VUSB
J14

VUSB
Vin
VBat
Program
AREF
12 / SPI_DIN
8 / SPI_DIN / TX3
4 / RX
3.3v
0 / RX1
9 / SPI_CS / RX2 / PWM

A11
A10

1 / TX1
2 / TX
3 / TX / PWM
6 / PWM
7 / SPI_DOUT / RX3
11 / SPI_DOUT
10 / SPI_CS / TX2 / PWM

13 (LED) / SPI_SCK
A0 / SPI_SCK
A1 / SPI_CS
A2 / I2C SCL0
A3 / I2C SDA0
A4 / I2C SDA0
A5 / I2C SCL0
A6 / I2C SCL7
A7 / RX1 / SPI_CS / PWM   A8 / PWM
A9 / PWM

PULSE_INA
PULSE_INB
TGC_TRIG
TGC_CTRL
SERVO_PWM

3V3   TGC_RESET
BUTTON_TRIG

3.3V (250mA)

AGND
GND
GND

Teensy 3.2

GND

if you don't like commitment then you can solder female header pins to the board and male header pins to the teensy

5V

TP4

J17
SERVO_PWM
3 Pin Header

L10
BLM18AG601SN1D

C107
10V
16V
1µF

GND

USB Power Filter

VUSB   TP14   L8   TP13   5V
                 BLM18AG601SN1D

C103   TP15   TP16   C104   C105   C106
50V   10V   16V   10V
10nF   100.0nF   1µF   4.7µF

maybe change to 1206 for lower ESR

GND

HIGH VOLTAGE GENERATION

U5
-Vout3-72V
-Vout2_48V
-Vout1_24V
+Vout

+Vin_5V

-Vin_GND

NMT0572SC

J3
10-89-7082

V_POS
TP11

R12
100k
1206
1%

TP12

C42   C40   C41   C39
10V   100V   100V   100V
1µF   10nF   10nF   10nF
10%   1206   1206   1206
0805

GND   GND   GND

HIGH VOLTAGE PULSE

5V

C29   L1 BLM21PG121SN1D   C31
100nF   10V
10%   1µF
0603   0805

GND   TP5   U3 VDD1 VDD2 VH   GND

PULSE_INA   INA   V_POS
                                        C3210nF
5V PULSE_INB   INB   OUTA   120610%
                                        100V
                                        U4
            TP6 OE   OUTB   C3310nF   SN DN
                 PAD   120610%   GN DN
                 GND VSS VL VH V2S5   100V   SP DP
                                        C34   GP DP
MD1210K6-G   100V   TC6320TG-G
                                        1µF
                                        10%
                                        1206
GND   GND GND

TP3
D2   TP10
BAV99   V_PIEZO   J16
                              1
                              MNT_1
                              MNT_2
                              MNT_3
                              MNT_4
                     GND 3251-1150

SMA connector
TO SENSOR

5V

L4
100nH
0805
C52   C53
1nF   10V
10%   100nF
0603   10%
       0603
GND

5V

L3
100nH
0805
C50   C51
10V   10V
1nF   100nF
10%   10%
0603   0603
GND

U1

U61
B A
COM

V_PIEZO

MD0100N8-G

D3
BAV99

L2
100nH
0805

C44
100nF
10V
10%

R13
280
1%

C47
10V
100nF
10%
0603

GND

C46   C92
10V   10V
18nF   22pF
10%   10%
0603   0603

TO_LON

V_GAIN

C49
10V
1nF
10%
0603

GND

VPSL
VIN
VPOS
VIP
VCM
MODE
GAIN
INH
HILO
COML
ENBV
LMD
ENBL
COMM_2
COMM

VOH
VOL
RCLMP
LON
LOP

TO_VIP

C55   C57   1nF
10V   10V   10%
100nF 1nF   0603
0603 10%
      0603

5V
R15 10K
R16 10K
1% 0603

C54
10V
100nF
10%
0603

5V_VGAfiltered

GND   GND   ??

VGA+
VGA-

R19 100
     100nH 0805
R18 100
     100nH 0805

C93   C58
10v   10V
1nF   100nF
10%   10%
0603 0603

R17
11K
1%
0603

TO_LON

C48
10v
100nF
10%
0603

TO_VIP

GND

R66   TP1
          T1
C60   237Ω   V_VGA   J19
100nF   CX2041NL 1
10V   MNT_1
10%   MNT_2
R67   MNT_3
C61   237Ω   MNT_4
100nF
10V   73251-1150
10%

SMA connector
to ADC

LED STATUS

3V3

R32
2K2
0603
1%

POWER   D8
        APT2012SGC

GND

MOUNTING HOLES

M187

M188

M189

M190

GND

BUTTONS

SW94

HP0315AFLP2-R

BUTTON_TRIG

GND

TGC ramp generator

8.0pF
100V
C100

R57   R58   R61   R62   5V
10kΩ   3V3   2.4kΩ 9.1kΩ

                  TGC_REF
                  U2B   TP7
U2A   TGC_TRIG
LMV722M/NOPB   LMV722M/NOPB

R59   R60   V_GAIN
10kΩ   10kΩ

TGC_CTRL   3V3   TP17

TP8   C98   C102
TGC_RESET R69   10V   16V
           2.4kΩ   100.0nF   1µF
           Q1
      MMBT6429LT1G