

Appendices

User manual

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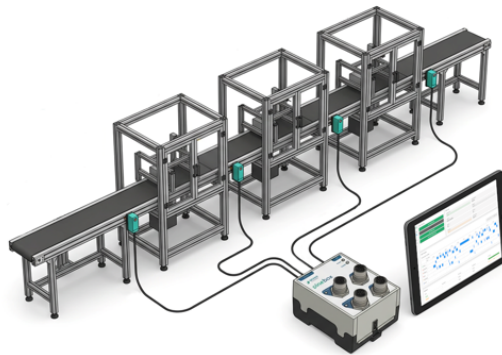


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Appendices

A. Glossary

Term	Definition
Availability	OEE factor: running time / (running time + unplanned downtime)
Bottleneck	The process stage whose throughput limits the whole line
Changeover	Setup/product-change phase before a production run
Cycle station	Machine monitored via energy-based cycle detection [PBX]
Defect / Reject	Part not meeting quality requirements; counted by the reject stage or corrected manually
Downtime reason	Category + reason classifying a Down period
Draining	Run-out phase: input stopped, line runs empty
Entitlement	A licensed feature on the Pinetek license (Core, Cloud Backup, AI Chat, SMTP)
Ideal cycle time	Theoretical time to produce one unit at full speed; basis of Performance
OEE	Overall Equipment Effectiveness = Availability × Performance × Quality
Pareto analysis	Ranking of causes by impact with cumulative percentage
Performance	OEE factor: (ideal cycle time × actual quantity) / running time
Pinebox	Pinetek field data-acquisition device; source of all machine signals [PBX]
Process stage	One counting point of the line, with role Input/Output/Defect/Intermediate
Product	Produced article, linked to a program, with part number and ideal cycle time
Production run	Continuous production of one product; unit of OEE calculation
Program	Line configuration: stages, counters, sensors, takt, detection parameters
Quality	OEE factor: good quantity / actual quantity
Scrap rate	Defect quantity / actual quantity
State event	Stored record of one contiguous period in a production state
Takt	Measured cycle/interval time from a Pinebox timer [PBX]
Target quantity	Planned quantity of a run, entered at changeover
Units per count	Multiplier from counter ticks to units (e.g. one tick = pack of 6)

B. State reference

State	Color	Entered by	Left by	OEE effect
Stopped	grey	Run end, drain complete	Start Changeover	outside any run
Changeover	purple	Start Changeover button	counting starts	not an availability loss
Running	green	counting detected	stall, slow-down, operator action	running time
Running Slow	orange	throughput drop	recovery or stall	running time; reduces Performance
Down	red	stage counter timeout	counting resumes	unplanned downtime, reduces Availability ; reason required
Planned Stop	yellow	operator action	Resume button	planned; no Availability loss

State	Color	Entered by	Left by	OEE effect
Draining	blue	Drain Line button	output counter timeout → run ends	not an availability loss

C. Roles and permissions matrix

Function	Basic	Operator	Supervisor	Admin
Scoreboard	✓	✓	✓	✓
Production Timeline (run control, downtime reasons)	-	✓	✓	✓
Live Bottleneck Analysis	-	✓	✓	✓
Notifications	-	✓	✓	✓
Analysis (OEE History, Production, Bottleneck History, Downtime Pareto)	-	-	✓	✓
AI Assistant	-	-	✓	✓
Line Config (Program, Product, Counters, Cycle Stations, Sensors, Takt, Downtime)	-	-	✓	✓
System configuration, Backup, Users, SMTP, Version, License	-	-	-	✓
Reports (Templates, Blocks, Layout)	-	-	-	✓

D. Technical data

Item	Value
Web interface	http://<device-ip>:8000
Supported browsers	current Chrome, Edge, Firefox
Pinebox data services	port 18080 (counters, timers, cycles) [PBX]
Update manager	port 18090
Database	MariaDB, local on the device
Timestamps	stored in UTC, displayed in the configured timezone
Languages	English, German (system-wide, incl. reports)
Report output	PDF (A4), optional e-mail dispatch via SMTP
Data export	Excel (.xlsx) from analysis tables
License check	Pinetek license server, once per 24 h, cached locally

E. Contact and support

Supplier information

Pinetek Networks GmbH
Bachstelzenweg 8
DE-88677 Markdorf

www.pinetek-networks.com
info@pinetek-networks.com

Data privacy

The device does not collect, store, or transmit data outside of the physical device, unless the user programs the device accordingly (AI feature, online backup, email; see sections in this manual).

Support

Support for **Pinetek Insight** is available through multiple channels:

- The Pinetek Knowledge Base (online manuals): doc.pinetek-networks.com
- Latest firmware, PDF manuals and other information: download.pinetek-networks.com/cedar-insight

For individual support, please use our support portal: support.pinetek-networks.com

