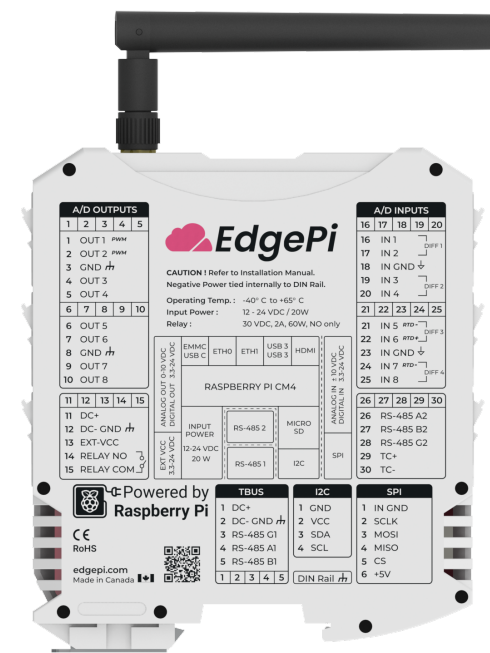


# Technical Data Sheet

| SKU      | MODEL                               |
|----------|-------------------------------------|
| 90-0001A | EdgePi BYOD-FAN (No Compute Module) |
| 90-0002A | EdgePi Lite 4GB-16GB SD-FAN         |
| 90-0005A | EdgePi Pro 8GB-32GB eMMC-WIFI-FAN   |



## PHYSICAL PROPERTIES

|                                |  |
|--------------------------------|--|
| Housing Dimensions (H x W x D) | 114 x 104 x 45 mm                      |
| Housing Weight                 | 283 g (0.62 lbs)                       |
| Housing Material               | PA66 (Nylon, 125°C Max)                |
| Mounting                       | 35 mm DIN Rail (IEC/EN 60715-35, TS35) |
| IP Classification              | IP20                                   |
| Screw Terminal Wire Gauge      | 16 - 28 AWG                            |
| Screw Terminal Torque          | 0.22 - 0.25Nm (1.9 - 2.2 lb-in)        |

## POWER

|                       |   |
|-----------------------|---|
| Power Requirements    | 12 - 24 VDC $\pm$ 15%, reverse-polarity protected |
| Max Power Consumption | 20 Watts (includes USB power, Fan)                |

## ENVIRONMENTAL

|                              |                                       |
|------------------------------|---------------------------------------|
| Operating Temperature        | -25°C to +65 °C                       |
| Storage Temperature          | -40°C to +85 °C                       |
| Humidity                     | 0 to 95% (non-condensing)             |
| CPU Temperature at Peak Load | 25°C above ambient                    |
| Cooling Method               | Internal heatsink, variable speed fan |

## INPUTS & OUTPUTS

|  |   |
|--|---|
| Input Channels ( 8x Analog or Digital )  | <p><b>Digital In</b></p> <ul style="list-style-type: none"> <li>• 3.3V - 24VDC Digital Input</li> </ul> <p><b>Analog In</b></p> <ul style="list-style-type: none"> <li>• <math>\pm</math>10VDC, 32-bit resolution, Max 5.4kHz sampling</li> <li>• Configurable as 4x differential pairs</li> <li>• Configurable as 3-wire RTD input</li> <li>• 3kV Isolation</li> </ul> |
| Output Channels ( 8x Analog or Digital ) | <p><b>Digital Out</b></p> <ul style="list-style-type: none"> <li>• 3.3V - 24VDC Digital Out</li> <li>• 2x configurable as PWM output</li> <li>• Up to 500mA from internal 5V power</li> <li>• Up to 2A from external power</li> </ul> <p><b>Analog Out</b></p> <ul style="list-style-type: none"> <li>• 0 - 10VDC Analog Out, 16bit resolution</li> </ul>               |

## PORTS & SLOTS

|                        |   |
|------------------------|---|
| Video                  | 1x Micro HDMI 2.0a (4K)   |
| Serial                 | 2x RS485 3-wire, 3kV isolation  |
| Powered USB            | 2x USB 3.0 (1A Each)  |
| Gigabit Ethernet       | 2x RJ45 10/100/1000 Gigabit Ethernet  |
| Programming Interface  | 1x USB-C for eMMC programming only  |
| Development Interfaces | 1x SPI, 3kV Isolation, 6-wire JST-SH connector<br>1x I2C, no Isolation, 4-wire JST-SH Qwiic Connect and<br>Stemma QT compatible |
| Micro SD Slot          | 1x Micro-SD Card, 50 Mbps, 1 TB Max (Disabled for all<br>eMMC models)   |

## FEATURES

|                 |  |
|-----------------|--|
| Fan Header      | 1x 12 VDC, 4-wire variable speed PWM control |
| Relay           | 1x 30 VDC, 2A, 60W                           |
| Real-Time Clock | 3 PPM accuracy                               |
| Battery         | 3V Lithium CR1216 / CR 1220 / CR1225         |
| Thermocouple    | 19 bit, Types K,J,N,R,S,T,E and B            |
| Wireless Models | WiFi 802.11 b/g/n/ac, BLE 5.0                |
| Indicator LEDs  | 8x programmable or H/W assigned to I/O's     |
| EEPROM          | 32KB (16KB reserved, 16KB user programmable) |

## COMPLIANCY

|                  |                      |
|------------------|----------------------|
| FCC Compliant    | Yes                  |
| RoHS Compliant   | Yes                  |
| CE Compliant     | Yes                  |
| UL Certification | Yes, cULus (pending) |

## COMPUTE MODULE

|                               |  |
|-------------------------------|--|
| Raspberry Pi Compute Module 4 | All models are supported but micro-SD slot is<br>disabled for modules with eMMC memory |
|-------------------------------|--|

## SOFTWARE & CLOUD

|                              |  |
|------------------------------|--|
| IoT Protocol                 | MQTT   |
| Security                     | 256-bit private key encryption   |
| Data topics                  | All digital/analog inputs/outputs, TC, LED status,<br>relay status, fan speed, CPU temperature, etc.                 |
| Remote Device Configuration  | EdgePi Portal Dashboard (free)   |
| Cloud Automatic Data Storage | EdgePi Portal (subscription required)  |
| Cloud Data Visualization     | EdgePi Portal (subscription required)  |
| Cloud API                    | Read streaming (semi real-time) and historical data<br>(subscription required)                                       |
| EdgePi Hardware SDK          | Python SDK, Open source MIT license<br><a href="https://github.com/edgepi-cloud">https://github.com/edgepi-cloud</a> |

