

### 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

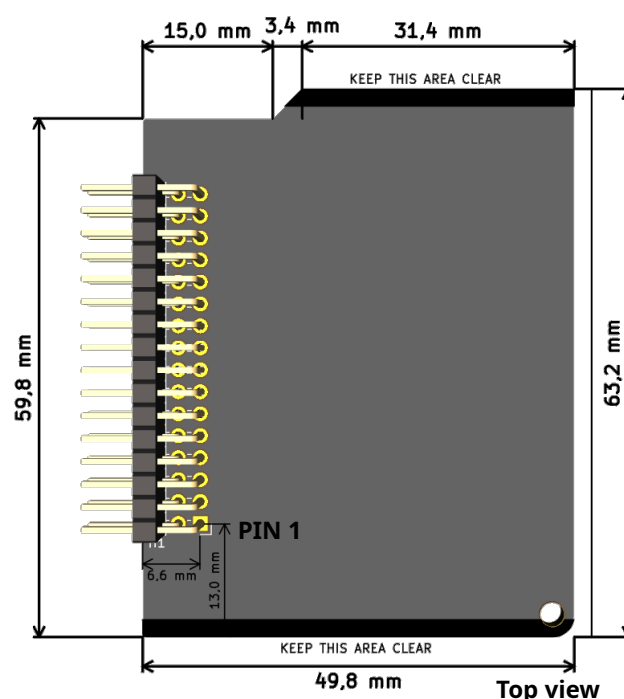
H1			
1	3V3_PWR	GPIO_21	2
3	GPIO_20	GPIO_16	4
5	GPIO_13	GPIO_12	6
7	GND	GND	8
9	SPI0_SCLK	SPI0_CS1	10
11	SPI0_MISO	SPI0_CS0	12
13	SPI0_MOSI	GPIO_25	14
15	3V3_PWR	GND	16
17	GPIO_22	GPIO_24	18
19	GPIO_27	GPIO_23	20
21	GPIO_17	GND	22
23	GND	GPIO_18	24
25	GPIO_4	UART_RX	26
27	I2C1_SCL	UART_TX	28
29	I2C1_SDA	GND	30
31	5V_PWR	5V_PWR	32

Edgeberry\_Cartridge\_Connector

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

### 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.



### 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.