

(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 sensing, and secure IIoT connectivity in a compact and robust device.

Technical data	
Electrical data	
The control unit for controlling up to 5 rows of picks and up to 15m each (max 1000 LEDs).	
Power supply	5V DC
Light strips	RGB light strips
Current consumption	Up to 15A (maximum)
Power consumption	Dependent 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
Protocols	Support for Wi-Fi , MQTT for IIoT communication, HTTP/HTTPS for web interfaces.
Security	WPA3 encryption, TLS 1.3 for secure connections, device authentication via certificates.
Operator Interface	---
Sensors and Measurements	

Internal sensor	BME680 (Bosch Sensortec) • 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 ± 3 %, pressure ± 1 hPa.
External sensors	Up to 2 additional sensors for adhesive devices (temperature and humidity). • Interface: I2C or analogue, compatible with common sensors such as DHT22 or similar.
Update rate	Configurable, by default every 10 seconds.
Lighting and displays	
RGB LED lines	5 independent lines • Maximum length per line: 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	• Status LED: Multi-coloured (RGB) for operating statuses (e.g. green: OK, red: error).

	• System LED: For system status (e.g. flashing during boot, permanent 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, IP54 protection (dust and splash-proof).
Dimensions	100 mm x 60 mm x 30 mm (estimated, depending on final design).
Environmental conditions	
Operating temperature	-20 °C bis +60 °C.
Storage temperature	-40 °C bis +85 °C.
Montage	DIN rail or wall mounting.
Interfaces and extensions	
Inputs/outputs	• 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	Update-capable via OTA (Over-The-Air) via WLAN.
Certifications and conformity	
EMV	EN 55032/55035
Security	EN 62368-1

RoHS	Konform
More	CE, FCC (depending on market)