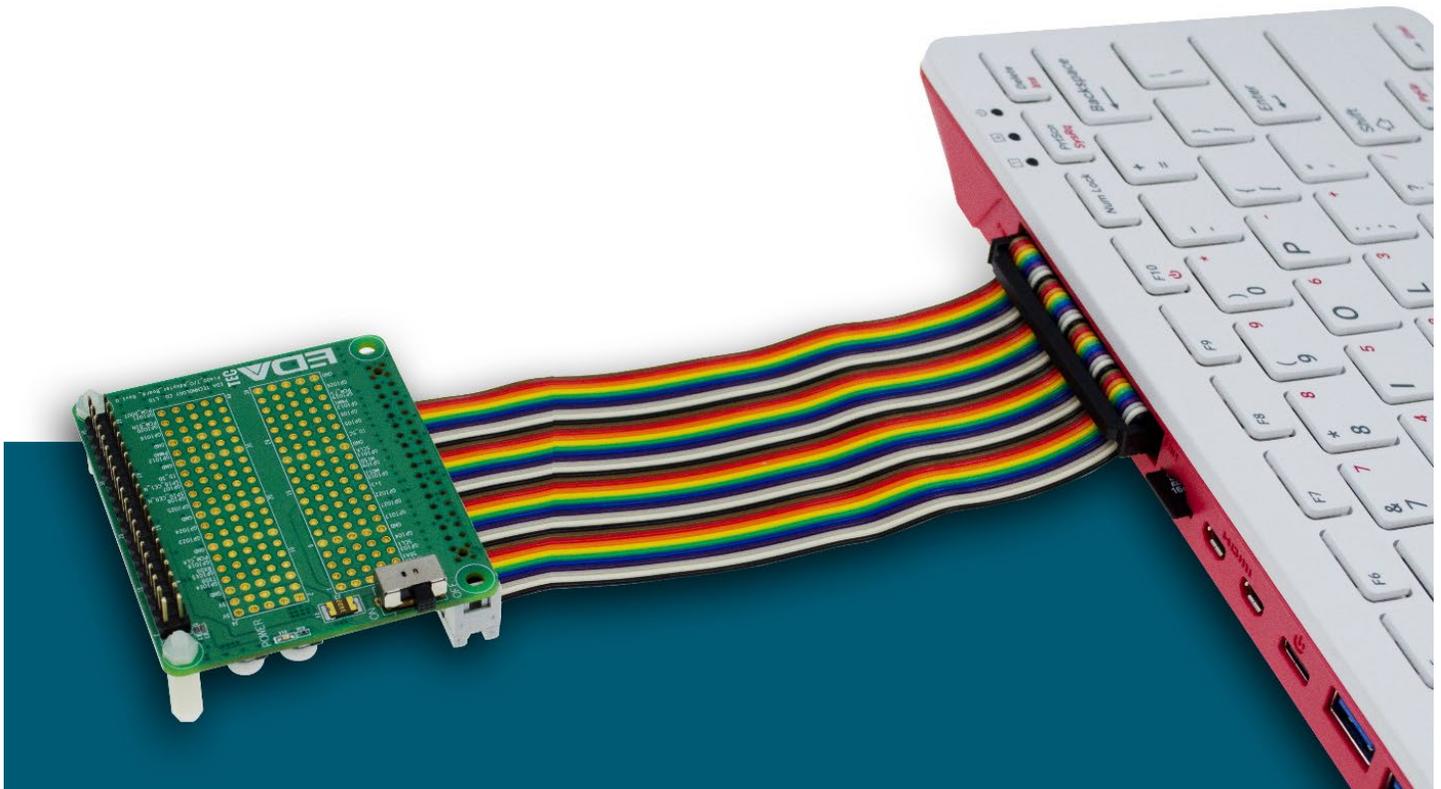


## 40pin I/O Protector

4-01-04

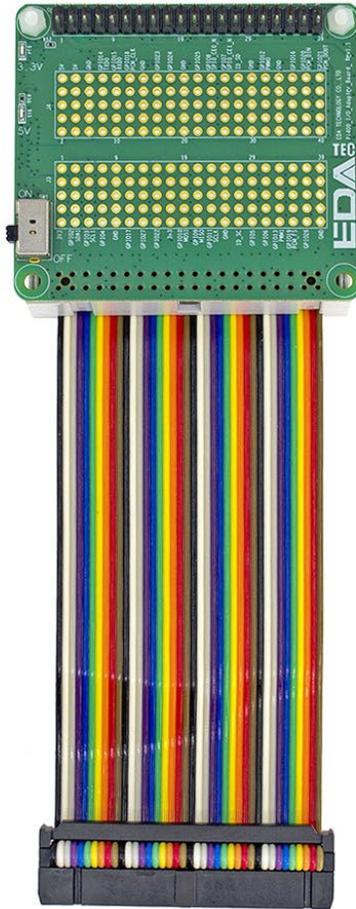
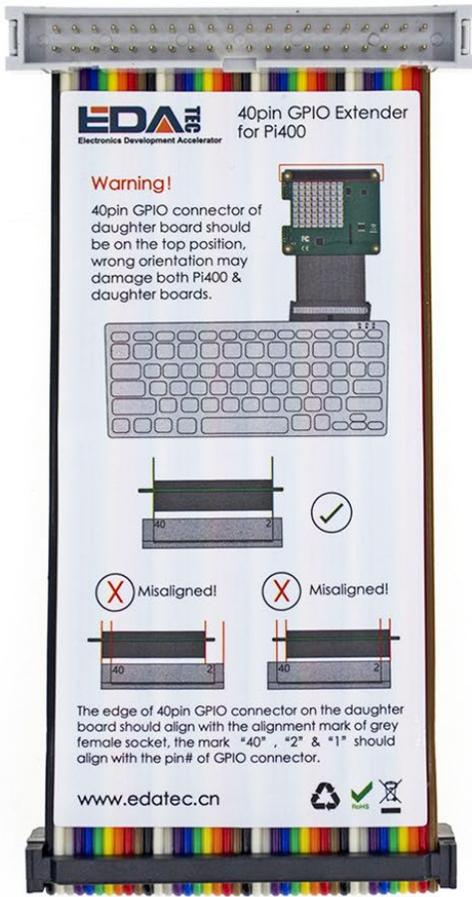


### Overview

- Protect Raspberry Pi400 by ESD immunity IC, Tiny Switch and Over current limit circuit.
- 40pin GPIO Protector are made of a 40pin ribbon cable & a circuit board, the 40pin ribbon cable is to lead 40pin GPIO signals from Pi 400 to the circuit board, the circuit board provides a series of functions to protect Pi 400 computer.
- A tiny switch at the left board edge is to control +5V & +3.3V power supply for the daughter board, the user can switch off the daughter board by switching the tiny switch at "OFF" position, when the user wants to install the daughter board on the 40pin connector, he/she doesn't have to shut down Pi 400, just need to switch off the power of 40pin GPIO Protector, it protects Pi400 from damage due to hot plug.



- All of 40 signals from Pi400 are protected by ESD immunity IC including power signal, ESD immunity IC will absorb the energy of ESD which may come from the daughter boards.
- All of GPIO signals are protected by current limit resistors-33ohm, short circuit between GPIOs and GPIO to GND, 5V or 3.3V won't damage the IO of Pi400.
- Although PMU of Pi400 provides the over-current protection, Pi400 won't properly work when PMU is on protection mode. Over-current limit circuit on GPIO protector limits 2A@5V and 1.5A@3.3V maximal current draw from Pi400, it void Pi400's PMU to shut down the system due to short circuit or over current of daughter board, a green LED indicates the status of 3.3V power supply for daughter board, a red LED indicates the status of 5V power. When daughter board draw too much power from Pi400, LED will blink.
- 2pcs 220uF capacitors stabilize the power supply of 5V and 3.3V respectively, 5\*40pin bread board allows the user to do some experiment without additional cost.

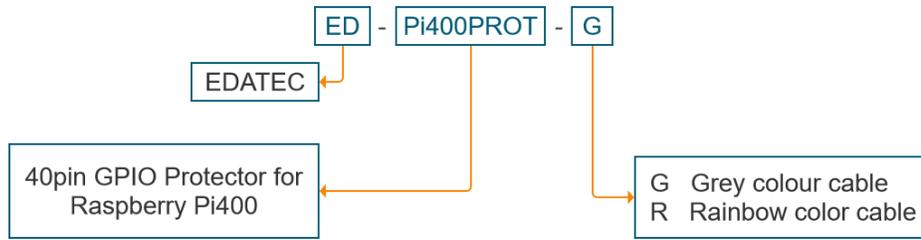


- The IO board comes with a 40pin ribbon cable, which is Grey and rainbow color optional, 40pin black male connector with anti-reverse insertion at one end is to connect 40pin female connector at the back of Pi 400, the user can install the daughter board on the IO board.
- All of materials used on this product are RoHS compliant.

## Installation Guide

- Set the switch of 40pin GPIO protector at the "OFF" position.
- Install daughter board on the top of 40pin GPIO protector, make sure the holes on the four corners between GPIO protector and daughter boards are aligned.
- Insert 40pin black male connector into 40pin female connector at the back of Pi 400. If black male connector can't be inserted into Pi 400, the orientation of the black male connector should be wrong, please reverse the cable and re-insert.
- Power on Pi400, turn the switch to "ON" position.
- If you want to remove daughter board from 40pin GPIO protector, turn the switch to "OFF" position, remove the daughter board from 40pin GPIO protector. (You don't have to power off Pi400 when you do it)

## Order Information



### Example

**Part# : ED-Pi400PROT-G**

**Configuration :** 40pin GPIO Protector for Pi400, Grey colour

## FAQ

**1. Do I need to buy 40pin GPIO Extender if I buy 40pin GPIO Protector?**

No, 40pin GPIO Protector does include 40pin GPIO Extender.

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