

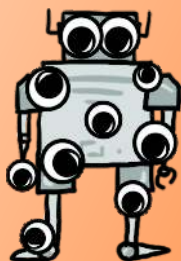


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# I<sup>2</sup>C-IT

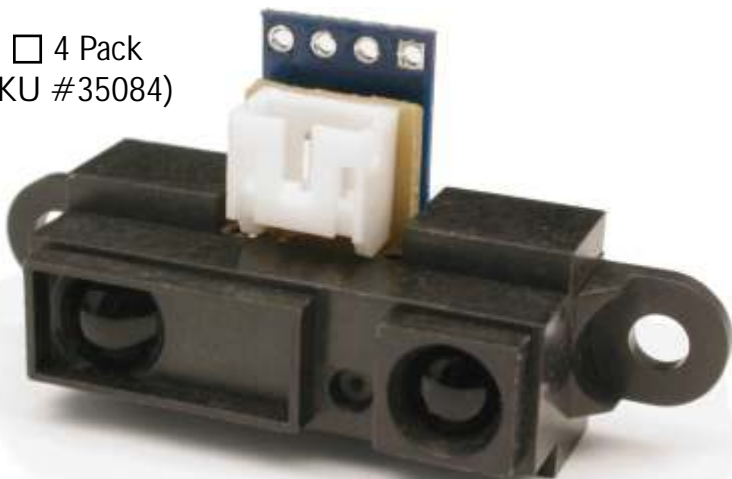
Analog Infrared Ranging  
System with I2C Networking

Multiple eyes for  
your device is easy!



Singles  
(SKU #35080)

4 Pack  
(SKU #35084)



Infrared Distance Measurement  
*featuring:*

- User-Selectable sensor address
- Sharp GP2D12 Sensor (10 ~ 80cm range)
- I<sup>2</sup>C Compatible, with 8 devices per chain (or more!)
- Use more sensors per I/O line than a standard port
- Let the sensors on-board processor do all the work!

# I<sup>2</sup>C-IT

Technical Data

## Recommended Operating Conditions:

Excess cable length can adversely affect the I<sup>2</sup>C bus response. Experiment with lower bus speeds for longer cable lengths.

Parameter	Symbol	Rating	Unit
Operating Voltage	V <sub>cc</sub>	4.5 to 5.5	V+
Operating Temperature	T <sub>opr</sub>	-10 to +40	C
Maximum Cable Length	CL <sub>max</sub>	35/14	cm/in
I <sup>2</sup> C Clock Frequency	SCL	100k	Hz
Bus pull-up Resistance	R <sub>line</sub>	1.2k to 10k*	ohms
Required Current	I <sub>cc</sub>	35 to 55	mA

*\*faster speeds are possible*

## Jumper Addressing (1=solder jumper):

The default address is 0x20. Add a solder-blob jumper across the labeled pads to set your own address. We can custom-program units with different address locations.

Device Address	JP1	JP2	JP3
0x20	0	0	0
0x22	0	0	1
0x24	0	1	0
0x26	0	1	1
0x28	1	0	0
0x2A	1	0	1
0x2C	1	1	0
0x2E	1	1	1

Note that these addresses are shifted 1 bit to the left during transmission as per Atmel's "Two Wire Standard".

## Device Pin-Out:

The square pad denotes "Pin 1"

Pin1 - Ground (signal ground)

Pin2 - SCL (I<sup>2</sup>C clock line)

Pin3 - SDA (I<sup>2</sup>C data line)

Pin4 - Vcc (+4.5 to +5.5V)



We've put together some sample snippets of code showing how to interface the I<sup>2</sup>C-It to Atmel, PIC, and PICAXe micros. From [www.hvwtech.com](http://www.hvwtech.com), go to the Resources button and then type in 'i2c-it' for five code examples.

[www.HVWTech.com](http://www.HVWTech.com)

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