL
Bracket hole
Title
Play 2
Size
Custom
Document Number
<Doc>
Rev
2.2
Date:
Monday, December 11, 2017
Sheet
1
of
1

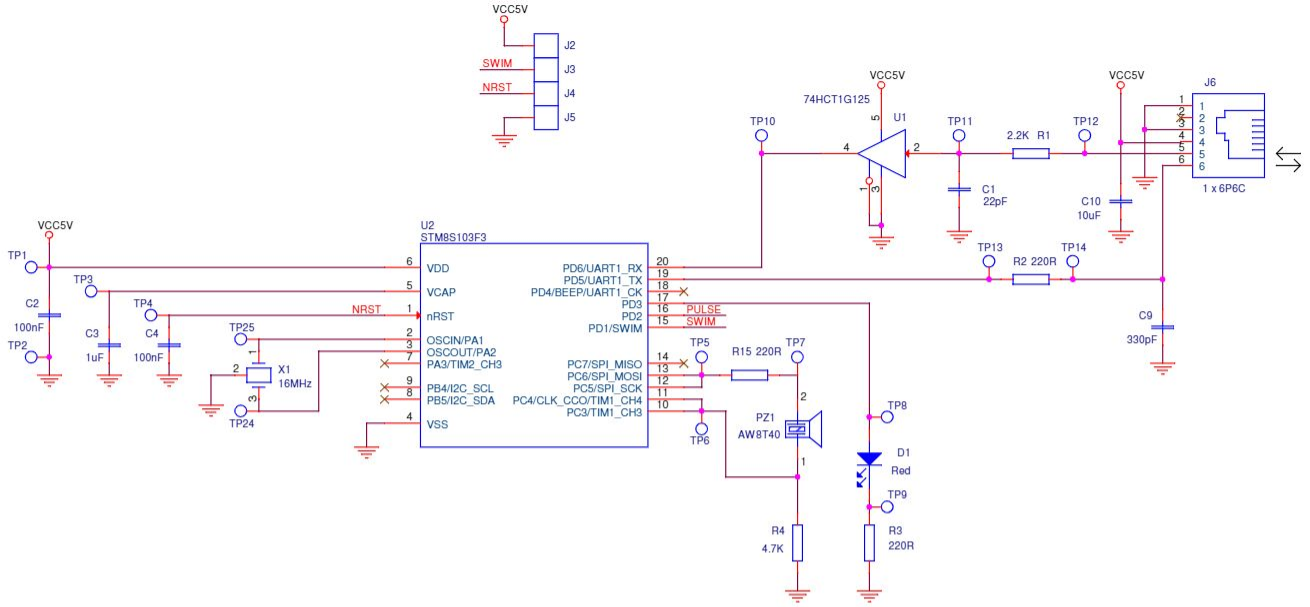


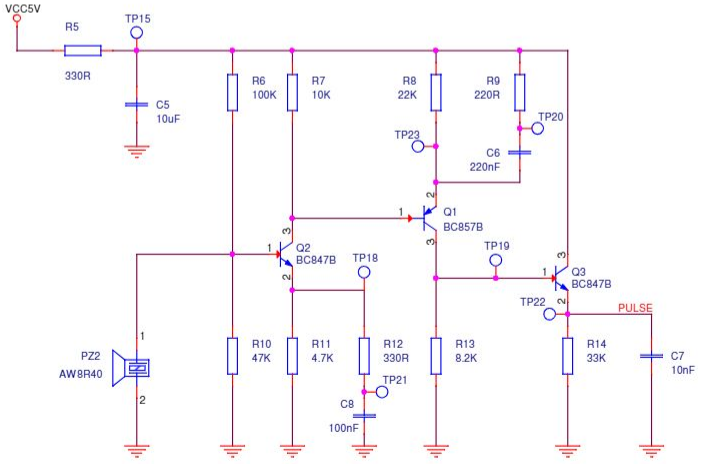
LEGO	Title: MS EV3 Gyro sensor	Engineer/constructer: PP	Date (YYYY/MM/DD): 2012 / 05 / 03
		Drafter	Date (YYYY/MM/DD)
	Project Number: 99383_20E	Schematic Name: SCHEMATIC1	
Version	Sheet: 1 of 1	Page Size: A4	



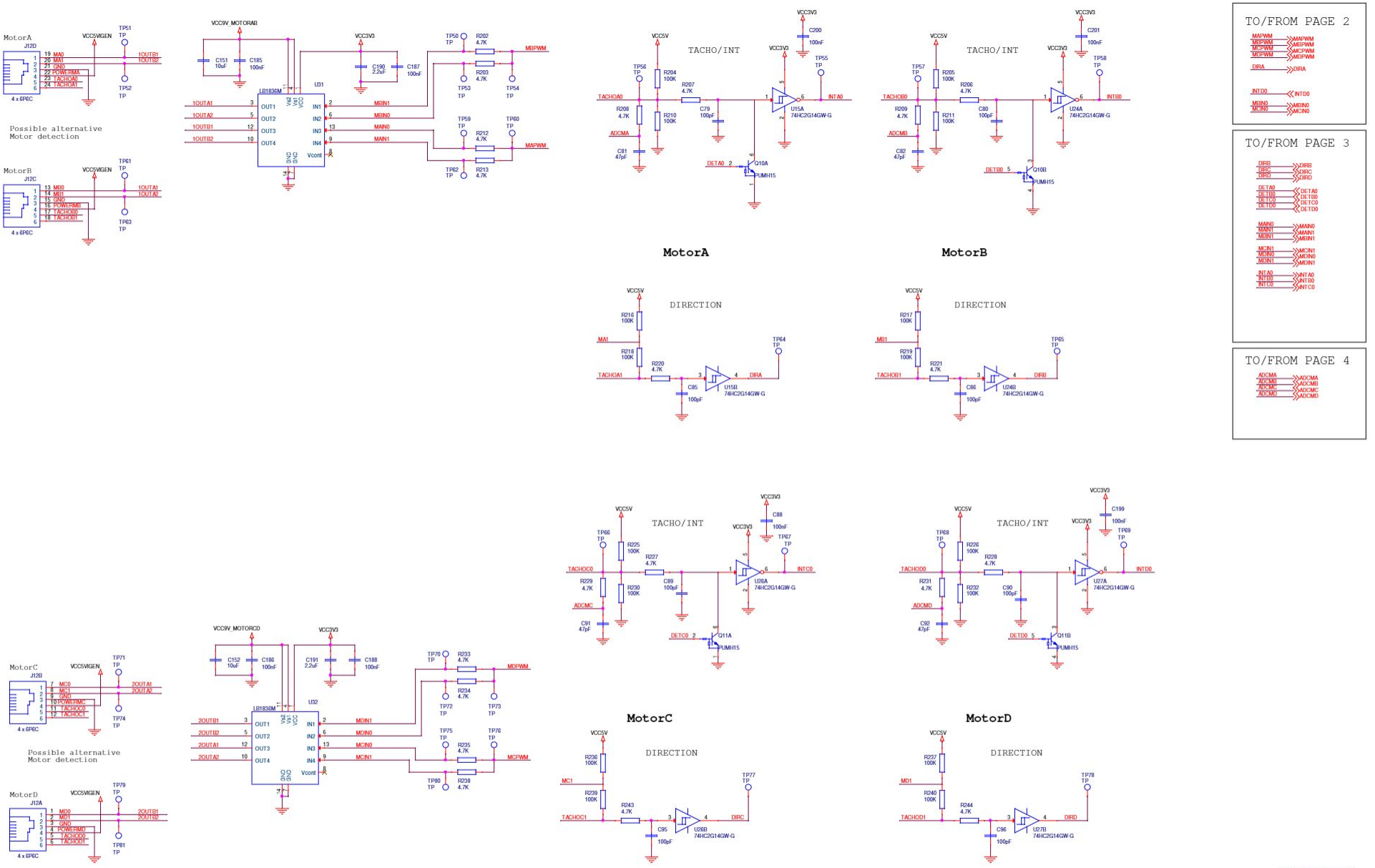
	A	B
	CAP	BRIGHT
COLOR MODE	FLOAT	FLOAT
AMBIENT DARK	LOW	FLOAT
AMBIENT BRIGHT	LOW	LOW

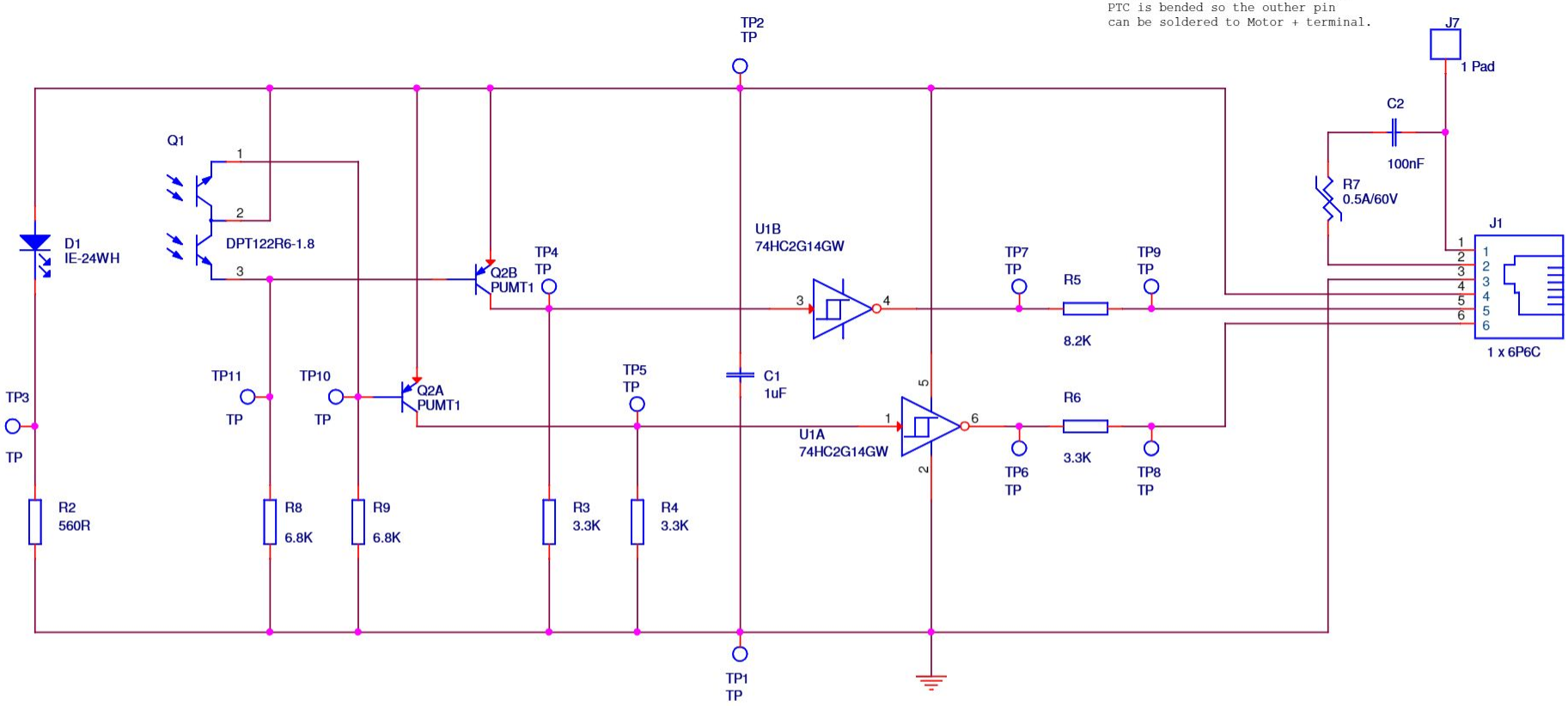
	Title: MS-EV3, Color sensor	Engineer/constructer: PP	Date (YYYY/MM/DD): 2012-09-11
		Drafter	Date (YYYY/MM/DD)
	Project Number: 95651_20G	Schematic Name: SCHEMATIC1	
Version	Sheet: 1 of 1	Page Size: A3	



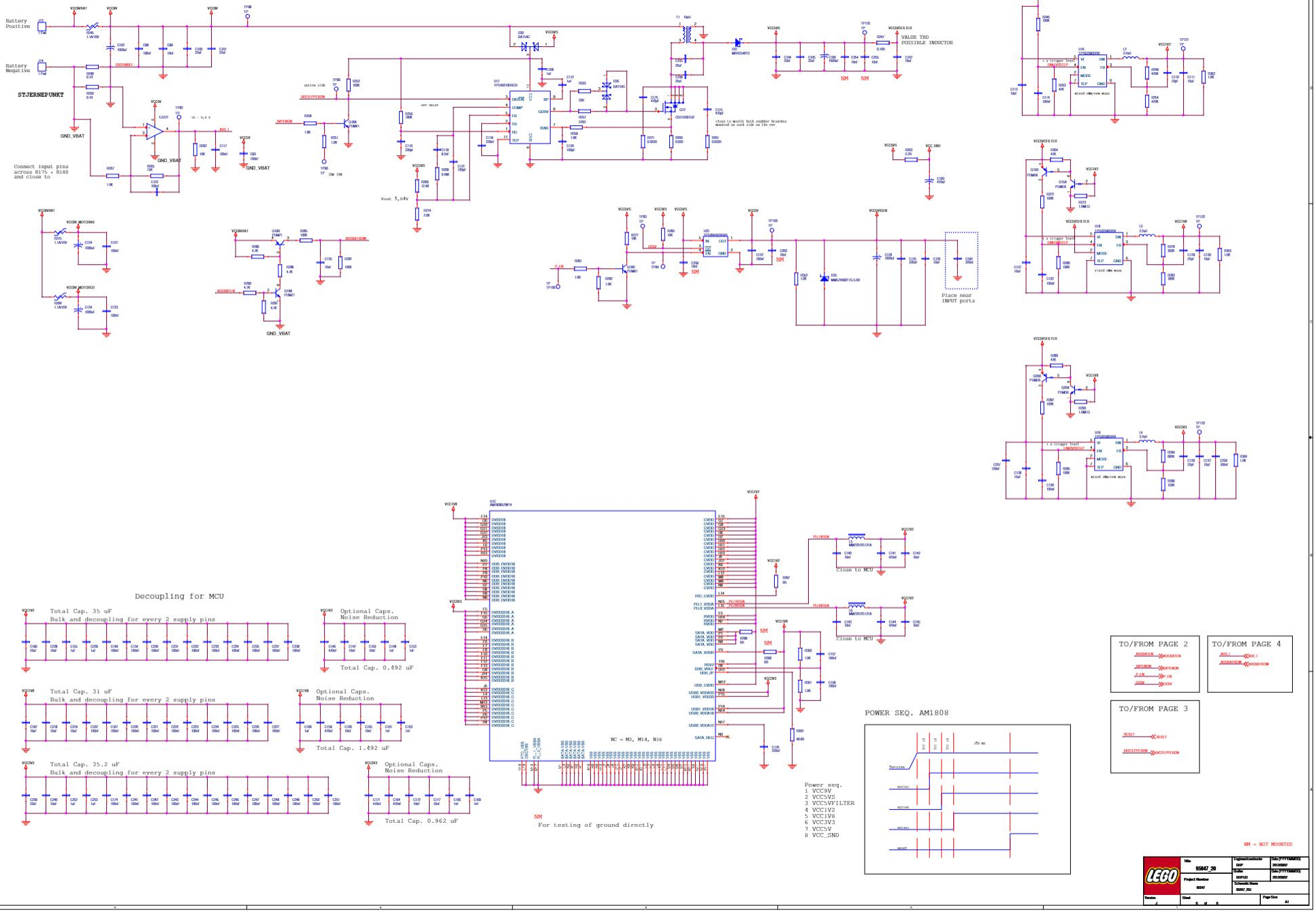


LEGO	Title: MS-EV3, Ultrasonic sencor	Engineer/constructer: PP	Date (YYYY/MM/DD): 2012-03-05
		Drafter: PP	Date (YYYY/MM/DD):
	Project Number: 95653_20D	Schematic Name: SCHEMATIC1	
Version	Sheet: 1 of 1	Page Size: A3	


MotorA
J12D
MA0
MA1
GND
POWERMA
TACHOA0
TACHOA1
4 x 6P6C
Possible alternative
Motor detection
MotorB
J12C
MB0
MB1
GND
POWERMB
TACHOB0
TACHOB1
4 x 6P6C
VCC9V_MOTORAB
LB1836M
U31
1OUTA1
1OUTA2
1OUTB1
1OUTB2
MBIN1
MBIN0
MAIN0
MAIN1
MBPWM
MAPWM
VCC3V3
TACHO/INT
VCC5V
U15A
74HC2G14GW-G
U24A
74HC2G14GW-G
Q10A
Q10B
PUMH15
INTA0
INTB0
DIRECTION
U15B
U24B
DIRA
DIRB
MotorC
J12B
MC0
MC1
GND
POWERMC
TACHOC0
TACHOC1
Possible alternative
Motor detection
MotorD
J12A
MD0
MD1
GND
POWERMD
TACHOD0
TACHOD1
VCC9V_MOTORCD
U32
2OUTB1
2OUTB2
2OUTA1
2OUTA2
MDIN1
MDIN0
MCIN0
MCIN1
MDPWM
MCPWM
U26A
74HC2G14GW-G
U27A
74HC2G14GW-G
Q11A
Q11B
U26B
U27B
DIRC
DIRD
TO/FROM PAGE 2
MAPWM
MBPWM
MCPWM
MDPWM
DIRA
INTD0
MDIN0
MCIN0
TO/FROM PAGE 3
DIRB
DIRC
DIRD
DETA0
DETB0
DETC0
DETD0
MAIN0
MAIN1
MBIN1
MCIN1
MDIN0
MDIN1
INTA0
INTB0
INTC0
TO/FROM PAGE 4
ADCMA
ADCMB
ADCMC
ADCMD
NM = NOT MOUNTED
LEGO
Title
95647_20
Project Number
95647
Engineer/constructer
BHP
Drafter
BHP/JIJ
Schematic Name
95647_20J
Date (YYYY/MM/DD)
2012/09/07
Date (YYYY/MM/DD)
2012/09/07
Version
J
Sheet
5 of 6
Page Size
A2



LEGO	Title: MS-EV3, Medium motor, PCBA	Engineer/constructer: JS	Date (YYYY/MM/DD): 2012.08.29
	Project Number: 99450_20	Drafter: JS	Date (YYYY/MM/DD): 2012.08.29
		Schematic Name: SCHEMATIC1	
Version: E	Sheet: 1 of 1	Page Size: A4	


Battery Positive
Battery Negative
STJERNEPUNKT
GND_VBAT
Connect input pins across R175 + R180 and close to
Vout 5,04v
VALUE TBD POSSIBLE INDUCTOR
close to model both chamber branches mounted on each side on the ver
Place near INPUT ports
Decoupling for MCU
Total Cap. 35 uF
Bulk and decoupling for every 2 supply pins
Optional Caps.
Noise Reduction
Total Cap. 0.492 uF
Total Cap. 31 uF
Total Cap. 1.492 uF
Total Cap. 35.2 uF
Total Cap. 0.962 uF
NC = M3, M14, N16
For testing of ground directly
Close to MCU
TO/FROM PAGE 2
TO/FROM PAGE 4
TO/FROM PAGE 3
POWER SEQ. AM1808
Power seq.
1 VCC9V
2 VCC5VS
3 VCC5VFILTER
4 VCC1V2
5 VCC1V8
6 VCC3V3
7 VCC5V
8 VCC_SND
NM = NOT MOUNTED