

TOUCH SENSING IC

U2

AT42QT2120

Pin 9: +5V

Pin 12: nRESET

Pin 13: NC

Pin 15: nCHANGE

Pin 11: I2C_SDA

Pin 14: I2C_SCL

Pin 10: MODE

Pin 8: VSS

Pin 21: EP

Pin 16: KEY11/GP09

Pin 17: KEY10/GP08

Pin 18: KEY9/GP07

Pin 19: KEY8/GP06

Pin 20: KEY7/GP05

Pin 1: KEY6/GP04

Pin 2: KEY5/GP03

Pin 3: KEY4/GP02

Pin 4: KEY3/GP01

Pin 5: KEY2/GP00

Pin 6: KEY1

Pin 7: KEY0

Pin 16: R1 10k

Pin 17: R2 10k

Pin 4: R9 10k

Pin 5: R10 10k

Pin 6: R11 10k

Pin 7: R12 10k

KEY11

KEY10

KEY9

KEY8

KEY7

KEY6

KEY5

KEY4

KEY3

WHEEL2

WHEEL1

WHEEL0

C1 100nF

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STACKING CONNECTOR

Diagram illustrating the pin connections for the **STACKING CONNECTOR** (U1).

The connector is labeled **CON_STACK_9**.

Pin connections:

- Pin 9: +5V
- Pin 8: I2C_SCL
- Pin 7: I2C_SDA
- Pin 6: nCHANGE
- Pin 5: LED_CAT
- Pin 4: LED_CAT
- Pin 3: (unlabeled)
- Pin 2: FIX2
- Pin 1: FIX1

KEYPAD LEDs

The diagram illustrates the wiring for 10 LEDs (D1-D10) connected to a common LED_CAT line. Each LED is connected to a specific key (KEY8, KEY5, KEY4, KEY10, KEY7, KEY6) through a resistor (R13-R18). The resistors are 390 ohms for R13-R16 and 750 ohms for R17-R18. The LEDs are connected to KEY8, KEY5, KEY4, KEY10, KEY7, and KEY6.

LED	Resistor	Resistor Value	Key
D1	R13	390	KEY8
D2	R13	390	KEY8
D3	R13	390	KEY8
D4	R14	390	KEY5
D5	R14	390	KEY5
D6	R15	390	KEY4
D7	R15	390	KEY4
D8	R16	390	KEY10
D9	R17	750	KEY7
D10	R18	750	KEY6

KEYPAD

KEY9 P1

KEY11 P2

KEY3 P3

LED_CAT P4

WHEEL2 1

WHEEL1 2

WHEEL0 3

K1
CONN_3