pironex
electronic and software solutions

Data sheet
piControl-System

E-Mobility | Datalogger

Multi-function terminal with RFID reading function for checking and controlling objects.

Important features

› energy self-sufficient
› multifunctional

Overview

The piControl-System is a powerful industrial PC that meets the requirements of the modern IoT solutions. Mounted on a back wall or a pole, it can be used for a variety of purposes. It's sturdy, durable and easy to use.

The piControl-System is an extremely energy-saving access system that collects customer data over a long period of time. Thanks to the integrated RFID reader, there is fast access control with a high level of security. Usibility is made easier by the e-paper display as a human-machine-interface.
The piControl-System enables location-independent administrative management of itself and all devices connected to it. It records current position and operating data and forwards them directly to a higher-level system (pironex-iot.de). Updates can be carried out conveniently over the air.
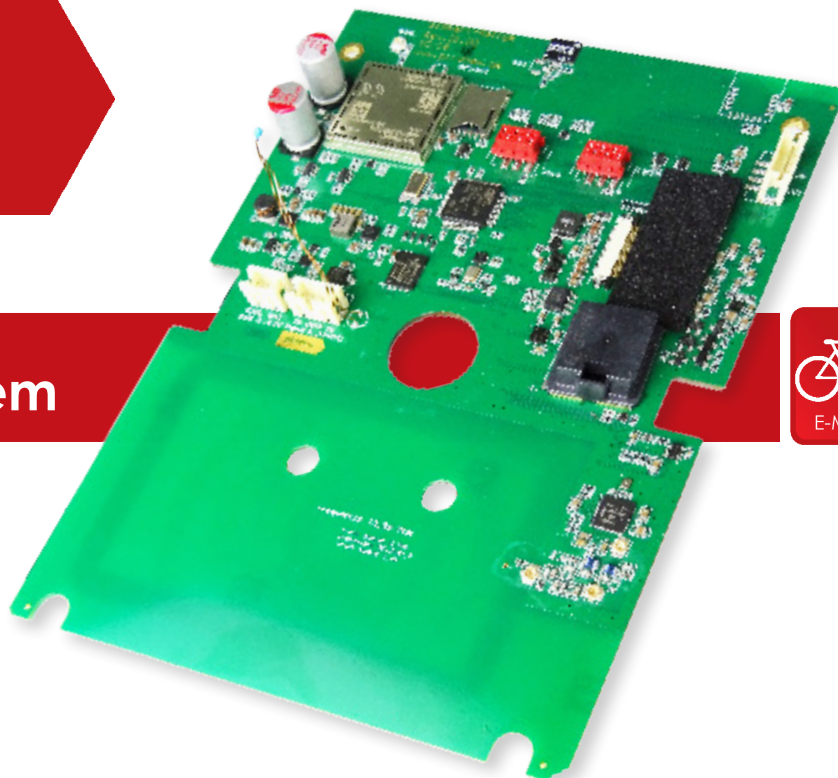
Use cases

The GSM location offers versatile options for control and monitoring. In addition, warnings are sent as soon as zones are left or certain events occur.

The piControl system is administered and managed via the pironex portal. There the operating data recorded, such as times, accesses, or reservations, as well as current locations are transmitted to the operator.

The diverse functions allow the device to be used, for example, for time recording, warehouse management, product tracking or even to determine tourist paths.

Functions

› RFID cards read / write RFID cards
› terminal
› access control
› door control
› time recording system
› attendance control
› GSM tracking
› data acquisition
› rental
› reservation
› occupancy
› device control, triggering an action
› location-independent software updates
› remote diagnosis
› telemetry / remote measurement
› operating hours / runtime recording

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Technical specifications

Basics

Supply voltage	6.5-16V (12V nominal) or internal power supply for 6 months
Battery pack	rechargeable backup battery (Li-ion)
Cooling	Passive and fanless cooling
Antennas	GSM (internal) GPS antenna (internal) Radio antenna (internal)
Temperature range	Operating temperature 0 to 40 ° C Storage temperature -20 to 85 ° C
Housing	individually designed robust plastic housing
Dimensions	190 mm x 130 mm x 52 mm

Interfaces

Mobile	2G
Serial	TTL-UART
Programming interface	JTAG
RFID / NFC	13,56 Mhz full NFC forum compliancy

Other properties

Sensors	Inertial measuring unit with 3-axis acceleration sensor 16 bit, ± 16 g 3-axis gyroscope 16 bit, 2000 ° / s
Storage	20 kB RAM / 128 kB Flash
RTC	Real time clock
IO interfaces	2 x digital input (12V) 2 x output Vin 2 x output (Vin / GND)
SIM	customer-specific selectable (embedded SIM chip or nano SIM card)
Signal transmitter	acoustic (buzzer) 95dB max
Processor	STM32 - high performance processor with power saving function
Display	E-paper 264 x 176 px b / w 2.7 inches, RGB illuminated
IP protection class	IP67