POWER

U3 LP2992 3V3
VIN, GND, ON/OFF — VOUT, BYPASS
VBUS, VCC_3V3
C4 0.1uF, C5 10uF, C6 10nF

USB-PROG

AUTO PROGRAM CIRCUIT

DTR	RTS	RST	GPIO0
1	1	1	1
0	0	1	1
1	0	0	1
0	1	1	0

U2 CP2102
VDD, REGIN, VBUS, D−, D+, NC, GND
_RST, _RI, DCD, DSR, DTR, RTS, RXD, TXD, CTS, HEAT_TAB, _SUSPEND, SUSPEND
R3 10K, VBUS
R4 200R, CP_TX, CP_RX
Q1 S8050, Q2 S8050
R5 12K, R6 12K
DTR, RTS, GPIO0, EN

USB1 Type-C
A1 GND, A2 TX1+, A3 TX1−, A4 VBUS, A5 CC1, A6 D+, A7 D−, A8 SBU1, A9 VBUS, A10 RX2−, A11 RX2+, A12 GND
B12 GND, B11 RX1+, B10 RX1−, B9 VBUS, B8 SBU2, B7 D−, B6 D+, B5 CC2, B4 VBUS, B3 TX2−, B2 TX2+, B1 GND
R7 5.1K, R8 5.1K
USB_PWR_DP, USB_PWR_DM, VBUS
SH1 SH2 SH3 SH4

CORE

VCC_3V3, 3V3A, 3V3A
R1 0R, C1 10uF, C2 0.1uF
A1 (antenna)
R2 10K, C3 0.1uF, EN

ESP32_PICO_D4
VDDA, LNA_IN, VDD3P3, VDD3P3, SENSOR_VP, SENSOR_CAPP, SENSOR_CAPN, SENSOR_VN, CHIP_PU, VDET_1, VDET_2, 32K_XP
CAP1_NC, CAP2_NC, VDDA, XTAL_P_NC, XTAL_N_NC, VDDA, GPIO21, U0TXD, U0RXD, GPIO22, GPIO19, VDD3P3_CPU
GPIO23, GPIO18, GPIO5, SD_DATA_1 (FLASH_SD1), SD_DATA_0 (FLASH_SD3), SD_CLK (FLASH_CLK), SD_CMD (FLASH_SD2), SD_DATA_3/IO10, SD_DATA_2/IO9, IO17 (FLASH_SD0), VDD_SDIO_NC, IO16 (FLASH_CS)
32K_XN, GPIO25, GPIO26, GPIO27, MTMS, MTDI, VDD3P3_RTC, MTCK, MTDO, GPIO2, GPIO0, GPIO4
GPIO33, GPIO25, GPIO26, GPIO27, GPIO14, 3V3A, GPIO12, GPIO13, GPIO15, GPIO2, GPIO0, GPIO4

GPIO37, GPIO38, GPIO34, GPIO35, GPIO32
SENSOR_VP, SENSOR_CAPP, SENSOR_CAPN, SENSOR_VN

GPIO23, GPIO18, GPIO5, FLASH_SD1, FLASH_SD3, FLASH_CLK, FLASH_SD2, GPIO10, GPIO9, FLASH_SD0, FLASH_CS

IMU

MPU6050
A_CL, A_DA, CLKIN, VLOGIC, AD0, REGOUT, FSYNC, INT, SDA, SCL, CLKOUT, RESV, CPOUT, RESV, VDD, NC, GND
C7 10nF, C8 0.1uF, C9 0.1uF, C10 2.2nF
VCC_3V3
MPU_SDA, MPU_SCL

J1
MPU_SDA — GPIO32
MPU_SCL — GPIO33

TFT-LCD

P4
VBUS, VCC_3V3, DC, SCK, MOSI, RES, LCD_BL
DC — J6 — GPIO2
SCK — J7 — GPIO18
MOSI — J8 — GPIO23
RES — J9 — GPIO25
LCD_BL — J10 — GPIO26

Extends

VCC_3V3 — R9 1K — D1 — GPIO27
VCC_3V3 — R10 1K — D2
K1 3.4x3.5 — R11 1K — EN
K2 3.4x3.5 — GPIO12

P1
VBUS, VCC_3V3, GPIO26, GPIO25, GPIO33, GPIO32, GPIO35, GPIO34, SENSOR_VN, GPIO38, GPIO37, SENSOR_VP

P2
GPIO27, GPIO14, GPIO12, GPIO13, GPIO15, GPIO2, GPIO0, GPIO4, GPIO9, GPIO10, GPIO18, GPIO23, GPIO19, GPIO22, GPIO21

CAN-PHY

CAN_TX — J3 — GPIO5
CAN_RX — J4 — GPIO4
CAN_H — P3 — CAN_L

U5 SN65HVD232D
D, GND, VCC, R, NC, CANH, CANL, NC
R12 120R, J5
VCC_3V3
CAN_TX, CAN_RX, CAN_H, CAN_L