4.2 Viewing IIC Bus Line Peripherals Using I2C Tools

Here is a general introduction to the use of i2c-tools:

Installation:

apt-get install libi2c-dev i2c-tools

Detecting devices mounted on the i2c bus:

Use i2cdetect to detect several sets of i2c buses on the system:

i2cdetect -l

Detecting devices mounted on the i2c bus:

Use i2cdetect to detect devices mounted on the i2c-1 bus:

i2cdetect -r -y 1

```
jetbot@jetbot:~$ i2cdetect -r -y 1
     0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:          -- -- -- -- -- -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- -- 1b -- -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: 40 -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: 70 -- -- -- -- -- -- --
```

View the values of all device registers:

Use i2cdump to view the values of all device registers:

i2cdump -f -y 1 0x40

```
jetbot@jetbot:~$ i2cdump -f -y 1 0x70
No size specified (using byte-data access)
     0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f    0123456789abcdef
00: 01 04 e2 e4 e8 e0 00 00 00 00 00 00 00 00 00 00    ??????..........
10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00    ................
20: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00    ................
30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00    ................
40: 00 00 00 00 00 00 XX XX XX XX XX XX XX XX XX XX    ......XXXXXXXXXX
50: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
60: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
70: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
80: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
90: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
a0: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
b0: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
c0: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
d0: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
e0: XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX    XXXXXXXXXXXXXXXX
f0: XX XX XX XX XX XX XX XX XX XX 00 00 00 00 03 00    XXXXXXXXXX....?.
```