IOT-KIT

TEST POINTS

TestPoint TP1 → +3.3V
TestPoint TP2 → +3.3V
TestPoint TP3 → GND
TestPoint TP4 → GND

POWER INPUT

+VE_B, BT1, GND
SW1 SW_DIP_x01
+5V_BUS
U2 TP4057 (CHRG, Vcc, BAT, STDBY, GND, PROG)
R3 1K

5V TO 3.3V

+5V_BUS
U1 LM2576HVS-3.3 (PWR_FLAG, VIN, FB, ON/OFF, GND, OUT)
L1 100uH
C1 100uF
C2 1000uF
+3.3V

ESP32-WROOM-32

+3.3V
C10 0.1uf, C11 10uf
U4 ESP32-WROOM-32
RST, SENSOR_VP, SENSOR_VN, SDO, SD1, SD2, SD3, CLK/SCK, SCS
GPIO_0, UART0_TX, UART0_RX
SW3 SW_DIP_x10

TEST PINS

Digital I/O: IO13 → TP10; IO14 → TP11; IO15 → TP12; IO16 → TP14; IO17 → TP16
Digital / ADC: IO26 → TP9; IO27 → TP13
INPUT ONLY: IO25 → TP15
PWM OUT: IO12 → TP17
ADC: IO35 → TP18

Display Module

L2 SPI TFT DISPLAY (2.4-Inch SPI Interface 240×320 TFT Display Module)
SDO, LED, SCL, SDA/SDI, DC, VDD33, GND, CS, RST, VDD3
IO19, IO18, IO23, IO2, IO5, IO4
SW5 SW_DIP_x01
UP BUTTON: SW6 CK_KMS2xxG, IO32
DOWN BUTTON: SW7 CK_KMS2xxG, IO33
ENTER: SW8 CK_KMS2xxG, IO25

8X8 LED

WS_VCC, DATA_IN, R7 330
D6 WS2812 (VDD, VCC, DIN, DOUT, VSS)
C3 100nF
TP22 WS_VCC, TP23 DATA_IN

RELAY NO CONFIG

USB-to-UART

C6 10uf, C7 0.1uf, PWR_FLAG
U3 CP2102N-Axx-xQFN28 (UART0_RX, UART0_TX, UART0_RTS, UART0_DTR, TXD, RXD, RTS, CTS, DSR, DTR, DCD, RI/CLK, SUSPEND, TXT/GPIO.0, RXT/GPIO.1, RS485/GPIO.2, WAKEUP/GPIO.3, GPIO.4, GPIO.5, GPIO.6, CHREN, CHR0, CHR1, VDD, VREGIN, RST, VBUS, D-, D+, GND, GNDPWR)
R4 0
J7 USB_C_Receptacle_PowerOnly_24 (CC2, CC1, VBUS, SHIELD)
D2 SS14
C8 0.1uf, C9 10uf
RST, UART0_RTS, UART0_DTR, GPIO_0
R2 10K, R1 10K
Q2 S8050, Q1 S8050

BUZZER → TP7 TestPoint
potentiometer → TP5 TestPoint
POTENTIOMETER_VCC → RV1 R_Potentiometer
POTENTIOMETER_VCC → TP24 TestPoint
LED → TP6 TestPoint
LED → (input-only) (input-only, ADC) GND
BUZZER → BZ1 Buzzer

LDR SENSOR

LDR_DATA, R10 LDR03, GND
LDR_DATA → TP8 TestPoint

MALE CONNECTORS

J2 Conn_02x10_Odd_Even
SW2 SW_DIP_x10
IO21, IO22, IO23, IO25, IO26, IO27, IO32, IO33, IO34, IO35
IO2, IO4, IO5, IO13, IO14, IO15, IO16, IO17, IO18, IO19

+3.3V, +3.3V, GND, GND → TP20, TP21, TP25, TP26

LEVEL SHIFTER

+5V, +3.3V
R5 1K, R6 1K
Q3 S8050
K2 RAYEX-L90AS
J6 Screw_Terminal_01x02
RELAY_COM → TP19 TestPoint

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