1. Introduction

Hardware manual

www.pinetek-networks.com

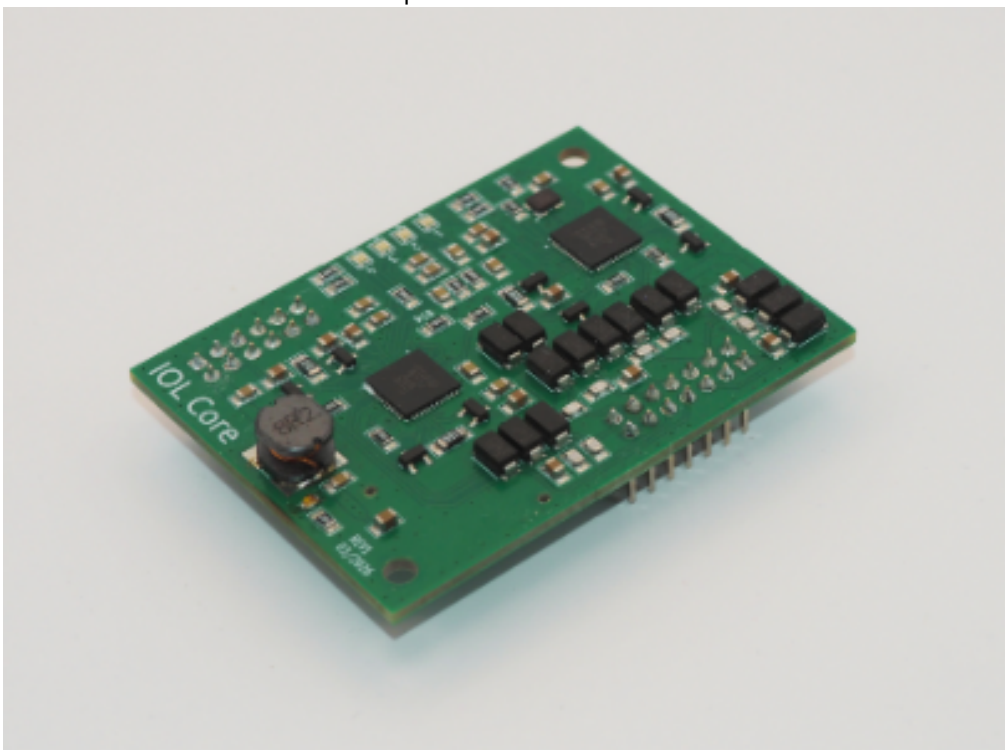


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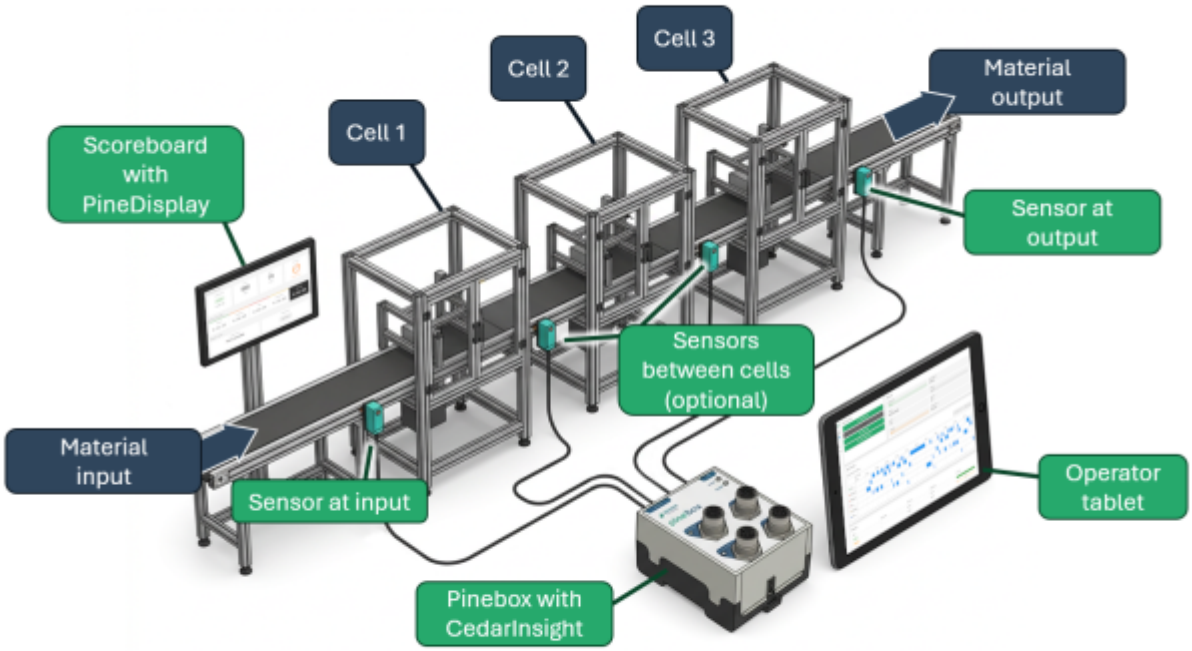
1. Introduction

1.1 About Pinetek Insight

Pinetek Insight is a manufacturing OEE (Overall Equipment Effectiveness) monitoring system by Pinetek Networks. It runs on the Pinebox, Pinetek Network's industrial edge device next to your production line and provides:

- Real-time production state tracking: the line state (Running, Down, Changeover, ...) is derived automatically from counter signals.
- OEE calculation: Availability, Performance and Quality per production run, aggregated over any time period.
- Downtime analysis: reason capture at the line, Pareto analysis, history drill-down.
- Bottleneck detection: live and historical, per process stage.
- Sensor, takt and cycle monitoring: throughput sensors, takt timers and energy-based cycle detection.
- Automated PDF reporting: run-end, scheduled or on-demand reports with e-mail dispatch.
- AI Assistant: chat-based analysis of your production data (licensed feature).

All data acquisition at the machine (counters, timers, sensor and cycle signals) is performed by the Pinebox core functions. **Pinetek Insight** consumes this data over the network and turns it into OEE metrics, analyses and reports.



1.2 Intended audience and user roles

This manual addresses three audiences, which correspond to the access levels in the application:

Role	Typical user	Relevant chapters
Operator	Line personnel: starts/stops runs, records downtime reasons, confirms notifications	4, 5
Supervisor	Shift/production lead: analyses OEE, downtime and bottlenecks, configures the line	4..7
Admin	Plant IT / system owner: installation, users, reports, backup, updates, licensing	all, especially 3, 8, 9

A fourth level, Basic, is a view-only account for wall displays (Scoreboard only, no password).

1.3 Scope of this manual

This manual covers the **Pinetek Insight** application: its user interface, configuration and administration.

It does not cover the Pinebox device itself: wiring, IO-Link master configuration, counter/timer setup and device-level networking are described in the separate Pinebox Manual.

1.4 Related documents

Reference	Document	Content
[PBX]	*Pinebox Manual* (separate document)	Pinebox hardware installation, sensor wiring, counter/timer/cycle configuration, device network setup

Throughout this manual, the marker [PBX] indicates that the described functionality depends on configuration performed on the Pinebox, described in the Pinebox Manual.

1.5 Typographic conventions

- **UI elements** are written in bold: press **Save**.
- *Menu paths* are written as: *Line Config → Counters*.
- `Monospace` is used for values, keys, file names and URLs: `http:<device-ip>:8000`.
- [PBX] marks a cross-reference to the Pinebox Manual.

1.6 Notes and warnings



This symbol is used to show information that is relevant for the operation of **Pinetek Insight**.



This symbol is used to show areas of special attention that need to be considered for the safe operation of **Pinetek Insight**.