Power

REGULATORS

POWER TEST

POWER_TEST

CANV
1N5819
D10
+24V
U1 MINI-360
IN+ OUT+
IN− OUT−
C1 10uF
+5V
C2 10uf
U2 AMS1117-3.3
VI VO
GND
C5 10uF
VCC
J6
C17 100uF
GND
GND VCC
+5V

ESP32 Microcontroller

VCC
C16 10uF
C3 100uF
GND
3V3
EN
SENSOR_VP
SENSOR_VN
IO34
IO35
IO32
IO33
IO25
IO26
IO27
IO14
IO12
GND
U3 ESP32-WROOM
IO23
IO22
TXD0
RXD0
IO21
NC
IO19
IO18
IO5
IO17
IO16
IO4
IO0
GND-PAD
37 SW1
36 BLINK
35 TX
34 RX
33 SW2
32
31 BLUE
30 GREEN
29 CTX
28 RED
27 PIXELS
26 CRX
25 SW0
39
38 GND
EN
VP
VN
FLDR
RLDR
SPEAKER
SW4
TOUCH5
34/35 input only
32/33 output only
IO12 strapping pin
GND
GND
15 16 17 18 19 20 21 22 23 24
GND SD2 SD3 CMD CLK SD0 SD1 IO15 IO2
SW3 IR_RX IR_TX SDA SCL TOUCH3
IO2 strapping pin

Light Level

VCC
R1 100k
R4 100k
FLDR
RLDR
LDR1 FLDR
LDR2 RLDR
GND

Microphone

MAX4466 breakout
VCC
R2 4K
MIC_HEADER
J2
R3 5K
VCC
VP
J1 MIC_JUMPER
GND

Onboard Switches

SW1 SW1
SW1
SW2 SW2
SW2
SW3 RESET
SW4 BOOT
SW0
SW0
J3 SW0 GND
EN

Pullup Resistors

VCC
R5 10k SW0
R6 10k SW1
R7 10k SW2
R8 10k SW3
R9 10k SW4
R10 10k EN

Speaker

SPEAKER
R11 100
Q1 MMBT918 (2N706 equiv)
+5V
LS1 Speaker
GND

Indicator LEDs

+5V
D11 POWER
R14 470
BLINK
R12 1K
D12 BLINK
GND GND

Connectors

SENSOR
J9 SENSOR
VCC VP
VN
GND

TOUCH
J11 TOUCH
TOUCH5
VCC
TOUCH3
VCC
GND

POWER RGB SHIELD
+24V
J15 RGB_SHIELD
RED
GREEN
BLUE
+5V
J16 RGB_SHIELD
J18
GND GND

ISP
+5V
J... TX RX
I2C
GND

SWITCHES
J21 SWITCHES
SW1
SW2
SW3
SW4
GND

SHIELD MOUNT
GND MH1 MH3 GND
MH2 MH4
GND

3V3
J5 3V3
VCC
GND

5V
J10 5V
+5V
GND

24V
J12 24V
+24V
GND

I2C
GROVE/I2C
J17
SCL
SDA
GND
VCC

CAP_RING
TOUCH5 MH5 MH7 TOUCH5
TOUCH5 MH6 MH8 TOUCH5

IR Tx/Rx

VCC
IR_RX
GND
IR_TX
+5V
R15 1K
R16 100
U5 TSDP341xx
Vs OUT GND
DEMOD
D13 IRLED
Q2 MMBT2222A (2N2222 equiv)
GND

CAN Bus

CAN_BOARD
J13
VCC
GND
CTX
CRX
CANH
CANL
VCC
C14 100nF
U6 SN65HVD230
D R Vref Rs
CANH
CANL
R18 120
J4 CANTERM
CTX
CRX
R17 10K
CANGND
GND
CANV
CANGND
CANH
CANL
SH
J19 CAN_IN
1: VCC
2: VCC
3: VCC
4: GND
5: GND
6: GND
7: CAN+
8: CAN−
CANV
CANGND
CANH
CANL
SH
J20 CAN_OUT

If the b
and the
the CAN
J2 jump
placed.
If the b
jumper

LEDs

+5V
PIXELS
R13 470
D9 WS2812B
DIN DOUT VDD VSS RGB
C6 100nF
D8 WS2812B
C8 100nF
D7 WS2812B
C10 100nF
D6 WS2812B
C12 100nF
D5 WS2812B
C14 100nF
GND
C15 100nF
D15 WS2812B
DOUT DIN VDD VSS RGB
C7 100nF
WS2812B
C9 100nF
WS2812B
C11 100nF
WS2812B
D4
+5V
60mA peak (all three LEDs) per pixel (5x = 300mA peak)

JagDev
Sheet: /
File: domenode.sch
Title: DomeNode
Size: A4
Date:
KiCad E.D.A. kicad (5.0.0)
Rev:
Id: 1/1