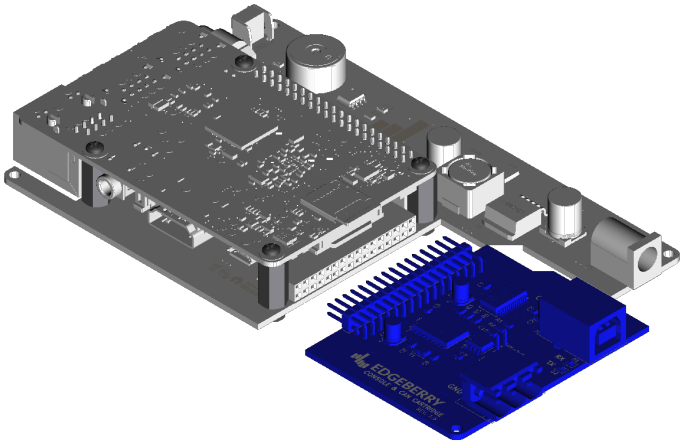
EDGEBERRY

Hardware Cartridge Design Guidelines

revision 1.1



Edgeberry Hardware Cartridge

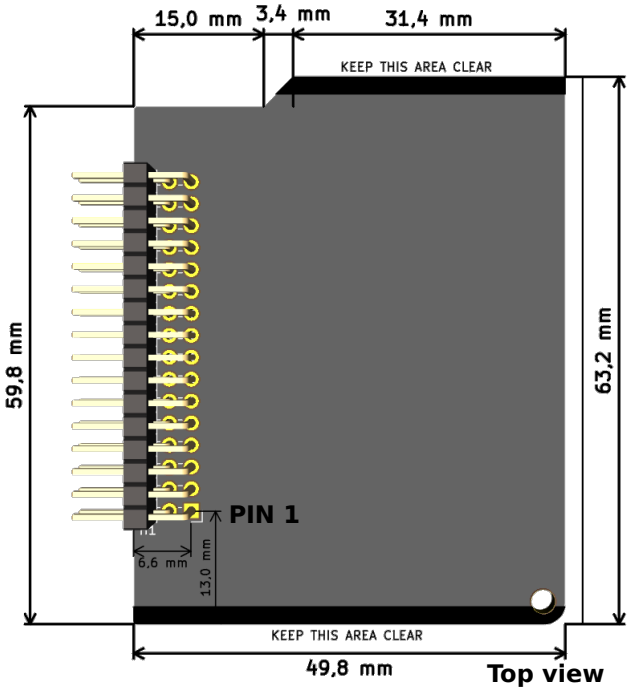
To create your own IoT Edge application using your Raspberry Pi with Edgeberry, you will most likely require application specific hardware. That is why Edgeberry is designed for expanding its capabilities with a Hardware Cartridge. This guide contains the information you need to successfully design your own.

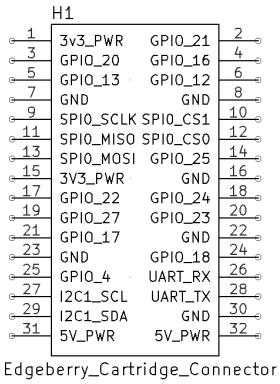
Mechanical Specifications

To seamlessly integrate your custom hardware into the Edgeberry project, your Hardware Cartridge should meet the mechanical specifications provided in this drawing. Components should not exceed a height of 15mm on the top side and 4.5mm on the bottom side. The recommended PCB board thickness is 1.6mm. The connector is a 2x16 pins 1.54mm horizontal header, with a pin length of 6mm.

⚠ IMPORTANT

Ensure careful alignment of the connector. Keep 2mm on the left and right side of the board clear of components





PIN	FUNCTION	PIN	FUNCTION
1	3V3 Power	**2**	GPIO 21
3	GPIO 20	**4**	GPIO 16
5	GPIO 13	**6**	GPIO 12
7	GND	**8**	GND
9	SPI SCLK	**10**	SPI CS1
11	SPI MISO	**12**	SPI CS0
13	SPI MOSI	**14**	GPIO 25
15	3V3 Power	**16**	GND
17	GPIO 22	**18**	GPIO 24
19	GPIO 27	**20**	GPIO 23
21	GPIO 17	**22**	GND
23	GND	**24**	GPIO 18
25	GPIO 4	**26**	UART Rx
27	I2C SCL	**28**	UART Tx
29	I2C SDA	**30**	GND
31	5V Power	**32**	5V Power

Electrical Specifications

The Edgeberry expansion connector for the Hardware Cartridge exposes the remaining unused pins of the Raspberry Pi, providing direct access to the UART, I2C, and SPI interfaces, as well as several GPIO pins. The 3.3V power is supplied by the Raspberry Pi, while the 5V power is directly connected to Edgeberry's robust power supply. When designing a circuit that draws current at 3.3V, it is recommended to use the 5V power in conjunction with your own voltage regulator.