ILM139CD — Schematic

U1 — IS31FL3741A-QFLS4-TR

Top pins: SDB, SCL, SDA, INTB
EP — 61

Left side pins:
1 CS34, 2 CS35, 3 CS36, 4 CS37, 5 CS38, 6 CS39, 7 INTB, 8 ADDR, 9 SDA, 10 SCL, 11 SDB, 12 GND, 13 ISET, 14 AVCC, 15 PVCC, 16 SW1, 17 SW2, 18 SW3, 19 SW4, 20 SW5, 21 SW6, 22 SW7, 23 SW8, 24 SW9, 25 PVCC, 26 CS1, 27 CS2, 28 CS3, 29 CS4, 30 CS5

Right side pins:
60 CS33, 59 CS32, 58 CS31, 57 CS30, 56 CS29, 55 GND, 54 CS28, 53 CS27, 52 CS26, 51 CS25, 50 CS24, 49 CS23, 48 CS22, 47 CS21, 46 CS20, 45 CS19, 44 CS18, 43 CS17, 42 CS16, 41 CS15, 40 CS14, 39 CS13, 38 CS12, 37 CS11, 36 GND, 35 CS10, 34 CS9, 33 CS8, 32 CS7, 31 CS6

I2C Address Selector

VCC — R45 — 0
SDA — R44 — 0
SCL — R43 — 0
GND — R42 — 0

ADDR	I2C Address
GND	0x00
VCC	0x11
SCL	0x01
SDA	0x10

R40 100K, C7 100nF, R41 10K

Capacitors:
C2 1uF, C1 100nF, C3 1uF, C4 100nF, C5 1uF, C6 100nF

CN6 — AXE540127D

SW3 1, SW2 3, SW4 5, SW1 7, S3 9, S2 11, S1 13, SW5 15, GND 17, GND 19, GND 21, GND 23, SW6 25, GND 27, GND 29, GND 31, S9 33, S9 35, SW9 37, SW8 39
S4 2, S5 4, S6 6, GND 8, GND 10, GND 12, GND 14, SW5 16, S16 18, S15 20, S14 22, S13 24, SW6 26, S12 28, S11 30, S10 32, S9 34, SW7 36, S8 38, S7 40

CN5 — AXE540127D

S36 1, S35 3, S34 5, S33 7, S32 9, S31 11, S30 13, S29 15, S28 17, S27 19, S26 21, S25 23, S24 25, S23 27, S22 29, S21 31, S20 33, S19 35, S18 37, S17 39
S37 2, S38 4, S39 6, GND 8, GND 10, GND 12, GND 14, GND 16, GND 18, GND 20, GND 22, GND 24, GND 26, GND 28, GND 30, GND 32, GND 34, GND 36, GND 38, GND 40

QWIIC CONNECTORS

U2 HC-1.0-4PWT-B-HW: SCL 1, SDA 2, 3V3 3, GND 4
U3 HC-1.0-4PWT-B-HW: SCL 1, SDA 2, 3V3 3, GND 4

POWER CONNECTORS (2.7V-5.5V)

CN1 HC-1.0-2PWT: VCC 1, GND 2
CN2 HC-1.0-2PWT: VCC 1, GND 2

3V3 -> VCC JUMPER

3V3 — R46 0 — VCC

SHUTDOWN PIN (CONNECT TO GND TO SHUT DOWN)

SDB — TestPoint TP1
TP2 TestPoint — GND

INTERRUPT PIN (USE EXTERNAL PULL UP IF IN USE)

INTB — TestPoint TP3

Resistor network (right)

CS39	R37 51	S39	CS18	R10 51	S18
CS38	R38 20	S38	CS17	R11 20	S17
CS37	R39 20	S37	CS16	R12 20	S16
CS36	R28 51	S36	CS15	R13 51	S15
CS35	R29 20	S35	CS14	R14 20	S14
CS34	R30 20	S34	CS13	R15 20	S13
CS33	R31 51	S33	CS12	R16 51	S12
CS32	R32 20	S32	CS11	R17 20	S11
CS31	R33 20	S31	CS10	R18 20	S10
CS30	R34 51	S30	CS9	R7 51	S9
CS29	R35 20	S29	CS8	R8 20	S8
CS28	R36 20	S28	CS7	R9 20	S7
CS27	R19 51	S27	CS6	R4 51	S6
CS26	R20 20	S26	CS5	R5 20	S5
CS25	R21 20	S25	CS4	R6 20	S4
CS24	R22 51	S24	CS3	R3 51	S3
CS23	R23 20	S23	CS2	R2 20	S2
CS22	R24 20	S22	CS1	R1 20	S1
CS21	R25 51	S21			
CS20	R26 20	S20			
CS19	R27 20	S19			