POWER SUPPLY

+12V
TP4 12VTP
U1 TPS56339DCR — 12V to 5V (3A)
VIN BOOT
EN SW
GND FB
C1 10uF C2 10uF C3 100nF
GND
R1 33R C4 100nF
L1 5.6uH
R2 56K 5.3v
C5 22uF C6 22uF
R3 10K
LED1 0805_Green
R4 300R
GND
D1 Scho (SS33)
TP1 5VTP
+5V
U2 LD1117S33CTR — 5V to 3.3v (950mA)
VIN VOUT VOUT GND
C7 100nF
GND TP2
TP3 3V3TP
C8 10uF
+3V3
LED2 0805_Yellow
R5 120R
GND

CAN TRANSCIEVER

+5V
C10 100nF
CAN1
IC1 MCP2562T-E_SN
TXD STBY
VSS CANH
VDD CANL
RXD VIO
CAN1_TX
CAN1_RX
GND
+3V3
C12 100nF
CAN1_H CAN1_L
ESD2 NUP2105LT1G — ESD Protection
JP2
R7 120R 0.25W
GND

JAE MX23A18NF1 – 18 WAY

+5V
F1 1206L050YR — 500mA PPTC Fuse
+5VP +12V
CONN1 MX23A18NF1
1 10
2 11
3 12
4 13
5 14
6 15
7 16
8 17
9 18
19 20
INPUT7 INPUT6 INPUT1
INPUT9 INPUT8 INPUT3 INPUT2
INPUT10 INPUT5 INPUT4
CAN1_H CAN1_L

ANALOG INPUTS

+5VP
R17 OPTIONAL R15 4K7 AIN1
R16 10K C15 10uF
INPUT1 GND

R18 OPTIONAL R19 4K7 AIN2
R20 10K C16 10uF
INPUT2 GND

R21 OPTIONAL R22 4K7 AIN3
R23 10K C17 10uF
INPUT3 GND

R24 OPTIONAL R25 4K7 AIN4
R26 10K C18 10uF
INPUT4 GND

R27 OPTIONAL R28 4K7 AIN5
R29 10K C19 10uF
INPUT5 GND

R30 OPTIONAL R35 4K7 AIN6
R40 10K C20 10uF
INPUT6 GND

R31 OPTIONAL R36 4K7 AIN7
R41 10K C21 10uF
INPUT7 GND

R32 OPTIONAL R37 4K7 AIN8
R42 10K C22 10uF
INPUT8 GND

R33 OPTIONAL R38 4K7 AIN9
R43 10K C23 10uF
INPUT9 GND

R34 OPTIONAL R39 4K7 AIN10
R44 10K C24 10uF
INPUT10 GND

MCU – ESP32-S3-WROOM-1U-N8R8

CONN2 KH-TYPE-C-16P
SHIELD GND
SBU2 SBU1
D+ D- D+ D-
CC2 CC1 VBUS
GND
USB_VBUS
ESD1 USBLC6-2SC6 — ESD Protection
C14 100nF
GND
D2 Sch (DSK110)
+5V
R14 5K1
R13 5K1

SW2 RESET
R8 10K
+3V3
U3 ESP32-S3-WROOM-1U-N8R8
C9 100nF
R6 10K
SW1 BOOT
GND
EN 3V3
TXD0 RXD0
IO0 IO17
IO1 IO18
AIN1 IO2
AIN2 IO3 USB_D-
AIN3 IO4 USB_D+
AIN4 IO5 IO35
AIN5 IO6 IO36
AIN6 IO7 IO37
AIN7 IO8 IO38
AIN8 IO9 IO39
AIN9 IO10 IO40
AIN10 IO11 IO41
IO12 IO42
IO13 IO45
IO14 IO46
IO15 IO47
IO16 IO48
CAN1_RX GND
CAN1_TX
PSRAM
R12 22R
R11 22R
C13 20pF
C11 20pF
GND
R10 4K7 Presence Detection
USB_VBUS
R9 10K
GND