

(en) PickBeam - Technical Details

The PickBeam is an industrial-grade control and sensor unit designed for monitoring and control in industrial environments. It combines flexible LED line management, precise environmental detection and secure IIoT connectivity in a compact and robust device.

Technical Specifications	
Electrical Data	
The control unit for controlling up to 5 rows of picks and up to 15 metres per row (max. 1000 LEDs) .	
Power supply	5V DC
Light strip	RGB light strips
Power consumption	Bis zu 15A (maximal)
Power consumption	Depending on connected components (e.g. LED lines); recommended external power supply for extensions
Communication Interfaces	
WLAN	2.4 GHZ (IEEE 802.11 b/g/n)
LAN	10GBe
Protocol	Support for Wi-Fi, MQTT for IIoT communication, HTTP/HTTPS for web interfaces.
Safety	WPA3 encryption, TLS 1.3 for secure connections, device authentication via certificates.
Sensors and Measurements	

Internal sensor	<p>BME680 (Bosch Sensortec)</p> <ul style="list-style-type: none"> • Measured variables: Temperature (-40 °C to +85 °C), relative humidity (0% to 100%), air pressure (300 hPa to 1100 hPa), gas resistance (VOC detection). • Accuracy: Temperature ± 1 °C, humidity $\pm 3\%$, pressure ± 1 hPa.
External Sensors	<p>Up to 2 additional sensors for adhesive devices (temperature and humidity).</p> <ul style="list-style-type: none"> • Interface: I2C or analogue, compatible with common sensors such as DHT22 or similar.
Refresh rate	Configurable, default setting is every 10 seconds.
Lighting and displays	
RGB LED lines	<p>5 independent lines</p> <ul style="list-style-type: none"> • Maximum length per cable: 5 m (standard), extendable to 10 m with special external power supply. • LED density: 144 LEDs/m (e.g. WS2812B compatible). • Colour space: RGB, 24-bit colour depth. • Control: Via PWM or digital protocols (e.g. NeoPixel).
Status-LEDs	<ul style="list-style-type: none"> • Status LED: Multicoloured (RGB) for operating states (e.g. green: OK, red: error).

	<ul style="list-style-type: none"> • System LED: For system status (e.g. flashing during boot-up, steady during operation).
Push button with LED	Up to 4 buttons, each with integrated LED for status display (e.g. on/off, configuration).
Mechanical conditions	
Housing	Suitable for industrial use, protection class IP54 (dustproof and splashproof).
Dimensions	100 mm x 60 mm x 30 mm (estimated, depending on the final design).
Environmental conditions	
Operating temperature	-20 °C to +60 °C.
Storage temperature	-40 °C to +85 °C.
Assembly	DIN rail or wall mounting.
Interfaces and extensions	
Inputs/Outputs	<ul style="list-style-type: none"> • 5 x RGB LED outputs. • 2 x sensor inputs (temperature/humidity). • 4 x push-button inputs with LED outputs.
Extension	Special power supply for LED extension to 10 m per line.
Firmware	Updateable via OTA (Over-The-Air) via Wi-Fi.
Certifications and compliance	
EMV	EN 55032/55035
Safety	EN 62368-1

RoHS	Compliant
More	CE, FCC (depending on the market)