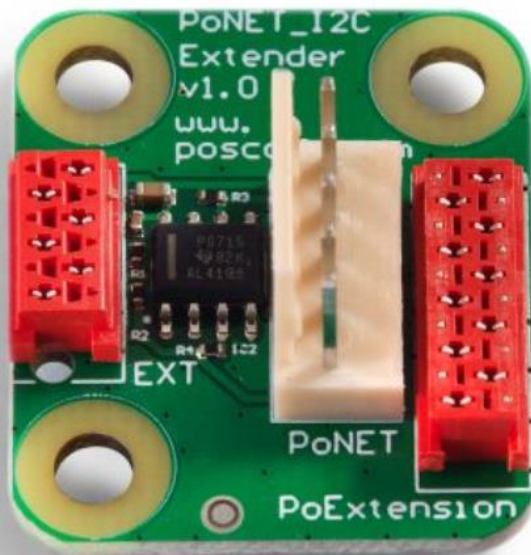




PoNET I2Cextender

User's manual

v1.0



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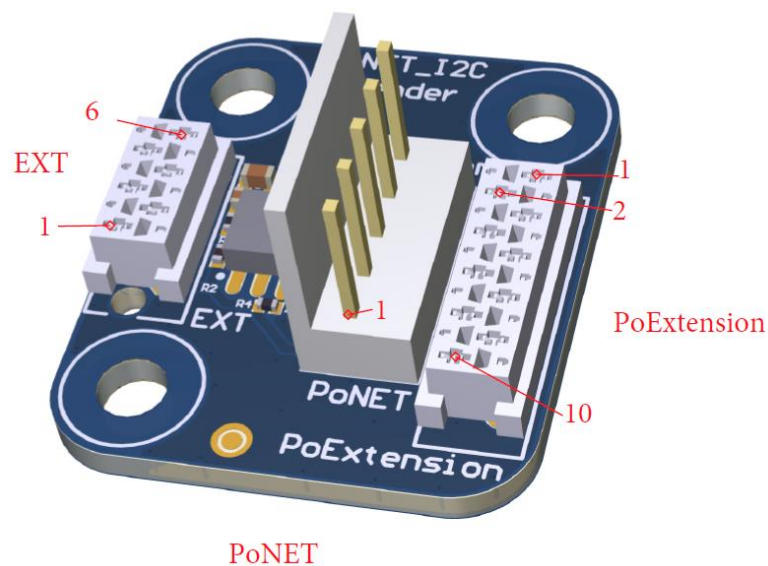
1 Introduction

PoNet I2Cextender is the I2C extension device that provides 10 times higher line drive than standard I2C, thus improving data integrity. Up to 25m - 50m long I2C line with CAT3 cable or better twisted pair is possible, compared to a few tenths of a meter without an I2C extension. In addition to 10 times higher line drive, it can also improve signal integrity in a noisy environment. The device was developed for use with PoKeys devices, but can be used with other microcontrollers without restriction.

2 Features

- up to 50m I2C line when using CAT3 or better twisted pair cable
- compatible with 100 kHz and 400 kHz bus frequency
- simple 6-pin flat cable connection between extenders
- 5 pin PoNET or 10 pin PoExtension connector for connection to PoKeys, Arduino, Raspberry Pi or any other device
- 4,5V – 12V power supply; less than 25 mA current
- 3V operation possible with reduced performance

3 Connectors and pinout



EXT (long distance side I2C)	
1	VCC
2	GND
3	SDA
4	SCL
5	GND
6	VCC

PoNET	
1	VCC
2	GND
3	SDA
4	na
5	SCL

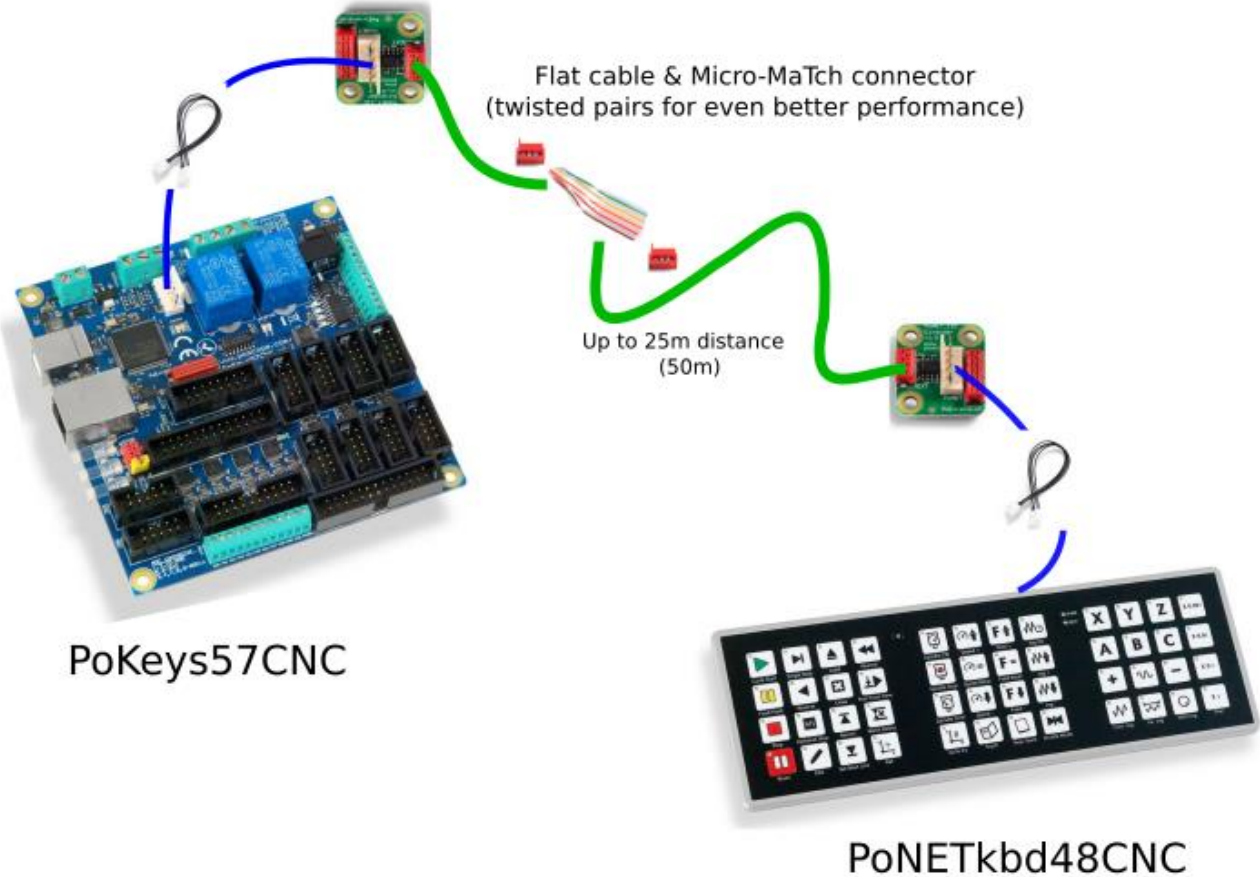
PoExtension	
1	VCC
2	GND
3	na
4	na
5	SDA
6	SCL
7...10	na

Two EXT connectors (Micro-MaTch) for flat cable and a PoNet cable are included in the package.



4 Connection example

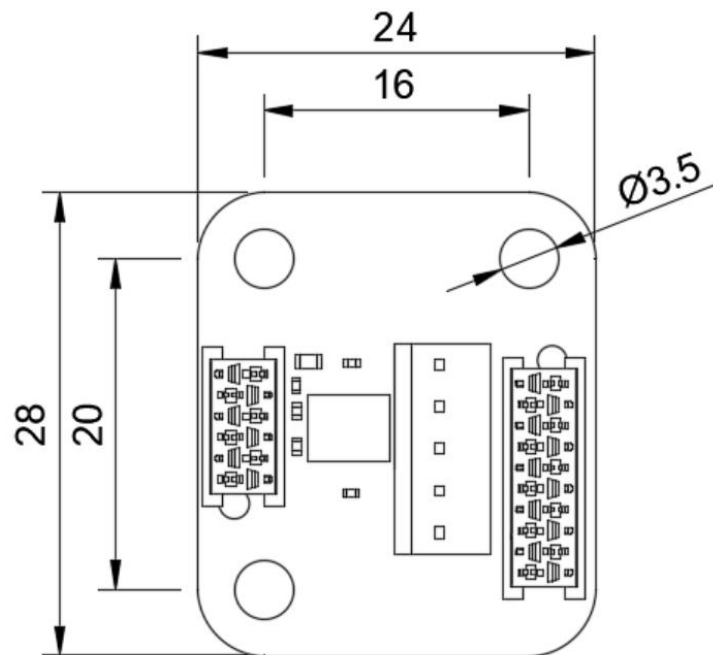
On a picture below is a typical example of usage where master device PoKeys57CNC communicate with I2C peripheral unit PoNETkbd48CNC.



Typical connection scheme

5 Technical specifications

- Input voltage 3-12 V_{DC}
- I2C bus frequency 100 kHz and 400kHz supported
- Operating range up to 50 m
- Working temperature -20 °C ÷ +80 °C
- Weight 4g
- Mechanical dimensions [mm]



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