

LinkVion Gateway · LinkVion Middleware · LinkVion SCADA

From Equipment to Screen, Three Products, One Platform

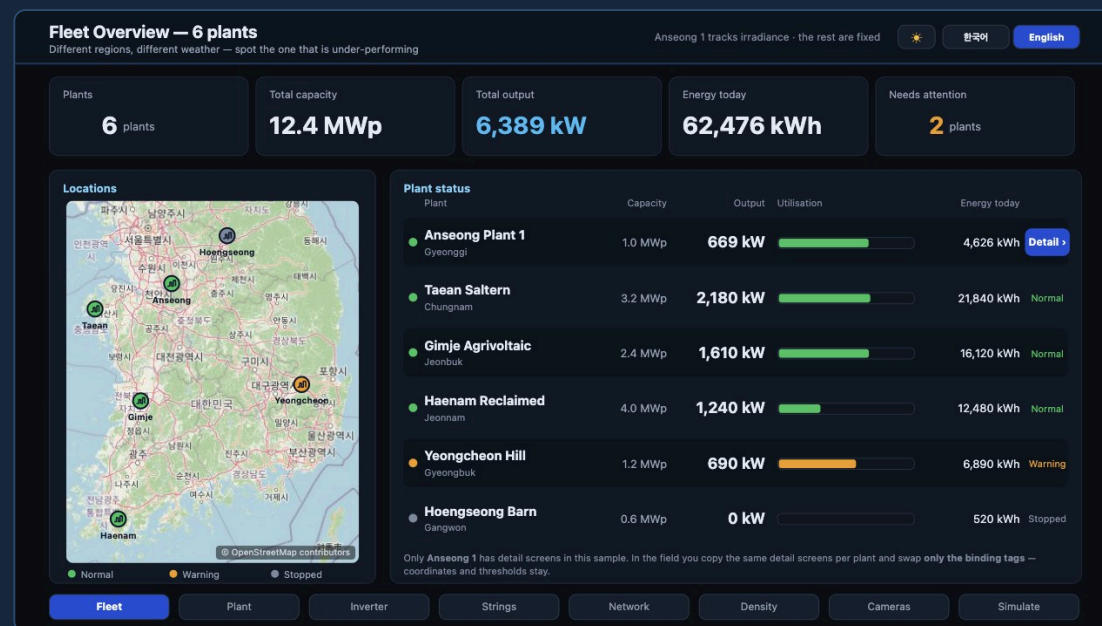
The gateway talks to the equipment, the middleware stores and processes the values, and SCADA shows them to people. Each product ships with sample projects you can open right away.

OS Where it runs LinkVion Box (CM4) · CM5 · Windows · Mac · Linux

01 LinkVion Gateway connections · tags · alarms · power · lighting · OSC · vision · detection models

02 LinkVion Middleware history · collection · HACCP · OEE · reports

03 LinkVion SCADA design · operation · 3D · signage · vision, person, barcode, CCTV, boxing and cafe samples



LinkVion is the product name from release 0.1.0.21 (formerly MoaView). The screens in this brochure come from sample projects and built-in screens that ship with the product, or are marked as product screens. None of them is a customer project. Gateway and middleware screens were taken on a test gateway with a sample open.

PLATFORM

The Platform at a Glance

Values flow from left to right. The three products are layers of one program, and you switch modes to work on the same project.



Where each product begins and ends

01 LinkVion Gateway

The layer that talks to equipment. It turns device values into tags, republishes them over other protocols, and raises alarms.

02 LinkVion Middleware

The layer that keeps and processes what was collected. It stores values, picks them by rule, and turns them into reports, records and verdicts.

03 LinkVion SCADA

The layer people look at. Tags are bound to screens to draw process diagrams, control rooms, signage and kiosks, and to operate them.

Operation modes (switch in the app header)

Gateway mode

Protocol bridge: Modbus master/slave, OPC UA, MQTT, power (PJLink etc.), lighting (Art-Net, sACN), OSC, live tag monitor, alarms, notifications, vision (optional).

Middleware mode

Data collection and storage. Collection rules (periodic, on change, threshold), SQLite, MariaDB, InfluxDB, history charts, CSV and Excel export, HACCP CCP records and OEE.

Runtime mode

Field operation and display. Run the screens you designed, with the configuration menus hidden if you like.

Other modes

Motion (G-code), sequencer and protocol tester appear only when the licence enables them.

LinkVion Box (CM4) The same program runs on its own in a small industrial box, no PC needed. Windows and macOS installers are available too.

Vision module · optional Camera images judged by an inspection recipe; OK/NG and measured values become tags (vision.<job>.*) for PLCs, alarms, history, reports and SCADA. 51 tools · recipe teaching · detection models. Licence vision; CM4 package or Windows component (not in the Mac package).

RUNTIME

Where LinkVion Runs

The same LinkVion program runs on a small industrial box or on an office PC. Screens open in a browser, wherever you are.



In a box, on site

LinkVion Box (CM4) · CM5 industrial box · small Raspberry Pi. Runs on its own, no PC.



Installed on a PC

Windows and macOS installers. Linux PCs on request.



Screens in a browser

Chrome · Edge · Safari. Nothing to install: PC, phone and tablet open the same address.

Platform	Form	Status	Notes
LinkVion Box (CM4)	Raspberry Pi CM4 · eMMC · 64-bit Linux (Debian 13) · real-time kernel	In use	Our in-house unit runs 0.1.0.24. Runs standalone without a PC, updated with signed update files. Vision is an optional package. Details on the next page.
CM5 industrial box	Raspberry Pi CM5 (checked on Waveshare IPCBOX-CM5-A)	Boots · installs	4 × RS-485 · RTC. No real-time kernel needed. The CAN port is hardware only; the gateway cannot use it yet. EtherCAT not verified.
Small Raspberry Pi	Pi 3 B · Zero 2 W (64-bit)	Checked (Zero 2 W)	Lightweight setup for collection and bridging. 32-bit-only boards (Pi 2 V1.1 and older, B+) do not work.
Linux PC (x86_64)	Desktop or industrial PC	Unverified · on request	No installer has been released yet. On request we build and test first.
Windows	Windows x64 installer	Released (beta)	Not code-signed: SmartScreen warns and Smart App Control may block it. Built without 11 plugins. From 0.1.0.17 vision is a setup component (off by default). Update by installing the new version.
Mac	Apple silicon · macOS 14 or later · notarized dmg	Released (beta)	Intel Macs are not supported. Signed update files are uploaded and checked in the app (applied with one terminal command). No vision function.

All platforms Every screen opens in a browser: design, operation and settings. Phones and tablets use the same address as the PC, with no client to install.

Status as of 2026-10-25 (CM5 and small Pi checked 2026-10-05). “In use” means it runs on our own unit, not at a customer site. The Windows build was installed and started on one Windows PC.

LINKVION BOX CM4

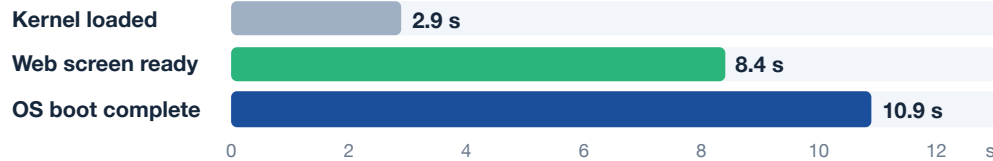
LinkVion Box (CM4)

A small box that runs on its own next to the equipment, no PC needed. It carries the same LinkVion as the PC version.

Configuration (unit from café post 26)

Carrier board	Waveshare CM4-DUAL-ETH-MINI (metal-case BOX version)
Module	Raspberry Pi CM4, 4 cores at 1.5 GHz, on-board eMMC
Network	2 × gigabit Ethernet: one for devices, one can be kept for EtherCAT
OS	64-bit Linux (Debian 13) + real-time kernel 6.6.78-rt51
Serial	RS-485 through USB adapters (FTDI · CP210x · CH341 drivers built in)

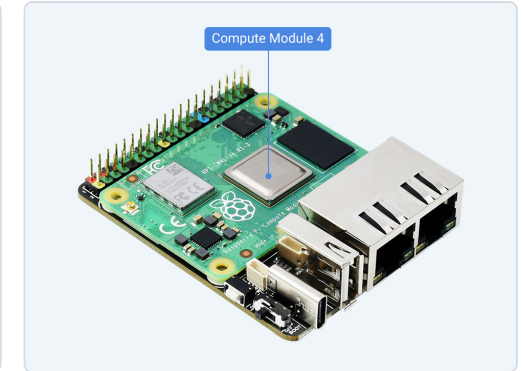
Boot time (from power on)



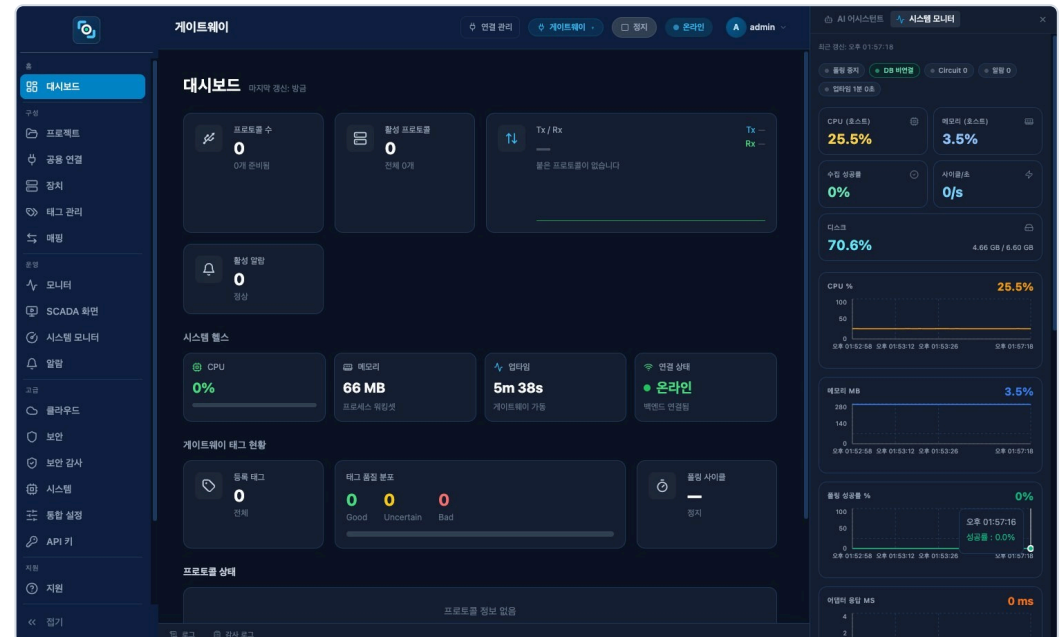
OS 10.9 s: systemd-analyze (kernel 2.9 + userspace 8.0), café post 26, 2026-08-21. Web 8.4 s: measured the same day to the first web response after trimming service dependencies (11.1 s before). The web screen opens before the OS reports boot complete. Not re-measured on later releases.

Performance · operation

- Mitsubishi MC, 10,000 words in a 16 ms cycle: CM4, Release build, loopback measurement (2026-07-15). A real PLC adds network round trips.
- Ready for an EtherCAT master (real-time kernel + dedicated port). For jitter-critical setups we recommend an Intel i210 NIC on a board with a PCIe slot.
- Updates: upload a signed update file (.acfw) in the app; it checks signature, target and hashes and keeps it. Applying it is one terminal command.
- Standalone: starts by itself as a service at power on. Login and roles are enforced, and passwords in the settings are masked on screen.



Photos: Waveshare (CM4-DUAL-ETH-MINI-BOX · board), manufacturer product photos. The LinkVion Box is this board with a CM4 and LinkVion installed.



LinkVion running on the CM4: dashboard and system monitor (host CPU, memory, disk). Our own capture from café post 26 (2026-08-21, Korean UI), taken before a project was loaded, so tags are 0.

01

LinkVion Gateway

Gateway mode · protocol conversion bridge

The layer that talks to equipment. It turns device values into tags, republishes them over other protocols, and raises alarms.

Key features

40+ protocol adapters

Modbus TCP/RTU, Mitsubishi MC, LS XGT, Siemens S7, Omron FINS, EtherNet/IP, MQTT (5 from 0.1.0.23) and more. Power (PLink, WOL, SNMP), lighting (Art-Net 4, sACN), OSC, RTSP cameras. BACnet/IP not yet field-verified.

Conversion · republishing

Publish tags as nodes with the OPC UA server, or serve an upstream PLC as a Modbus slave. Read in with the OPC UA client or MQTT.

Polling that keeps going · concurrent REST

Each adapter polls on its own lane. One silent device delays neither the other devices nor other REST requests.

Tags

Give device addresses a name, unit and decimals. Virtual tags compute from expressions. The monitor shows value and quality live, and writes memory tag values in place (0.1.0.16).

Alarms · HTTPS

Threshold alarms keep a raise, acknowledge and clear history and notify by email. Screens also open over HTTPS (8443).

Extending

Declarative adapters add a protocol from a spec file (meta.json). OPC UA has certificates, users and per-node permissions.

Samples that show this layer

Sample project	Contents
Ground Source Heat Pump (“지열 냉난방 시스템 (GSHP)”)	118 tags · 6 alarms
Pharmaceutical Water (“제약용수 시스템 (PW/WFI)”)	67 tags · 6 alarms
Wastewater Treatment (“하수종말처리장 중 합운전”)	57 tags · 5 alarms
Smart Farm Greenhouse (“스마트팜 온실 감시”)	31 tags · 7 alarms
LinkVion Signage (“링크비온 사이니지 — 로비·식당·생산동”)	3 tags · 2 simulated signals
Food Plant (“식품 공장 — 장비 연결 · 수집 · 해썬 · OEE”)	2 connections (Modbus TCP loopback) · 38 tags · 3 alarms
Four new samples: exhibition hall, night lighting, test wall, game booth	2 connections each (Modbus TCP loopback) · 46 to 353 tags · 1 to 42 alarms
Six vision samples: line, plates, parking, conveyor, eccentricity, person detection	4 · 1 · 1 · 3 · 1 · 1 vision jobs · folder-playback cameras

To be clear Food Plant and the four new 0.1.0.11 samples show real device connections. The gateway opens a Modbus slave (device simulator) on 127.0.0.1 and its own Modbus master reads it, so quality, link loss and recovery really happen with no outside equipment. The six vision samples and the CCTV viewer use folder-playback cameras; the other eleven use virtual tags and get mappings on site. Power, lighting, OSC and OPC UA settings are shown as product screens.



Project → Samples: 23 bundled samples in 0.1.0.24, card view (partly Korean UI). Opening one brings in connections, tags, scripts, alarms and screens

01 LinkVion Gateway Sample project

Ground Source Heat Pump

“지열 냉난방 시스템 (GSHP)”

118 tags come alive on the monitor, and 6 alarms guard their thresholds.

Contents (counted from the bundle file)

118 tags (virtual) **6 alarms (2 critical)** **1 script**

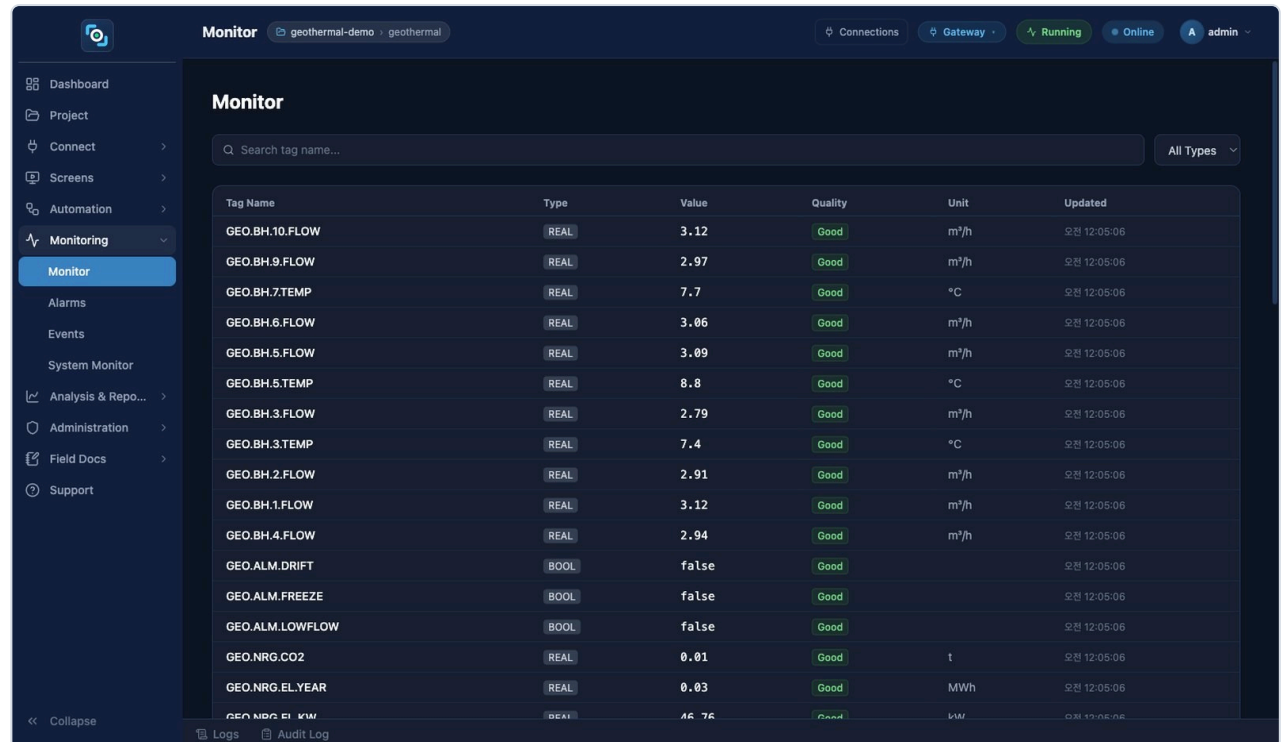
1 screen (3 pages)

Where to look

- Every tag carries a unit, decimals and a description. Tag management shows and edits them as a table.
- The monitor shows value, quality and update time live.
- Freeze risk and high pressure are critical; low flow and low efficiency are warnings.
- On site, add device mappings to the same tag names and the screens and alarms keep working.

How to open

Project → Samples → open “지열 냉난방 시스템 (GSHP)” → Open as this project. The simulation starts on its own.

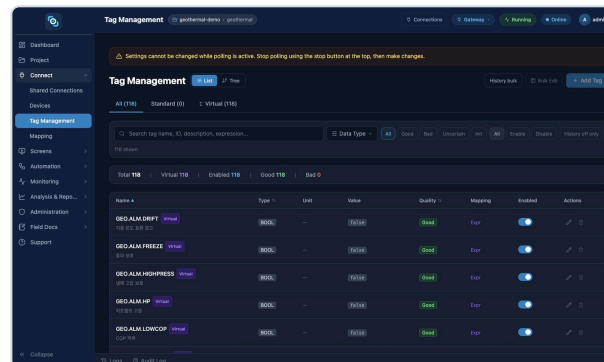


Monitor

Search tag name...

Tag Name	Type	Value	Quality	Unit	Updated
GEO.BH.10.FLOW	REAL	3.12	Good	m³/h	오전 12:05:06
GEO.BH.9.FLOW	REAL	2.97	Good	m³/h	오전 12:05:06
GEO.BH.7.TEMP	REAL	7.7	Good	°C	오전 12:05:06
GEO.BH.6.FLOW	REAL	3.06	Good	m³/h	오전 12:05:06
GEO.BH.5.FLOW	REAL	3.09	Good	m³/h	오전 12:05:06
GEO.BH.5.TEMP	REAL	8.8	Good	°C	오전 12:05:06
GEO.BH.3.FLOW	REAL	2.79	Good	m³/h	오전 12:05:06
GEO.BH.3.TEMP	REAL	7.4	Good	°C	오전 12:05:06
GEO.BH.2.FLOW	REAL	2.91	Good	m³/h	오전 12:05:06
GEO.BH.1.FLOW	REAL	3.12	Good	m³/h	오전 12:05:06
GEO.BH.4.FLOW	REAL	2.94	Good	m³/h	오전 12:05:06
GEO.ALM.DRIPT	BOOL	false	Good		오전 12:05:06
GEO.ALM.FREEZE	BOOL	false	Good		오전 12:05:06
GEO.ALM.LOWFLOW	BOOL	false	Good		오전 12:05:06
GEO.NRG.CO2	REAL	0.01	Good	t	오전 12:05:06
GEO.NRG.EL.YEAR	REAL	0.03	Good	MWh	오전 12:05:06
GEO.NRG.EL.KW	REAL	46.76	Good	kWh	오전 12:05:06

Monitor: the sample's tag values change every second



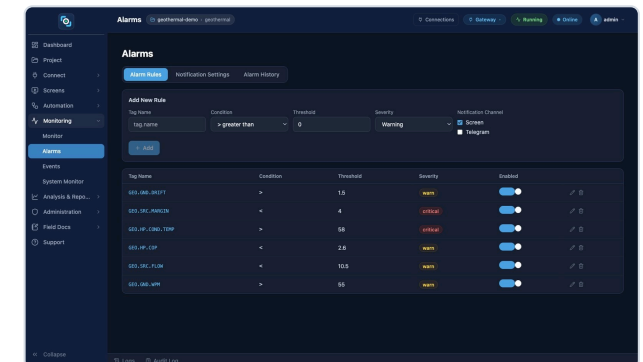
Tag Management

Settings cannot be changed while polling is active. Stop polling using the stop button at the top, then make changes.

Search tag name, ID, description, expression...

Name	Type	Unit	Value	Quality	Mapping	Enabled	Actions
GEO.ALM.DRIPT	BOOL		00000	Good	Four	On	✎
GEO.ALM.FREEZE	BOOL		00000	Good	Four	On	✎
GEO.ALM.HIGHPRESS	REAL		00000	Good	Four	On	✎
GEO.ALM.LOWFLOW	BOOL		00000	Good	Four	On	✎
GEO.ALM.LOWCOP	REAL		00000	Good	Four	On	✎

Tag management: 118 virtual tags



Alarms

Add New Rule

Tag Name	Condition	Threshold	Severity	Notification Channel	Enabled	Actions
GEO.ALM.DRIPT	>	1.5	Warning	Screen	On	✎
GEO.ALM.FREEZE	<	4	Critical	Screen	On	✎
GEO.ALM.HIGHPRESS	<	58	Critical	Screen	On	✎
GEO.ALM.LOWFLOW	<	2.6	Warning	Screen	On	✎
GEO.ALM.LOWCOP	<	10.5	Warning	Screen	On	✎
GEO.ALM.LOWCOP	>	65	Warning	Screen	On	✎

Six alarm rules: 2 critical, 4 warning

Taken on a test gateway with the sample open

01 LinkVion Gateway **Product screens · not a sample**

Connections & Conversion

The add-connection dialog and OPC UA server settings are product screens. Two live Modbus connections are in the Food Plant sample on the next page.

40+ adapters OPC UA server · client Modbus master · slave

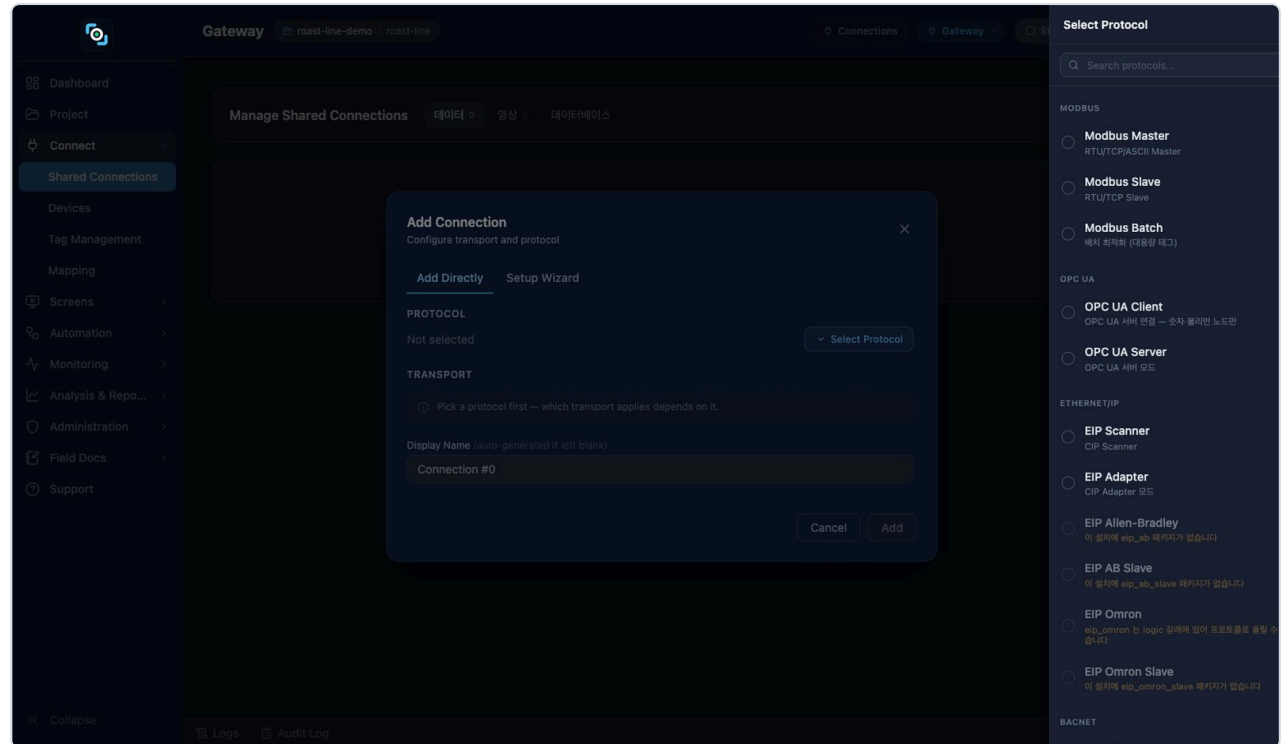
MQTT

Where to look

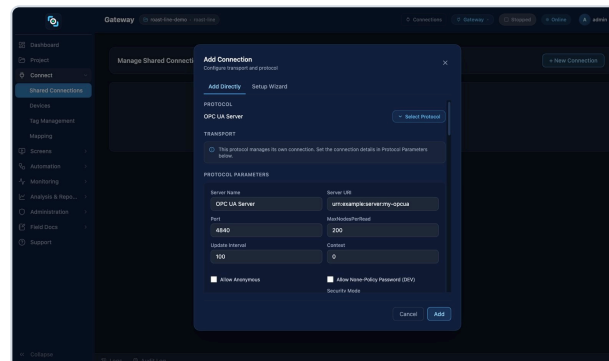
- Create a connection under New connection: pick the protocol, then address, port and cycle.
- The OPC UA server publishes tags as nodes, with certificates, trust list, users and per-node permissions.
- While polling runs, connection and tag settings are locked. Stop, edit, then start again.
- Devices, tags and mapping menus tie device addresses to tags.

How to open

Connections → Shared connections → New connection. Available while polling is stopped.



Product screen: new connection, choosing a protocol



Product screen: OPC UA server settings

Product screens taken on a test gateway with simulated devices

01 LinkVion Gateway **Sample project**

Food Plant: Device Connection

“식품 공장 — 장비 연결 · 수집 · 해셉 · OEE”

The gateway reads its own Modbus slave every second. Quality, link loss and recovery really happen, with no outside equipment.

Contents (counted from the bundle file)

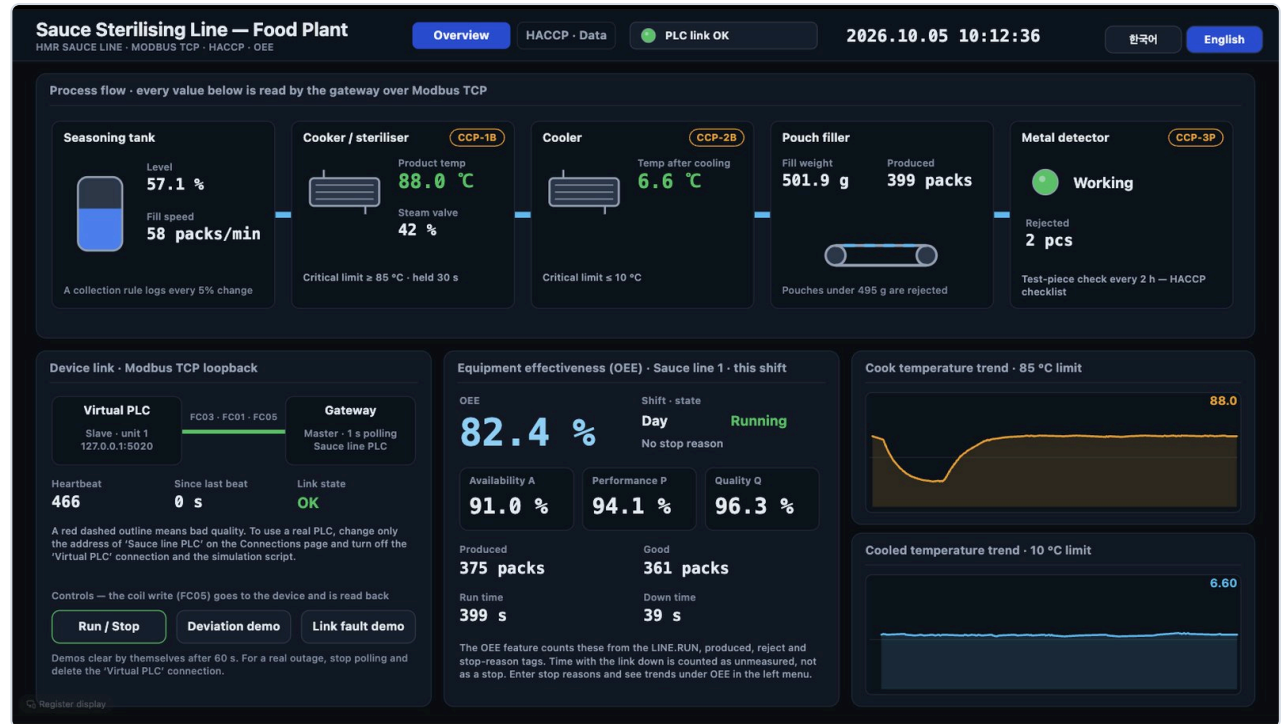
2 connections (Modbus TCP) 127.0.0.1:5020 · unit 1
38 tags (18 polled) 3 alarms (1 critical) 2 scripts 1 s polling

Where to look

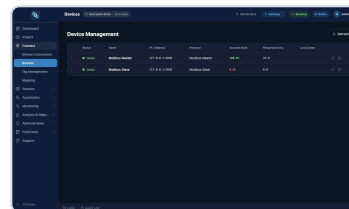
- The 'virtual PLC' (Modbus slave) listens on 127.0.0.1:5020 only, and the 'sauce line PLC' (Modbus master) reads its registers and coils into 18 LINE.* tags. All were Good when these screens were taken.
- A link-watch script turns the heartbeat register into a link state. With the link-fault demo the PLC stops answering for 60 s, the critical 'PLC link lost' alarm is raised, and the link recovers on its own.
- Run and demo buttons on the screen go through a confirmation dialog and write a coil (FC05) to the device, then read it back.
- To use a real PLC, delete the virtual PLC connection, the simulation script and the PLC.* tags, then change only the address, port and unit of the sauce line PLC. Screens, alarms, HACCP, OEE and collection rules use the LINE.* names and keep working.

How to open

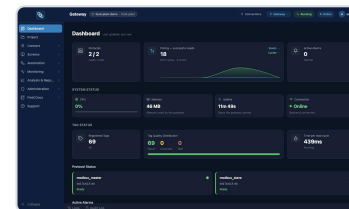
Project → Samples → open “식품 공장 — 장비 연결 · 수집 · 해셉 · OEE”
→ Open as this project. Opening leaves polling stopped, so press the polling button in the header once.



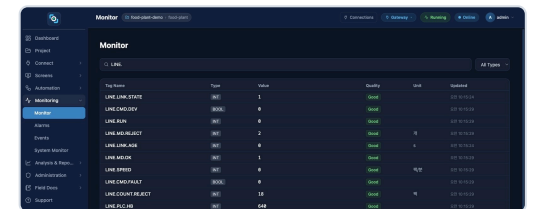
Run screen 'Overview': every value is read over Modbus TCP. The device link panel shows heartbeat and link state



Devices: master and slave both online



Dashboard: 2/2 protocols ready, 69 tags Good



Monitor: polled LINE.* values

Taken on a test gateway with the sample open

01 LinkVion Gateway

Product screens · not a sample

AV & Exhibit Power Control

The gateway switches projectors, displays, PCs and power outlets on and off and shows their state as tags. Signage displays follow the opening hours, power included.

PJLink (Class 1)

Wake-on-LAN

SNMP PDU outlets

Samsung MDC · LG templates

4 SCADA power parts

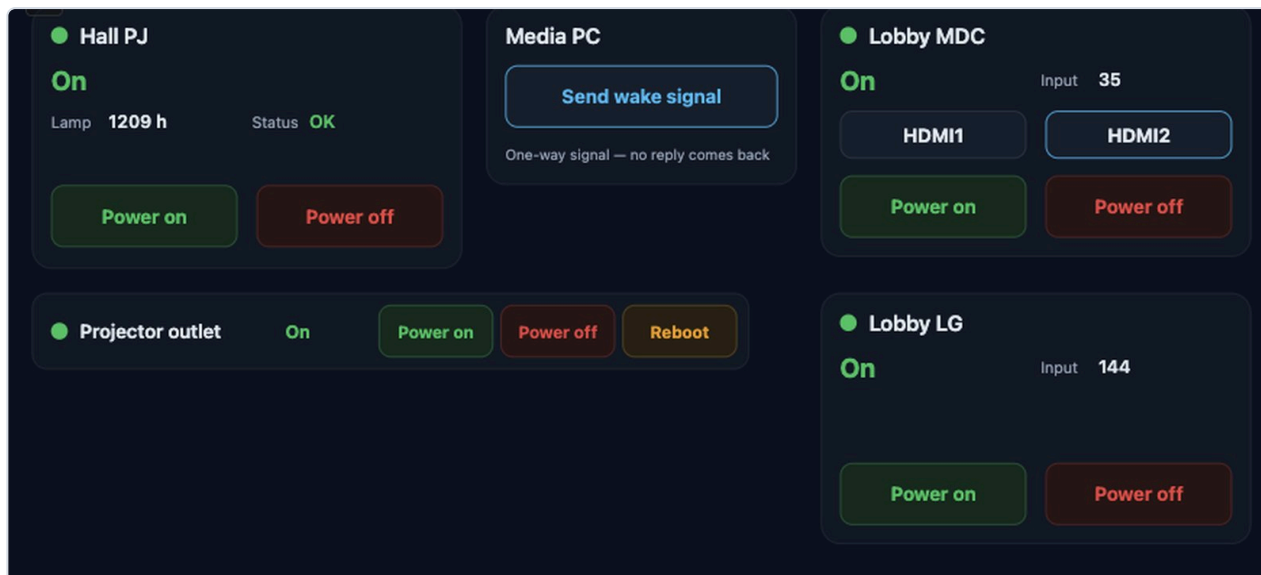
Since 0.1.0.10

Where to look

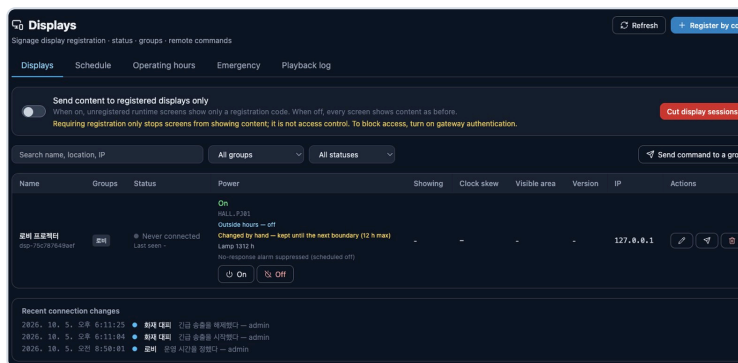
- Pick a template (PJLink, Wake-on-LAN, SNMP PDU outlet, Samsung MDC, LG RS-232C over IP) and 'Add device bundle' creates the connection and its standard tags at once from a tag prefix and the device address, or many devices from a CSV.
- PJLink reads power, input, lamp hours and six error fields. A command refused while warming up or cooling down is sent once more when the device settles.
- Four SCADA power parts (projector, wake button, display, outlet row) need only the tag prefix. Switching goes through a confirmation dialog and needs operator rights or higher.
- A signage display linked to its power turns on 5 min before opening and off 10 min after closing (defaults), follows the holiday calendar and comes on for an emergency broadcast. 'No response' alarms are suppressed while it is scheduled off.

How to open

Connections → Shared connections → Add device bundle. Display power is the Power column under Displays. Tested against simulated devices; on-site verification with real equipment is planned.



SCADA power parts: projector, wake button, two displays, outlet (simulated devices)



Displays: power state, reason and lamp hours per display

Product screens taken on a test gateway with simulated devices

01 LinkVion Gateway **Product screens · not a sample**

Lighting Control: Art-Net 4 · sACN

The gateway outputs DMX at 44 Hz without a lighting console. Patch fixtures, run scenes and cues, and operate them from faders and a GO button on SCADA screens.

Art-Net 4 · sACN (E1.31) output 44 Hz Fixture profiles · patch

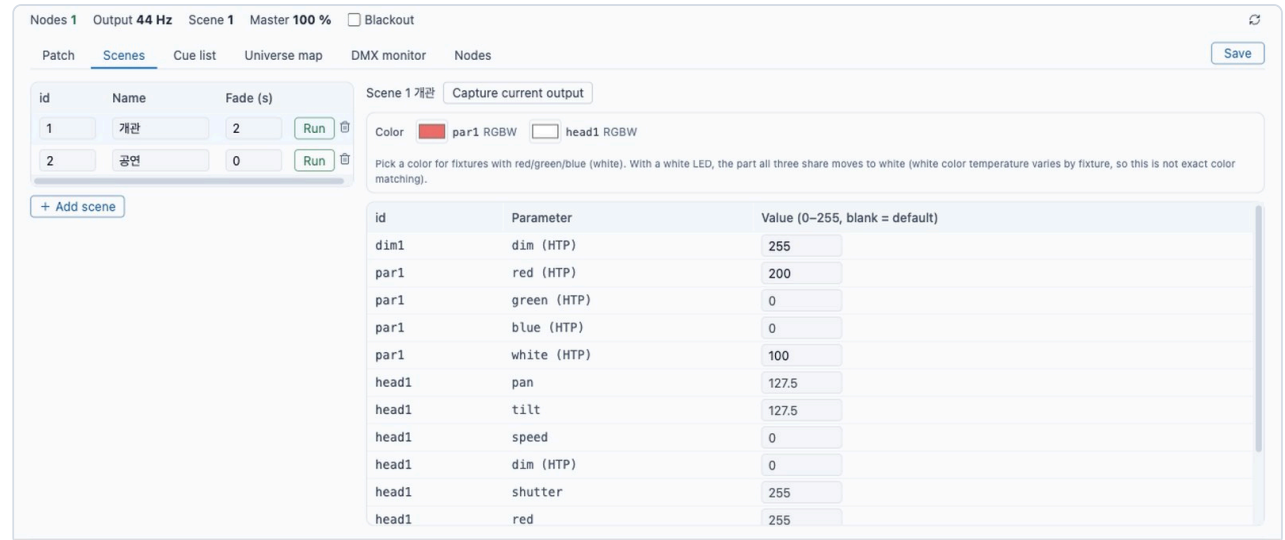
Scenes · fades · cues Master · blackout Art-Net input

Where to look

- Patch with fixture profiles (dimmer, RGBW par, moving head and more); overlapping addresses and 512 overflows are flagged at once. Intensity merges HTP, the rest LTP.
- Scenes change with time-based fades and the cue list runs with GO and BACK. Grand master and blackout act on intensity channels. No tag per DMX channel.
- Editor: universe map, DMX monitor, color picker, node list. Art-Net output from a lighting console can be received and merged HTP or LTP. SCADA lighting parts: fader, cue panel, blackout, color.
- Measured on CM4 (RT kernel): frame interval p99 about 22.8 ms, CPU 0.5, 0.9 and 3.3 % of one core at 1, 4 and 16 universes. No sACN input or ArtSync yet.

How to open

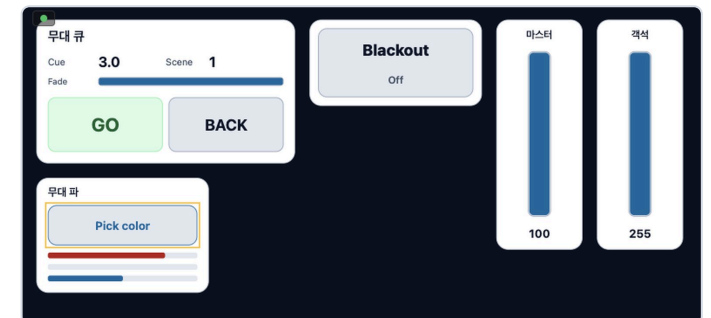
Connections → New connection → Art-Net (lighting), then the lighting button on the connection row opens the editor. Tested against a simulated node; on-site verification with real nodes and fixtures is planned.



Lighting editor: scene table and color picker, output 44 Hz (simulated node)



DMX monitor: output values



SCADA lighting parts: cue, blackout, master, color

Product screens taken on a test gateway with simulated devices

OSC · Performance & Reliability

Exchange OSC with media servers. Releases 0.1.0.10 and 0.1.0.11 also strengthened concurrent requests, configuration saving and value retention across restarts.

OSC send · receive

Address ↔ tag mapping

Script osc()

Concurrent REST

Atomic config writes

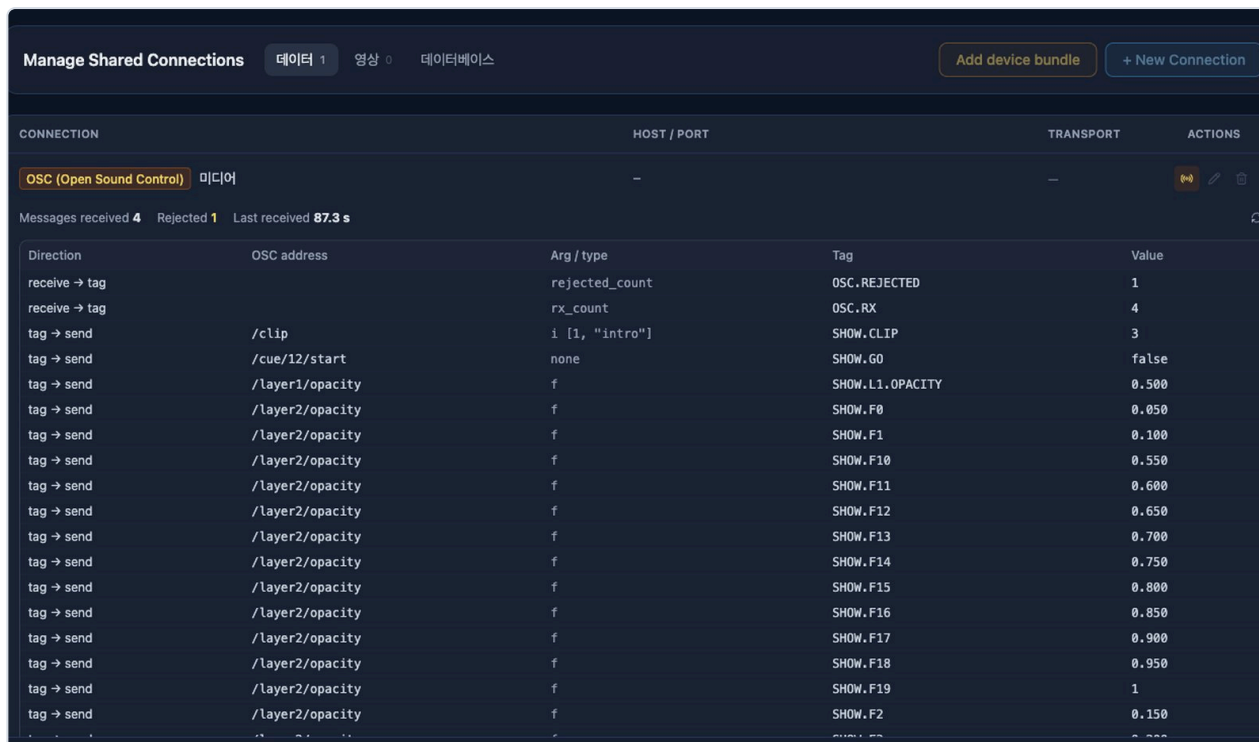
Memory tag values kept

Where to look

- OSC: bind received address patterns (* ? [] { }) to tags and send tag values to OSC addresses. The mapping table on the connection row shows direction, address, type and tag; an allow list filters senders. The script call osc(connection, address, args...) sends one-off commands such as media server cues.
- Concurrent REST: the SDK manager lock was redesigned. Writing to 7 unresponsive devices at once went from 22.5 s to 3.0 s.
- Configuration files are written to a temporary file and then swapped in, so a power cut during a save never leaves a half-written file. Memory tag values survive restarts.
- Alarm on-delays now fire when the time is up even if the value does not change. A listening port that cannot be opened shows in red in the connection list and event log.

How to open

Connections → New connection → OSC, then the mapping button on the connection row. Tested against a simulated peer; verification with real media servers is planned.



The screenshot shows the 'Manage Shared Connections' interface. At the top, there are tabs for '데이터 1', '영상 0', and '데이터베이스'. On the right, there are buttons for 'Add device bundle' and '+ New Connection'. Below the tabs, there is a table with columns: CONNECTION, HOST / PORT, TRANSPORT, and ACTIONS. The selected connection is 'OSC (Open Sound Control)' with a host/port of '-' and transport of '-'. Below the table, there is a summary: 'Messages received 4', 'Rejected 1', and 'Last received 87.3 s'. The main part of the screenshot is a detailed OSC mapping table with columns: Direction, OSC address, Arg / type, Tag, and Value.

Direction	OSC address	Arg / type	Tag	Value
receive → tag		rejected_count	OSC.REJECTED	1
receive → tag		rx_count	OSC.RX	4
tag → send	/clip	i [1, "intro"]	SHOW.CLIP	3
tag → send	/cue/12/start	none	SHOW.GO	false
tag → send	/layer1/opacity	f	SHOW.L1.OPACITY	0.500
tag → send	/layer2/opacity	f	SHOW.F0	0.050
tag → send	/layer2/opacity	f	SHOW.F1	0.100
tag → send	/layer2/opacity	f	SHOW.F10	0.550
tag → send	/layer2/opacity	f	SHOW.F11	0.600
tag → send	/layer2/opacity	f	SHOW.F12	0.650
tag → send	/layer2/opacity	f	SHOW.F13	0.700
tag → send	/layer2/opacity	f	SHOW.F14	0.750
tag → send	/layer2/opacity	f	SHOW.F15	0.800
tag → send	/layer2/opacity	f	SHOW.F16	0.850
tag → send	/layer2/opacity	f	SHOW.F17	0.900
tag → send	/layer2/opacity	f	SHOW.F18	0.950
tag → send	/layer2/opacity	f	SHOW.F19	1
tag → send	/layer2/opacity	f	SHOW.F2	0.150

OSC mapping table: receive and send addresses with their tags (simulated peer)

Product screens taken on a test gateway with simulated devices

01 LinkVion Gateway **Product screens · sample open**

Vision Inspection

Judge a camera image with an inspection recipe: OK, NG or no verdict, plus measured values. Results become tags for PLCs, alarms, history, reports and SCADA screens.

Licence vision · vision:<n>

Optional package

Trigger manual · edge · periodic · script

Result tags vision.<job>.*

Folder-playback camera

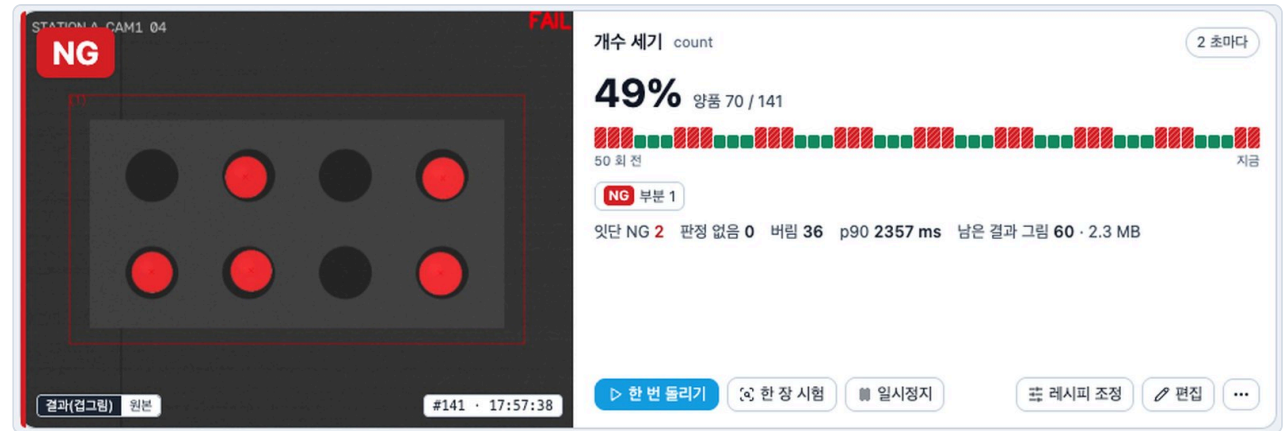
Since 0.1.0.12

Where to look

- A job is a camera, a recipe and a trigger; verdicts, counts and outputs can go to PLC tags. Job cards, records (NG images, CSV), NG appendix in reports.
- Counting and plates (0.1.0.18 to 21): tracking counts line crossings (A→B, B→A); plates are found and read in a scene or a tracked box.
- Result charts and spot width (0.1.0.22): histogram and line-profile results as SCADA charts; a line profile measures a spot's width, position and eccentricity.
- Focus check (0.1.0.23): sharpness bars for the center and four corners while you turn the lens, with the job stopped.
- Detection models (0.1.0.24): upload a checked model, bind it to a recipe, send box count and top score to tags, PLCs and alarms. Not a safety function. 51 tools.

How to open

Analysis & Reports → Vision inspection (Focus check in the job card More menu, Detection models tab). Needs the vision function (CM4, Windows; not in the Mac package; r26 for 0.1.0.24) and licence.



Job card: part count job of the vision line sample (Korean UI)



Focus check: reference 100 %, lower limit 85 %, only the bottom right is low (synthetic test chart, 0.1.0.23)

검사 작업

검사 기록

검사 레시피

캘리브레이션

검출 모델

모형 모형 도구를 통해 모델을 여기에 올려 줍니다. 올린 파일은 자동 실행되는 검사(메모리/CPU 사용 한도)를 통과해야 할 수 있습니다. 모델 파일은 레시피에 용지 있고 SHA-256 으로부터 참조됩니다. 쓰지 않는 모델은 자동으로 지워지지 않으나 직접 지우세요.

+

 모델 올리기

이름	SHA-256	크기	형식, 입력, 클래스	상태	쓰는 레시피	올린 때
사람 감지 모델	e32259369258	1.2 MB	R · 416x416 · 클래스 80개 · int8	사용 가능	쓰지 않음	2026. 10. 29. 오전 9:00:52 · admin
<div>파일명 1.2 MB / 512.0 MB</div>						
<div>검출 작업이 큰 레시피</div>						
레시피	검출 모델	쓰는 작업				
people-detect.vrp · v1 - 개시	루지 없음	people	<div>모델 코르기</div> <div>하기</div>			

Detection models tab: a model that passed the check and the recipe that will use it (0.1.0.24, Korean UI)

Product screens taken on a test gateway with a sample open (0.1.0.15, 0.1.0.23, 0.1.0.24)

01 LinkVion Gateway **Product screens · sample open**

Vision Recipe Teaching

Tune thresholds, ranges and inspection regions while looking at the image. Teaching runs apart from live inspection, so the line does not change until you save or publish.

Licence vision-teach Administrators 5 image sources

Test sets Versions · rollback Since 0.1.0.14

Where to look

- Bench: preview with a camera shot, a folder-playback image, a file, an NG image from the records or a test-set image. Change a value or drag a region and it judges again at once.
- Test sets run OK and NG images with expected verdicts on 'tuned' and 'as opened' values and count false passes and false fails. Auto setting (threshold, range), diagnosis, intermediate images.
- Two ways to save: override on the job (recipe unchanged) or publish a new version. Compare versions and roll back; the original version always stays, and drafts save every 30 s.
- 0.1.0.15: per-camera calibration, master image, pattern model teaching, character samples and OCR training. 0.1.0.17: 'auto glyph height' and 'plate layout hint' options for character training (off by default); steps in help section 17.
- A recipe with these options carries a minimum-version mark, so a device with an older vision function refuses to upload, publish or apply it instead of silently ignoring it.

How to open

Vision inspection → 'Tune recipe' on a job card (or 'Tune' on a recipe row, 'Tune with this image' in the records). New buttons and options need the vision function of the same release (r26 for 0.1.0.24). Article: cafe.naver.com/moaview/53 (Korean)

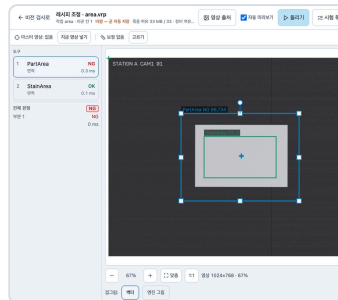
OK-NG 그림을 모아 두고 조정 값과 열 때 값 두 칼래로 한꺼번에 돌립니다. 게이트웨이에 남지만 프로젝트 묶음에는 담기지 않습니다.

판 면적 OK-NG 6장 (6) + 새 묶음 그림 더하기 기대 들어기 묶음 돌리기 CSV 받기 ☐ 어긋난 것만

맞음 3/6 · 거짓 합격 0 · 거짓 불합격 3 · 열 때 값 대비 바뀐 판정 3

그림	기대	조정 값	열 때 값	맞음
area_01_ok.jpg	OK	NG	OK	거짓 불합격
area_02_ok.jpg	OK	NG	OK	거짓 불합격
area_03_ok.jpg	OK	NG	OK	거짓 불합격
area_04_ng_chip.jpg	NG	NG	NG	OK
area_05_ng_notch.jpg	NG	NG	NG	OK
area_06_ng_stain.jpg	NG	NG	NG	OK

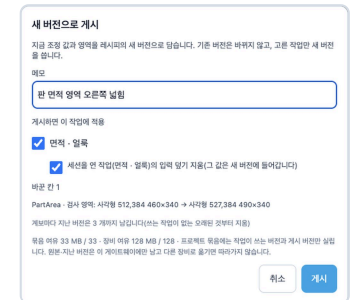
Test set: after raising the minimum area, three good images fail (Korean UI)



Teaching bench (Korean UI)



Version compare (Korean UI)



Publish as a new version (Korean UI)

Product screens taken on a test gateway with the vision line sample open (0.1.0.15)

02

LinkVion Middleware

Middleware mode · data collection and storage

The layer that keeps and processes what was collected. It stores values, picks them by rule, and turns them into reports, records and verdicts.

Key features

History database

Every tag is recorded automatically, with deadband and retention. History charts show raw, 1-minute, 1-hour or 1-day aggregates.

Database links

Connect a database and register queries (SELECT) and commands (INSERT, UPDATE). Results feed tables and maps on screen.

Scripts · recipes · schedules

Control logic in JavaScript. A recipe writes a whole set of set points from one number. Schedules fire at set times.

Collection rules

Selected tags are written by period, on change or by threshold into the table each rule names. SQLite, MariaDB, InfluxDB (PostgreSQL depends on the build).

Reports

Daily and per-interval templates produce files. Export to CSV and Excel.

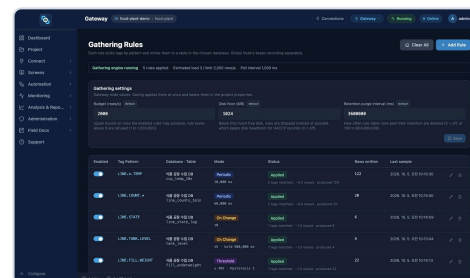
Business functions

HACCP CCP records · OEE · analytics (FFT, vibration diagnosis, health index) · web requests · MCP for the AI assistant.

Samples that show this layer

Sample project	Contents
Coffee Roasting (“커피 로스팅 — 프로파일 감시”)	1 recipe (5 profiles) · 1 report · 2 schedules · 1 script
Smart Farm Greenhouse (“스마트팜 온실 감시”)	4 analytics channels · 1 recipe (4 crops) · 1 script
Solar Power Plant (“태양광 발전소 통합 감시”)	1 database link · 2 queries
Wedding Hall Guide (“예식장 안내 · DB 연동”)	1 database link · 2 queries · 2 commands
Geothermal · pharma water · wastewater	history recording (30-day retention) · 1 simulation script each
Food Plant (“식품 공장 — 장비 연결 · 수집 · 해석 · OEE”)	5 collection rules (periodic, on change, threshold) · 3 HACCP CCPs · 1 checklist · 1 OEE asset · 2 queries
New samples: exhibition hall, test wall, game booth, night lighting	daily operation and test reports · monthly energy report · ranking query (collection rule → DB)

To be clear Collection rules, HACCP CCPs and OEE are shown by the Food Plant sample. Its values are read over loopback Modbus, so HACCP accepts them as measured, and buttons on the screen trigger a cooking deviation and a link loss (missing records).



Collection rules: the Food Plant sample's five rules writing to SQLite tables

02 LinkVion Middleware Sample project

Coffee Roasting

“커피 로스팅 — 프로파일 감시”

The middleware sample where recipe, schedule, script, history and report form one chain.

Contents (counted from the bundle file)

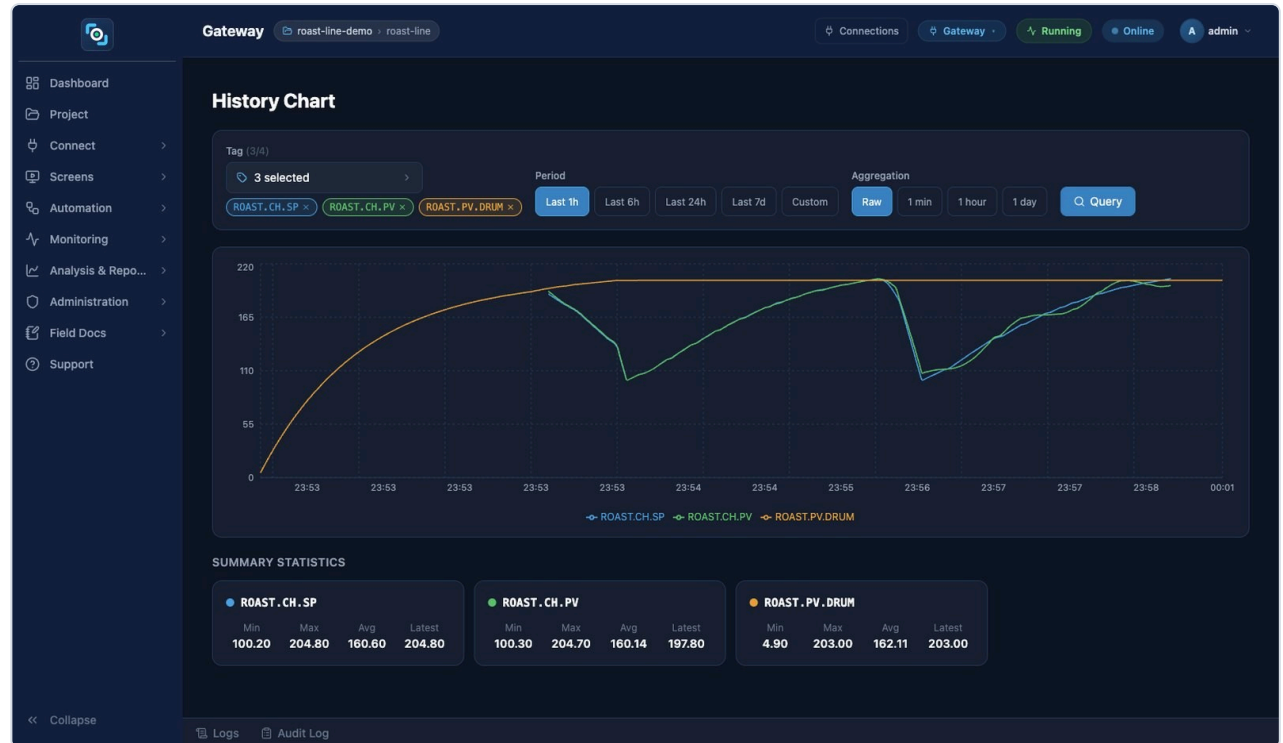
- 38 tags
- 1 recipe (5 profiles)
- 2 schedules
- 1 report
- 1 script
- 1 alarm

Where to look

- Pick a bean in the recipe and 13 target temperatures (0 to 12 min), band and drop temperature are written to tags at once.
- The script joins the points into a target curve and publishes deviation and band verdicts as tags.
- The history database keeps target, actual and drum temperatures for the history chart.
- The report writes target and actual averages and the largest deviation for every 30 s. A schedule turns preheat on at 07:30.

How to open

Project → Samples → open “커피 로스팅 — 프로파일 감시”. Pick a profile on the screen and start. One batch takes 2 minutes at the default speed.



History chart: target, actual and drum temperature

Recipe: five profiles

Report preview: 30-second intervals

Taken on a test gateway with the sample open

02 LinkVion Middleware Sample project

Smart Farm Greenhouse

“스마트팜 온실 감시”

Analytics channels catch abnormal climate values, and crop recipes switch growing conditions.

Contents (counted from the bundle file)

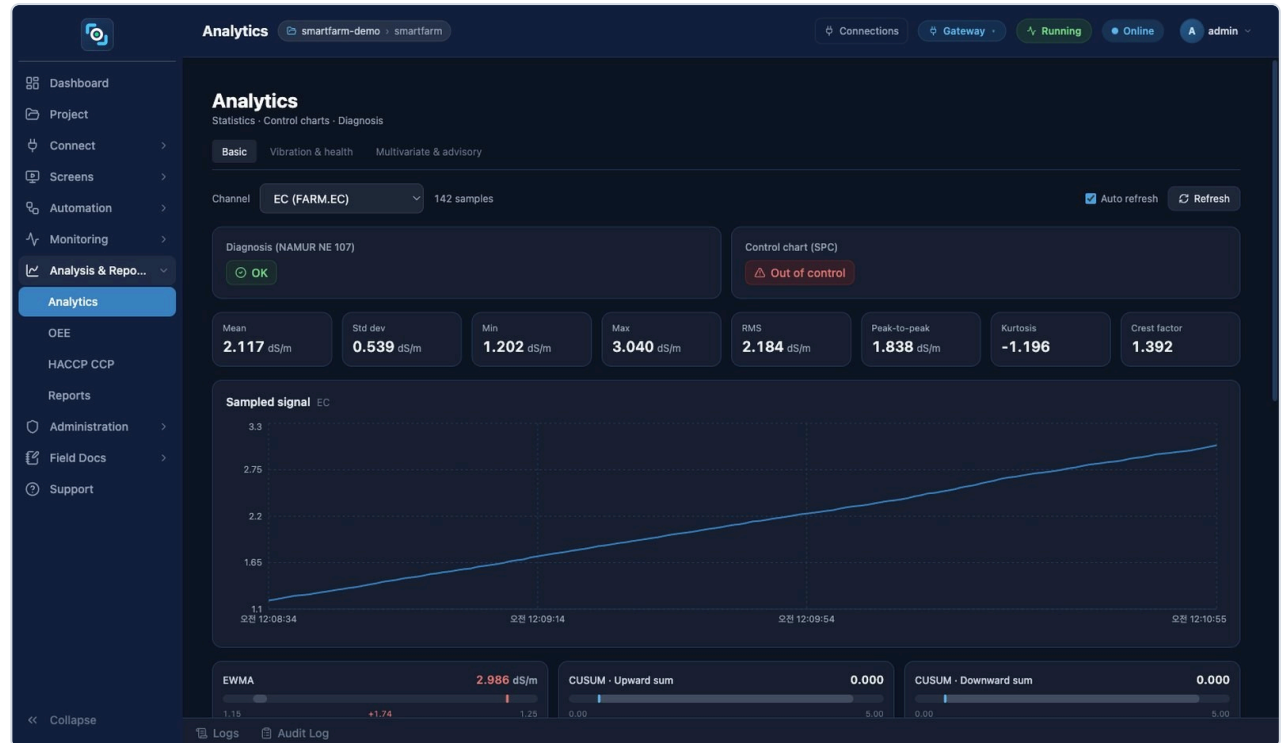
31 tags 4 analytics channels 1 recipe (4 crops) 7 alarms
1 script MCP read access

Where to look

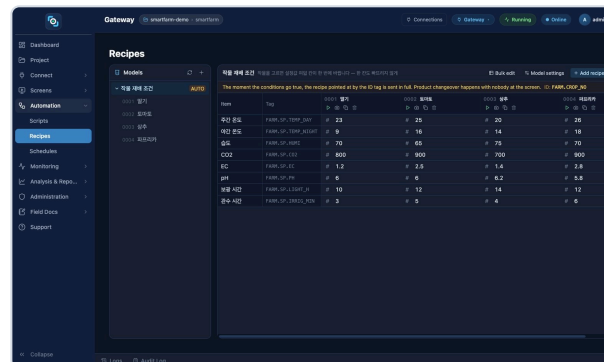
- The analytics module samples temperature, humidity, EC and VPD and watches them with a control chart (SPC) and diagnosis.
- The 'growing conditions' recipe writes day and night temperature, humidity, CO2 and EC for four crops at once.
- Two of the seven alarms, high and low temperature, are critical.
- The project opens MCP read access, so the AI assistant can read tags and alarms as tools.

How to open

Project → Samples → open “스마트팜 온실 감시” → Open as this project. Turn the simulation on with the run button on the screen (FARM.RUN).

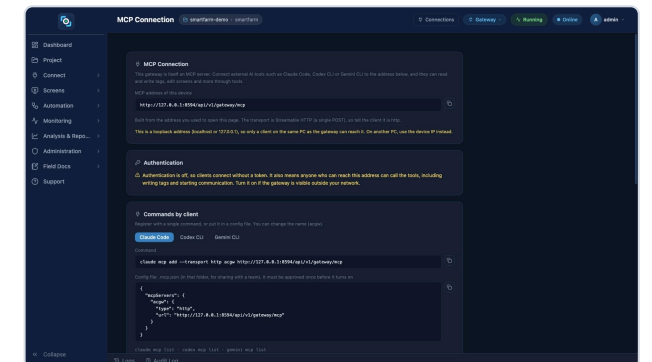


Analytics, EC channel: as the value drifts up, the control chart flags 'out of control'



Item	Temp	Humidity	CO2	EC
FARM_RUN_TEMP_DAY	23	25	20	25
FARM_RUN_TEMP_NIGHT	18	18	14	18
FARM_RUN_HUMIDITY	70	65	75	70
FARM_RUN_CO2	800	800	700	800
FARM_RUN_EC	1.2	2.5	1.4	2.8
FARM_RUN_PH	6	6	6.2	5.5
FARM_RUN_NH4	10	10	14	12
FARM_RUN_NH4_NH3	5	5	4	5

Recipe: four crops



MCP settings: connecting an outside agent

Taken on a test gateway with the sample open

02 LinkVion Middleware Sample project

Solar Plant · Wedding Hall Database Links

“태양광 발전소 통합 감시 · 예약장 안내 · DB 연동”

Link an outside database and put the results of registered queries on a map and a guide board.

Contents (counted from the bundle file)

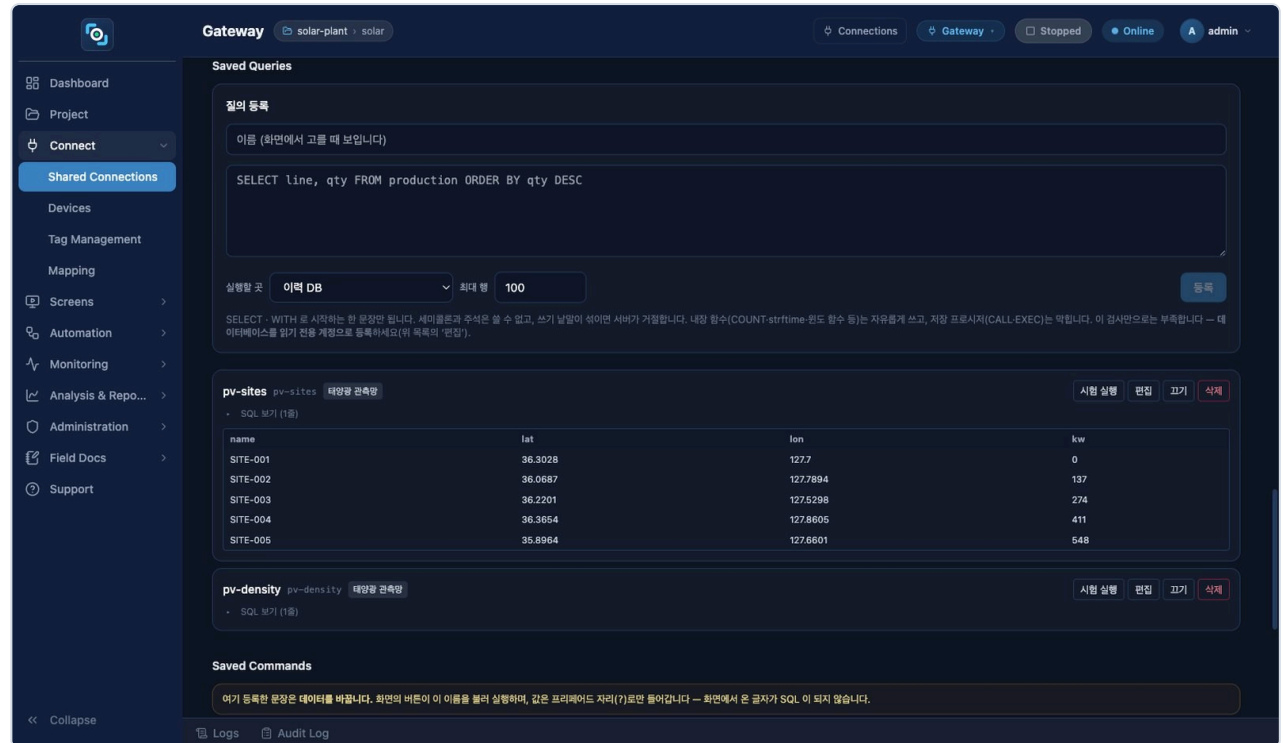
- 2 database links (SQLite)
- 4 registered queries
- 2 commands
- 65 solar tags

Where to look

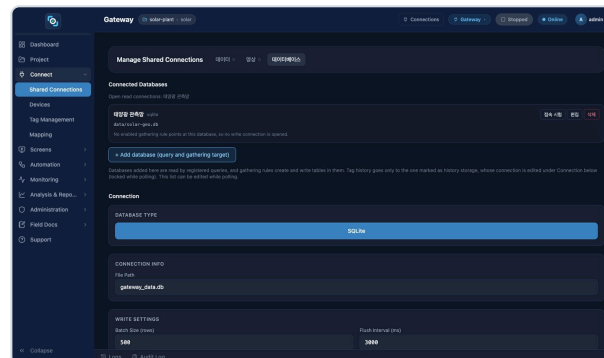
- The solar sample reads latitude, longitude and capacity with two queries to draw map points and a heat map.
- The wedding hall reads its booking database with two queries and writes with two commands (change stage, register a ceremony).
- Registered queries accept SELECT only. Writes are registered separately as commands.
- The bundles do not carry table definitions. Create the tables first with the bundled .schema.sql.

How to open

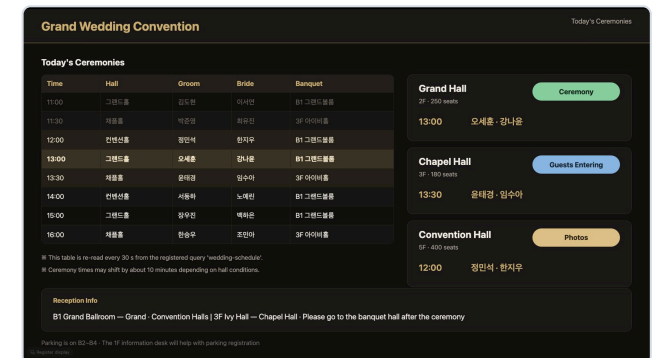
Project → Samples → open each by name. Create the tables with sqlite3 first; the command is in the sample's description.



Saved queries: test run of the solar query 'pv-sites'



The database link the sample brought in



Wedding hall board: query results on screen

Taken on a test gateway with the sample open

02 LinkVion Middleware Sample project

Food Plant: Collection, HACCP, OEE

“식품 공장 — 장비 연결 · 수집 · 해석 · OEE”

Values read over loopback Modbus flow into collection tables, HACCP records and equipment effectiveness.

Contents (counted from the bundle file)

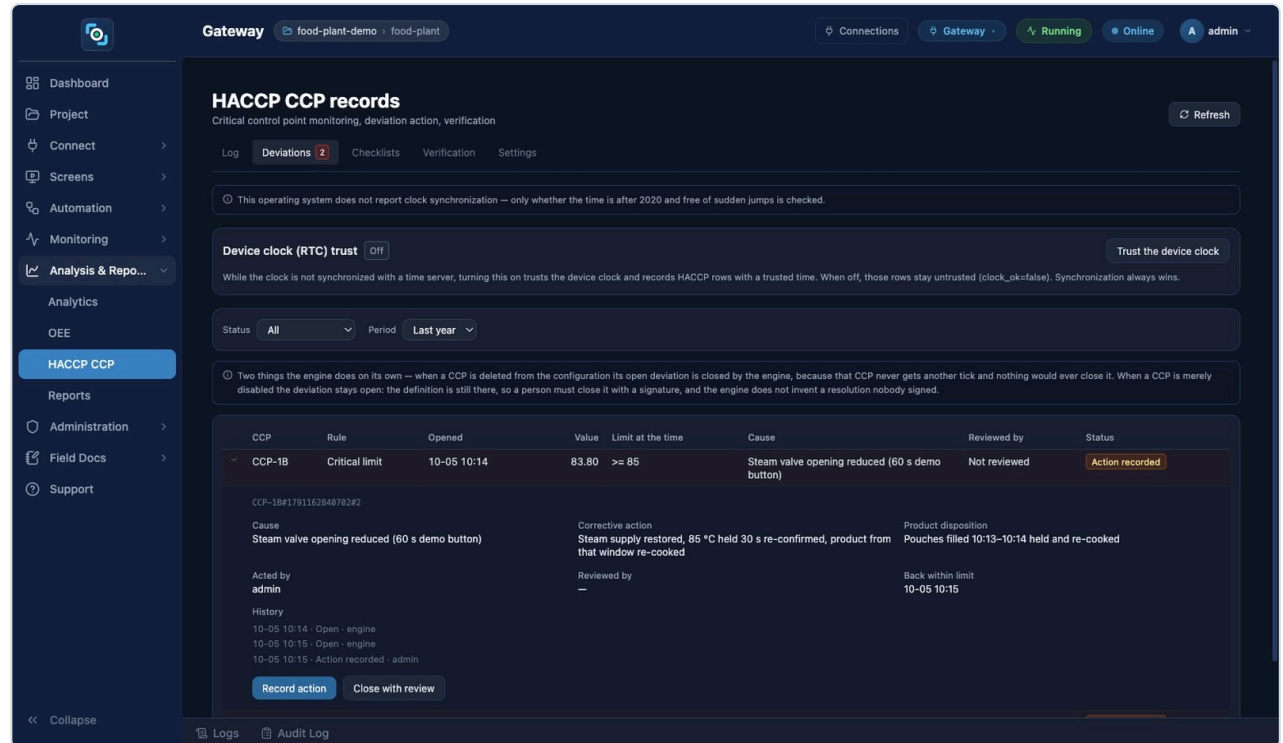
- 5 collection rules (SQLite) 2 registered queries
- 3 HACCP CCPs · 1 checklist 1 OEE asset · 3 shifts
- 6 stop reasons 30-day history

Where to look

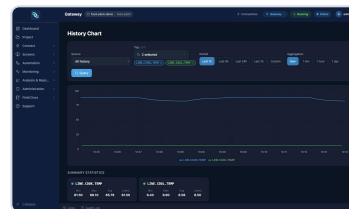
- Five collection rules write to SQLite tables: periodic (10 s, 1 min), on change, on a $\pm 5\%$ change, and threshold (fill weight below 495 g). Two registered queries show the latest rows on screen, and the data table view downloads them as CSV.
- HACCP records cooking (85 °C or more, held 30 s), cooling (10 °C or less) and metal detection, one slot a minute. Only polled values count as measured; a slot with no value stays missing.
- The cooking deviation demo drops the product temperature and opens a deviation. Enter cause, corrective action and product disposition, sign with your password, and it shows 'action recorded'.
- OEE turns the run, produced, reject and stop-reason tags into availability, performance and quality for each shift (day, afternoon, night).

How to open

Open the Food Plant sample and start polling. HACCP slots fill within a minute. HACCP and OEE are under Analysis & Reports; collection rules, history and data tables are in the middleware menus.



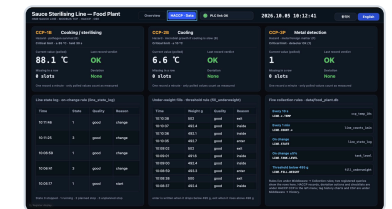
HACCP CCP → Deviations: cause and action recorded and signed for the demo cooking deviation



History chart: during the demo the cooking temperature drops to about 81 °C and recovers



OEE: availability 88 · performance 95 · quality 97 %



Run screen 'HACCP · Data': three CCP panels and rule tables

Taken on a test gateway with the sample open

03

LinkVion SCADA

Runtime mode · design and operation

The layer people look at. Tags are bound to screens to draw process diagrams, control rooms, signage and kiosks, and to operate them.

Key features

Design and run in one place

Place shapes, symbols, charts, tables and cameras, bind them to tags, and the screen runs. Sixty-odd pipe, tank, pump and valve symbols.

Many screens · 3D · scanning

Multi-monitor windows, phone layouts, master layers and navigation. Tags bound to the parts of 3D models (next page). Continuous barcode-scanner input and phone-camera scanning (0.1.0.24).

Korean · English

A screen translation table shows one screen in both languages.

57 built-in screens

Process 12 · energy and wide-area 5 · control room 3 · signage 17 · kiosk 10, plus 10 feature examples.

Digital signage · media

Register displays, schedule by group, emergency screens, proof-of-play CSV, opening hours. Audio and video play once on a tag signal (0.1.0.20). Order-number calls show the number and ring a chime (0.1.0.23; no spoken voice yet).

Permissions

Login, roles and audit log. Operations go through a confirmation dialog.

Samples that show this layer

Sample project	Contents
Wastewater Treatment (“하수종말처리장 종합운전”)	2 screens (operation, duty phone)
Pharma water · geothermal · roasting · smart farm	1 screen each
Solar Power Plant (“태양광 발전소 통합감시”)	2 screens (8 control-room pages, 3 phone pages)
LinkVion Signage (“링크비온 사이니지 — 로비·식당·생산동”)	8 screens (3 templates) · 6 schedule rules
Wedding Hall Guide (“예식장 안내 · DB연동”)	1 screen
Food Plant (“식품 공장 — 장비 연결 · 수집 · 해설 · OEE”)	1 screen (overview, HACCP · data) · Korean/English buttons
Four new samples: exhibition hall, night lighting, test wall, game booth	1 to 3 screens each · duty phone · portrait kiosk · 1920 counter board
Five vision samples: inspection line, plates, parking, conveyor, eccentricity	1 screen each (KO/EN) · verdicts · gate · counts · per-beam table · charts
Boxing scoring · cafe with three displays	13 screens (board, console, judge tablets) · 18 signage pages · phone console

To be clear 57 more built-in screens sit under Design → Samples. Next: 3D design and demo, the 0.1.0.11 samples, vision samples, the 0.1.0.24 samples, boxing and the cafe, then four pages from the category brochure.



Pharmaceutical water PW/WFI: this screen comes in with the bundled project

03 LinkVion SCADA Built-in screen · 3D demo

3D Model Design & 3D Demo

Put a glTF model on a screen and bind tags to the parts inside it. In Design you pick parts while watching a live preview.

3D model element

glTF 2.0 (.glb) · meshopt compression

Up to 5 MB · 200k triangles advised

4 part bindings

Up to 4 live 3D views per page

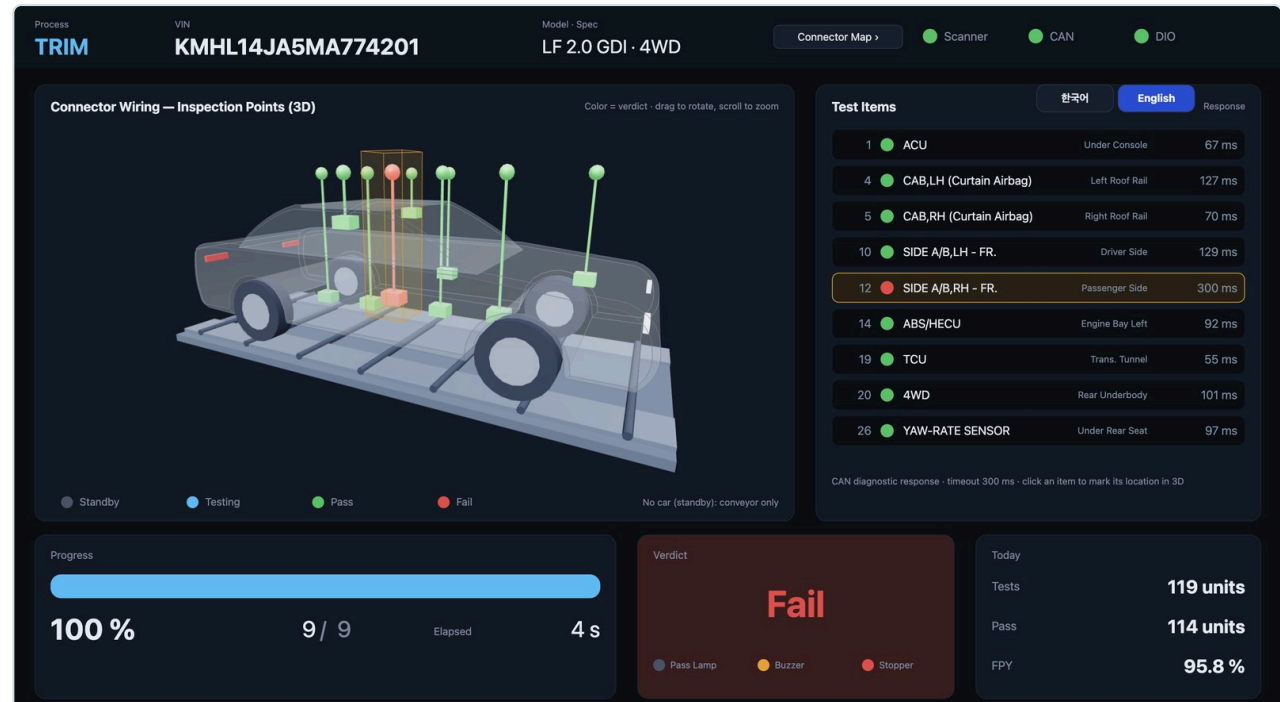
Sharp at any window size

Where to look

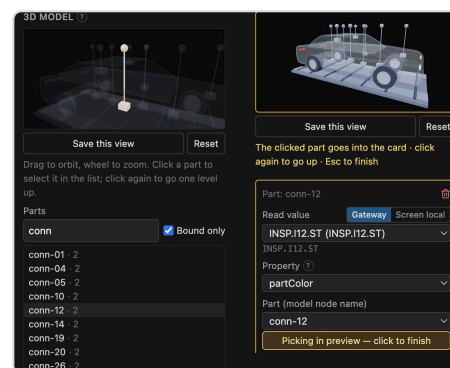
- Four part bindings: color, visibility, rotation and highlight (partHighlight). Highlight keeps the verdict color and adds an amber box, oriented to fit parts exported at an angle.
- Select a 3D element in Design and a live preview appears in the property panel. The part list has name search, binding counts and 'Bound only'. Hover a row and that part lights up as the camera frames it.
- Click in the preview to pick a part; click the same spot again to climb to the parent node. 'Pick in preview' puts the name into a binding card, and 'Save this view' keeps the angle. No more guessing among hundreds of CAD names like Mesh_042.
- Demo 'Vehicle Connector Check — 3D (Sample)': click an inspection row and that connector lights up in 3D. Viewer accounts can select too. Korean/English toggle on screen.

How to open

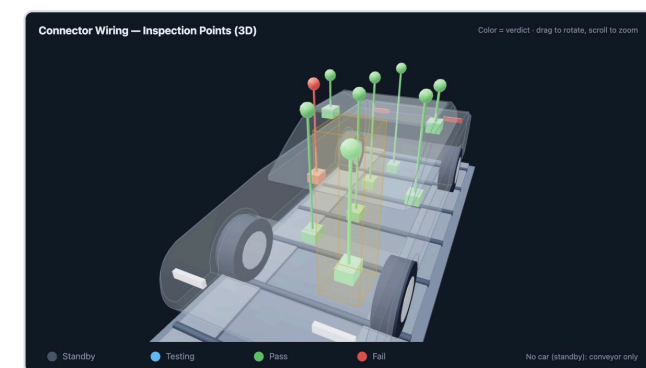
SCADA View → Design → Samples → search '3D' → Run. Selecting does not turn the camera to the connector by itself. Build notes: cafe.naver.com/moaview/44 (Korean)



Run: clicking row 12 puts an amber box around the failed (red) connector. The verdict color stays



Design: property-panel preview, part search, binding counts, 'Pick in preview'



Car rotated, item 14 (engine bay left) selected

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · new in 0.1.0.11

Exhibition Hall Operation

“체험 전시관 — 개관·폐관 순서 · 장비 고장 · 진열장 온습도 · 운영 일보”

One 'Open' turns on lighting, then HVAC, then projectors and displays, then kiosks; in the evening it runs in reverse. During the day it watches faults, showcase climate and visitors.

Contents (counted from the bundle file)

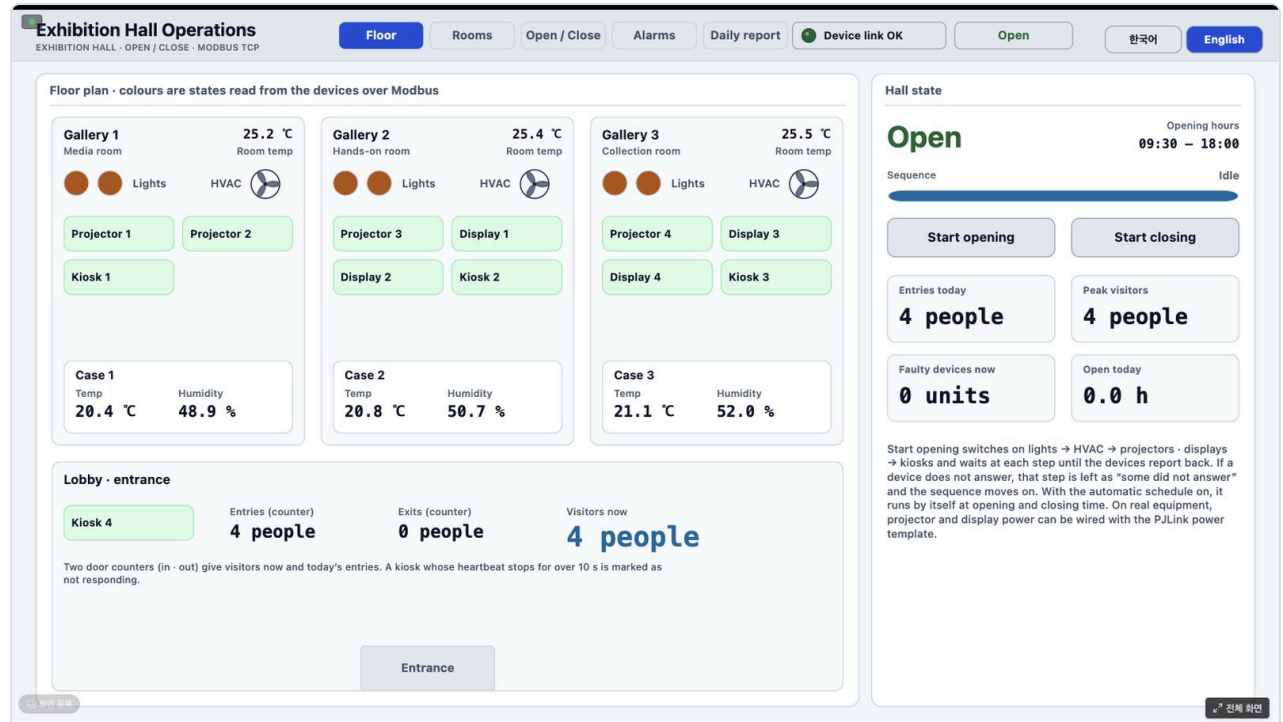
- 2 connections (Modbus TCP loopback)
- 162 tags
- 15 alarms
- 3 scripts
- 2 rules · 2 queries
- 1 report (daily)
- 1 screen (5 pages)

Where to look

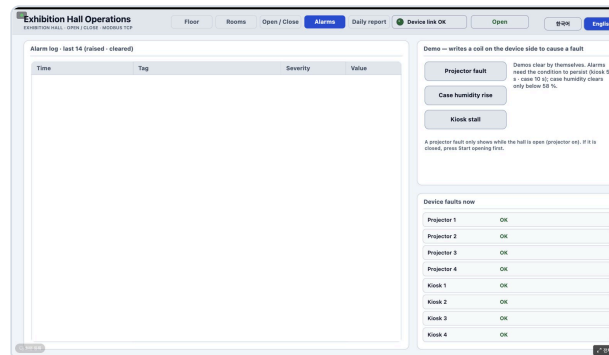
- Each step sends commands and waits for the devices to report back (10 to 30 s). When all answer it moves on; otherwise it records 'partly no response' and offers a step retry button.
- An automatic schedule opens and closes with the opening hours (09:30 to 18:00 by default). The times are changed on screen.
- Alarms for projector lamp failure, kiosk no response, showcase humidity over 60 % and temperature over 24 °C (10 s delay). Demo buttons trigger faults.
- The daily report writes visitors and state per hour and compares lamp hours with the 3,000 h replacement mark. On real equipment, projectors and displays use the PJLink template and kiosk PCs the Wake-on-LAN template.

How to open

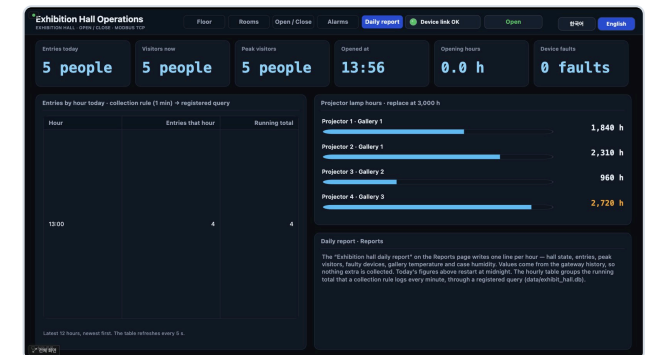
Project → Samples → open the exhibition hall sample → Open as this project. After a restart polling starts on its own. All values come from the device simulator inside the gateway. Article: cafe.naver.com/moaview/48 (Korean)



Floor overview: three rooms and lobby with lighting, HVAC, device states and visitors



Alarms and events



Daily report (dark theme)

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · new in 0.1.0.11

Night Landscape Lighting

“야간 경관 조명 — 일몰 점등 · 단선 감지 · 당직 폰”

Three lighting zones switch on after sunset, half go off late at night, and all go off at sunrise. Circuit current reveals failed lamps and the duty phone shows them.

Contents (counted from the bundle file)

2 connections (Modbus TCP loopback) 18 circuits · 3 zones

212 tags 28 alarms 1 report (monthly energy)

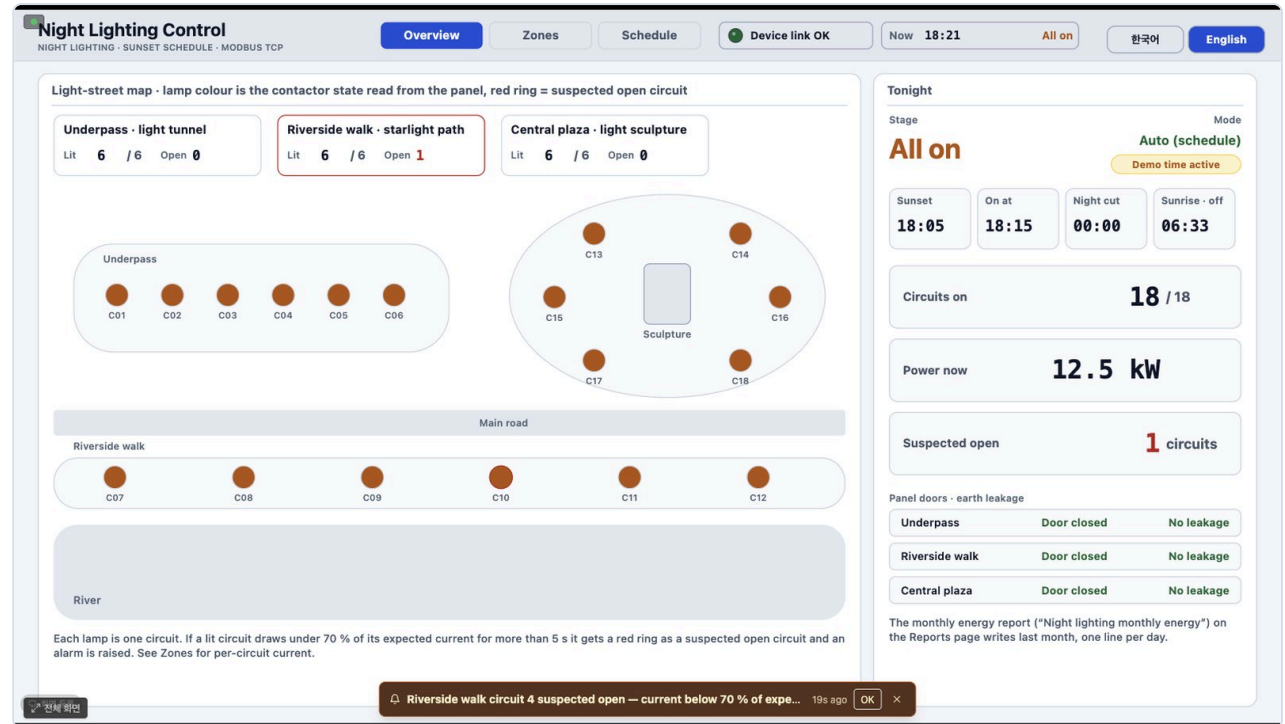
2 screens (3 PC pages, phone)

Where to look

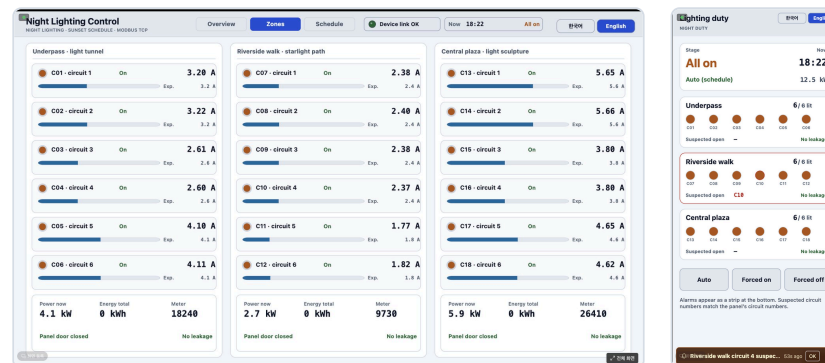
- Sunset and sunrise are calculated from latitude and longitude (no internet, approximation within 1 to 2 min). Turn-on delay, late-night cut time and event extension are set on screen.
- When a circuit has been on for 10 s and its current stays below 70 % of the expected value for 5 s, it is flagged as a suspected lamp failure. Circuits switched off or zones tripped by a leakage breaker are not counted.
- Alarms for panel doors, leakage breakers, contactor mismatch and link loss. Operating modes: automatic, forced on, forced off.
- A monthly energy report writes kWh and lit hours per zone, one row a day. This sample manages switching through a panel (Modbus); it has no Art-Net lighting show.

How to open

Open the sample and start polling. In daytime use the demo time buttons under Schedule · Manual (after sunset, late night, after sunrise). Article: cafe.naver.com/moaview/49 (Korean)



Overview: map of three zones, one lamp per circuit



Zone detail: current and expected value per circuit

Duty phone (portrait)

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · new in 0.1.0.11

Durability Test Wall: 40 Stations

“내구 시험 벽 — 시험대 40 회수 계수 · 관람객 계수판”

Cycle counts, states and faults of 40 test stations on the engineer screen, and the running total on a visitor counter board.

Contents (counted from the bundle file)

2 connections (Modbus TCP loopback) 40 stations · 4 kinds

353 tags 42 alarms 2 rules · 3 queries 1 report (daily)

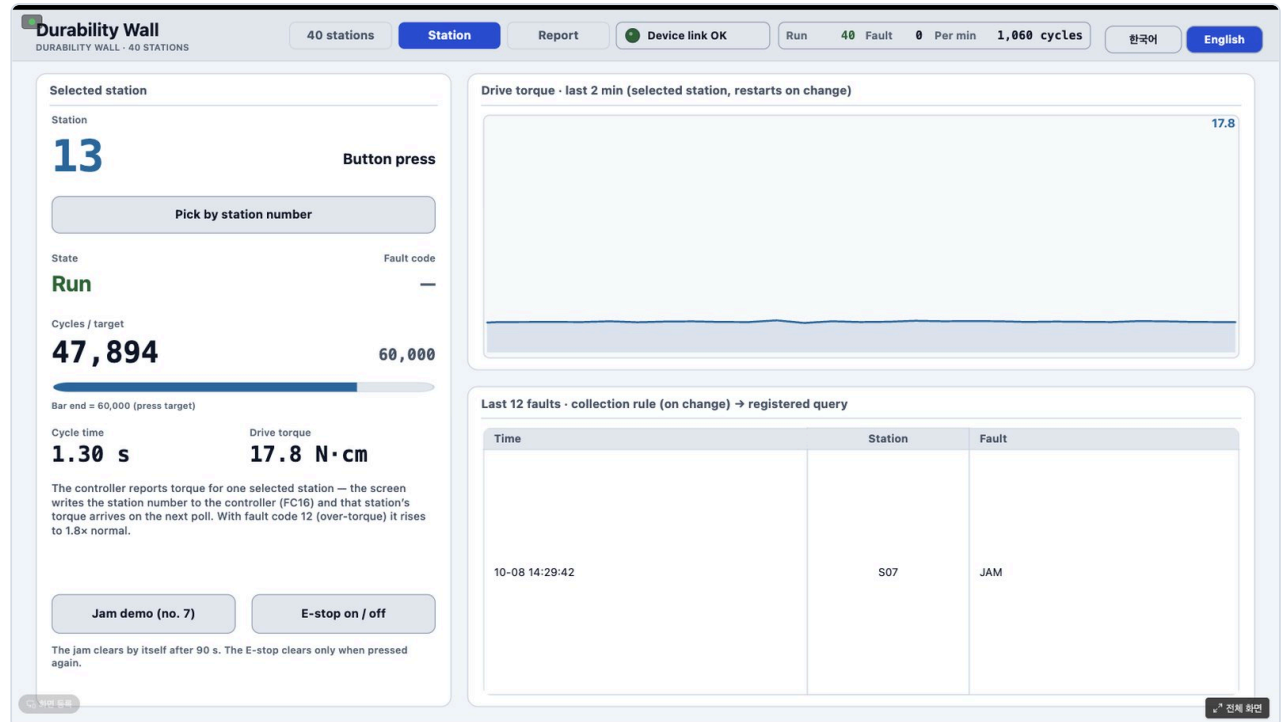
2 screens

Where to look

- An 8 × 5 grid shows cycles, a progress bar, a state color and the cycle time per cell. Click a cell to select that station.
- Torque is read from the selected station only: the screen writes the station number, FC16 sends it to the controller, and the next poll brings that value (multiplexed read).
- Jam, over-torque and sensor faults are kept as fault codes, and a collection rule writes them to the fault history table. Emergency stop is a critical alarm.
- The 1920×1080 counter board runs as a kiosk without tabs. Progress is an expression tag (total ÷ target).

How to open

Open the sample and start polling. durability-wall is for the engineer PC, durability-board for the big lobby screen. Article: cafe.naver.com/moaview/50 (Korean)



Station detail: state, fault code, torque trend, recent faults



Visitor counter board (1920×1080)



Test report

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · new in 0.1.0.11

Event Game Booth

“체험 게임 부스 — 접수 · 게임 · 순위판”

Players register their name at a kiosk and press whichever lit button comes up for 30 seconds. Score and today's ranking appear on the next screen.

Contents (counted from the bundle file)

2 connections (Modbus TCP loopback) **0.2 s polling** **46 tags**

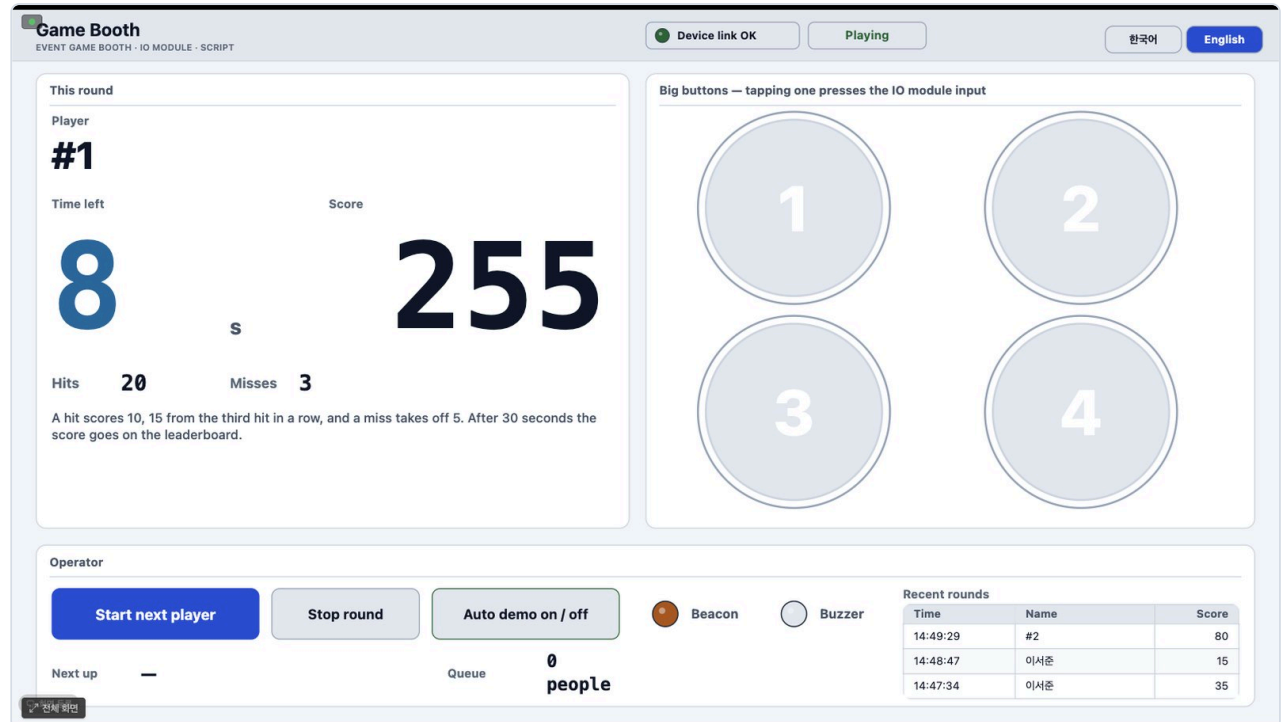
3 scripts **1 rule · 2 queries** **3 screens**

Where to look

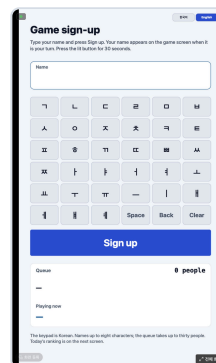
- Runs with an I/O module and LinkVion, no PLC. The game rules are a JavaScript script in the gateway (100 ms tick).
- Hit +10 (+15 from the third hit in a row), miss –5. Beacon and buzzer coils mark start and end.
- At the end of a round the result is written to one tag (JSON), a collection rule stores it in the database, and a ranking query picks today's top 10.
- The registration kiosk is portrait 1080×1920 with a Korean on-screen keyboard (English names cannot be typed). For real buttons, use an I/O module that latches short presses.

How to open

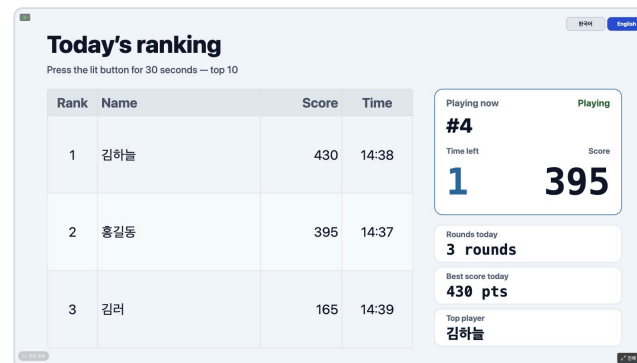
Open the sample and start polling. To watch without players, turn on the auto demo on the game screen. Article: cafe.naver.com/moaview/51 (Korean)



Game screen: four big buttons, time left, score



Registration kiosk (portrait)



Today's ranking board

Taken on a test gateway with the sample open

03 LinkVion SCADA **Sample project · 0.1.0.13 · updated 0.1.0.17**

Vision Inspection Line

“비전 검사 라인”

Four stations, part count, area and stain, code reading and precision check, judge images from folder-playback cameras every 2 s and show OK, NG, yield and NG streaks on a two-page screen.

Contents (counted from the bundle file)

4 vision jobs · 4 recipes · 1 calibration

4 folder-playback cameras (you create)

26 images + calibration files (ZIP) · 4 expression tags · 1 alarm

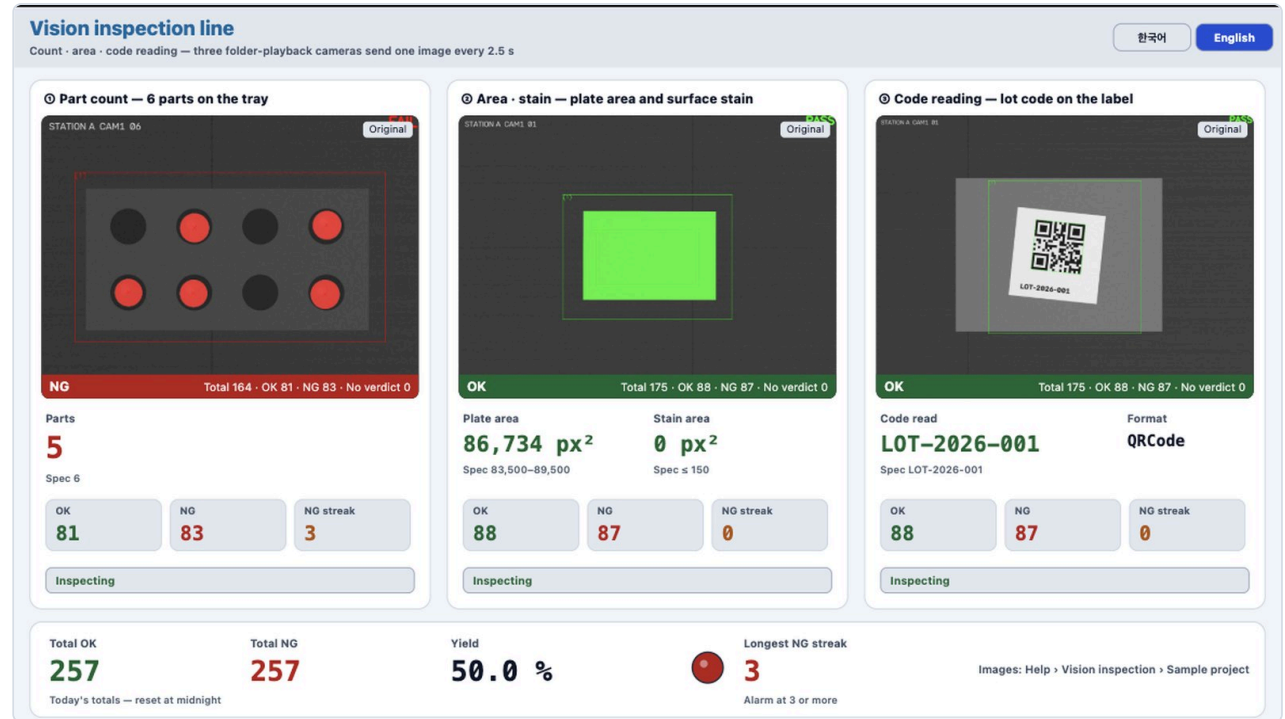
1 screen (2 pages, KO/EN)

Where to look

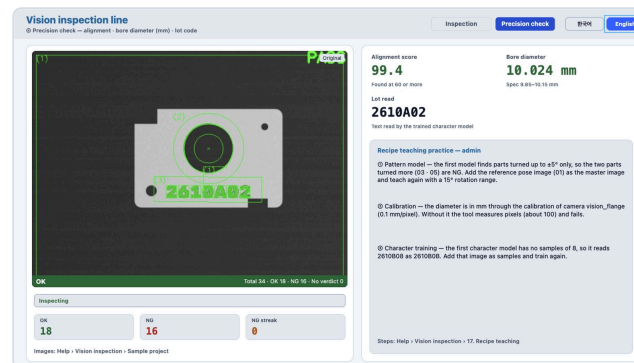
- Part count, area and stain, code reading (QR, DataMatrix). Verdicts come from the vision function, not a simulator.
- Results are tags. Total OK, NG, yield and longest NG streak are expression tags; three NGs in a row turn the lamp red and raise an alarm.
- 0.1.0.17 precision check: a pattern aligns the part, the bore is measured in mm (calibration 0.1 mm/pixel, 9.85 to 10.15 mm) and the lot text is read.
- It ships under-taught on purpose, as teaching practice: two rotated parts are NG and one lot is misread. The help shows the fix.

How to open

Image ZIP → Video: four folder-playback cameras (vision_count, _area, _code, _flange, 2500 ms) with the images → open the sample. Cameras first. Article: cafe.naver.com/moaview/52 (Korean)



English, light theme: part count NG (5 parts), NG streak 3 turns the lamp red



Precision check (0.1.0.17): alignment score, bore 10.024 mm, lot text

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.16

License Plate Recognition

“자동차 번호판 인식”

Reads 20 synthetic plates every 2.5 s; a script matches the text against the registered list: registered, unregistered or read failed. Gate lamp, alerts and totals follow.

Contents (counted from the bundle file)

- 1 vision job · 1 recipe
- 1 folder-playback camera (you create)
- 20 synthetic plates (ZIP)
- 26 tags
- 1 script (judge)
- 2 alarms
- 1 screen (KO/EN)
- Vision function r12 or later

Where to look

- Vision inspection only reads the text; the script decides. Unread text or text not in plate form (2 to 3 digits, 1 Hangul, 4 digits) is read failed; on the list is registered (gate opens); otherwise unregistered (alert).
- One loop: 14 registered, 6 unregistered, 0 read failed, read rate 100 % (0.1.0.17). The recipe turns on the plate layout hint, so the plate that failed in 0.1.0.16 now reads.
- The registered list is one tag, PLATE.REGISTRY (comma separated, 15 plates). From 0.1.0.16 edit it right in Monitoring → Monitor (operator or higher), or write it by REST or script.
- The reading model was trained only on the synthetic font. Do not use it as is for real vehicles or access control; train and test with site plates first.

How to open

Bundled from 0.1.0.16; needs vision function r12 or later. Image ZIP → folder-playback camera plate_cam (folder plate-demo, 2500 ms) with the images → open the sample.

License plate recognition (sample)
A folder-playback camera sends one synthetic plate image every 2.5 s

Inspecting
한국어 English

Camera — plate image


Reading result
Plate text read
534가0297
Registered
Judged at 13:49:27 Gate Open

Totals
Registered 12
Unregistered 4
Read failed 0
Total 16 Read rate 100.0 %
Reset totals Vehicles on list 15

Recent reads

13:49:27	534가0297	Registered
13:49:25	887노0911	Registered
13:49:22	997하0932	Registered
13:49:20	397호3792	Unregistered
13:49:17	287두8976	Registered
13:49:15	88소4751	Unregistered

Recent alerts

Time	Alert	State	Value
10-16 13:49:22	Unregistered	Cleared	Cleared
10-16 13:49:20	Unregistered	Raised	Unregistered
10-16 13:49:17	Unregistered	Cleared	Cleared
10-16 13:49:15	Unregistered	Raised	Unregistered
10-16 13:49:07	Unregistered	Cleared	Cleared
10-16 13:49:05	Unregistered	Raised	Unregistered

Synthetic plates for demonstration — do not use for real vehicle reading · Images: Help · Vision inspection · Sample project · License plate recognition

Registered: 534가0297, the plate that failed up to 0.1.0.16 (0.1.0.17)

License plate recognition (sample)
A folder-playback camera sends one synthetic plate image every 2.5 s

Inspecting
한국어 English

Camera — plate image


Reading result
Plate text read
362보8662
Unregistered
Judged at 13:49:37 Gate Closed

Totals
Registered 14
Unregistered 6
Read failed 0
Total 20 Read rate 100.0 %
Reset totals Vehicles on list 15

Recent reads

13:49:37	362보8662	Unregistered
13:49:35	7192731	Registered
13:49:32	836다0768	Registered
13:49:30	399하0936	Unregistered
13:49:27	534가0297	Registered
13:49:25	887노0911	Registered

Recent alerts

Time	Alert	State	Value
10-16 13:49:32	Unregistered	Cleared	Cleared
10-16 13:49:30	Unregistered	Raised	Unregistered
10-16 13:49:22	Unregistered	Cleared	Cleared
10-16 13:49:20	Unregistered	Raised	Unregistered
10-16 13:49:17	Unregistered	Cleared	Cleared
10-16 13:49:15	Unregistered	Raised	Unregistered

Synthetic plates for demonstration — do not use for real vehicle reading · Images: Help · Vision inspection · Sample project · License plate recognition

Totals after one loop: 14 registered, 6 unregistered, 0 read failed (0.1.0.17)

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.19

Parking Entrance Plate Scene

“주차장 출입 번호판 장면”

In 28 synthetic parking-entrance scenes the plate is found first and that spot is read. A green box is drawn over the camera image, and a script decides registered, unregistered or no car.

Contents (counted from the bundle file)

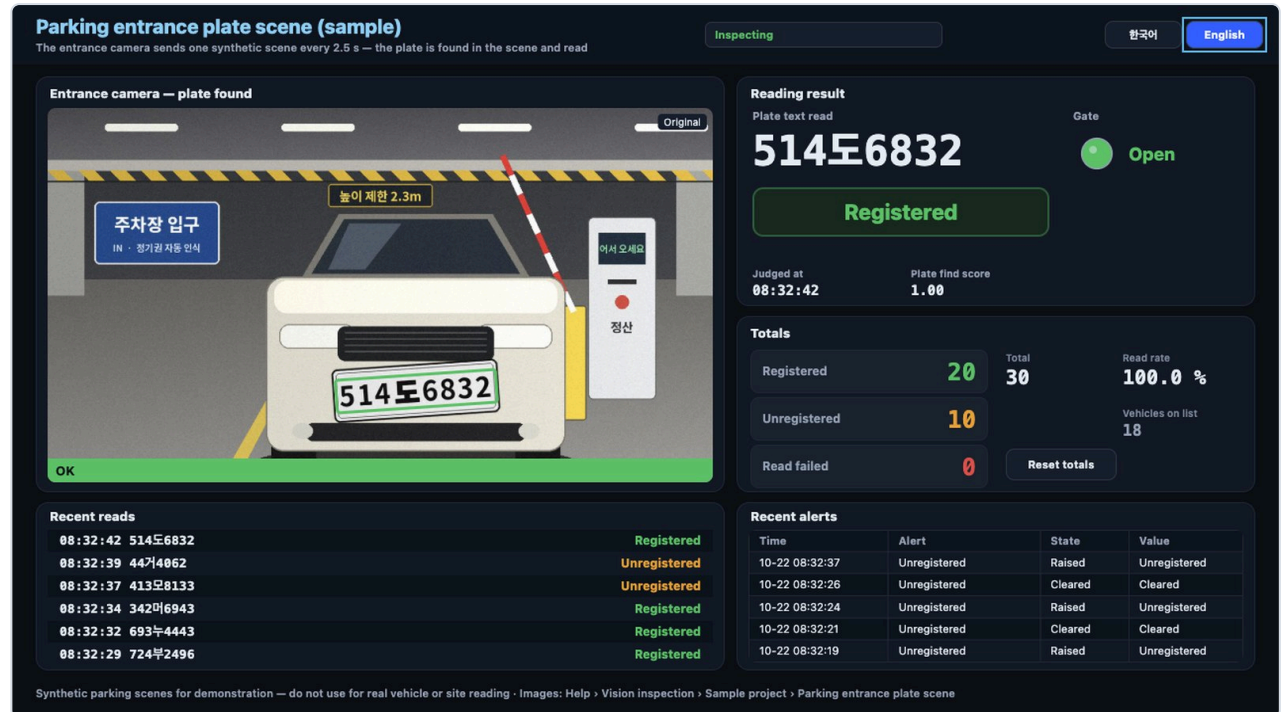
- 1 vision job (find → read)
- 1 folder-playback camera (you create)
- 28 synthetic scenes (ZIP)
- 30 tags
- 1 script (judge)
- 2 alarms
- 1 screen (KO/EN)
- Vision function r13 or later

Where to look

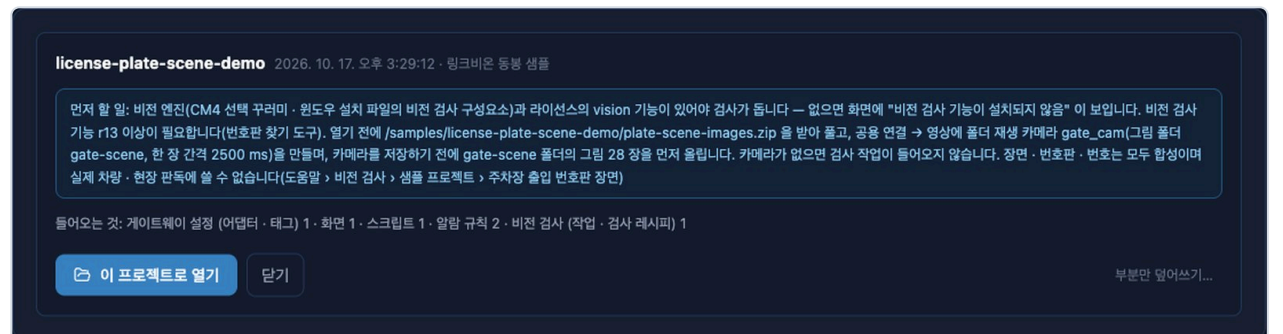
- A site camera does not frame only the plate: car front, signs and the pay station share the scene, and plate position, size and tilt change from car to car.
- One loop (24 cars, 4 empty lanes): 16 registered, 8 unregistered, 0 read failed. A scene with no plate found is 'no car' and stays out of totals and alerts.
- The registered list (18 cars) is one tag, so it changes without touching the inspection. The plate-find score is shown apart from the text score.
- Scenes and numbers are synthetic. Do not use as is for real vehicles or access control.

How to open

Image ZIP → folder-playback camera gate_cam (folder gate-scene, 2500 ms) with the 28 scenes → open the sample. Camera first.



Run screen: found plate box, registered car, gate open, totals (0.1.0.21)



Opening the sample: 'first' box with the image ZIP and camera values (Korean UI)

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.19

Conveyor Object Counting

“컨베이어 물체 세기”

The same conveyor video runs side by side as three jobs at 2, 5 and 10 frames a second, showing that each counts the same boxes in the same order whatever the speed. Each box label is read too.

Contents (counted from the bundle file)

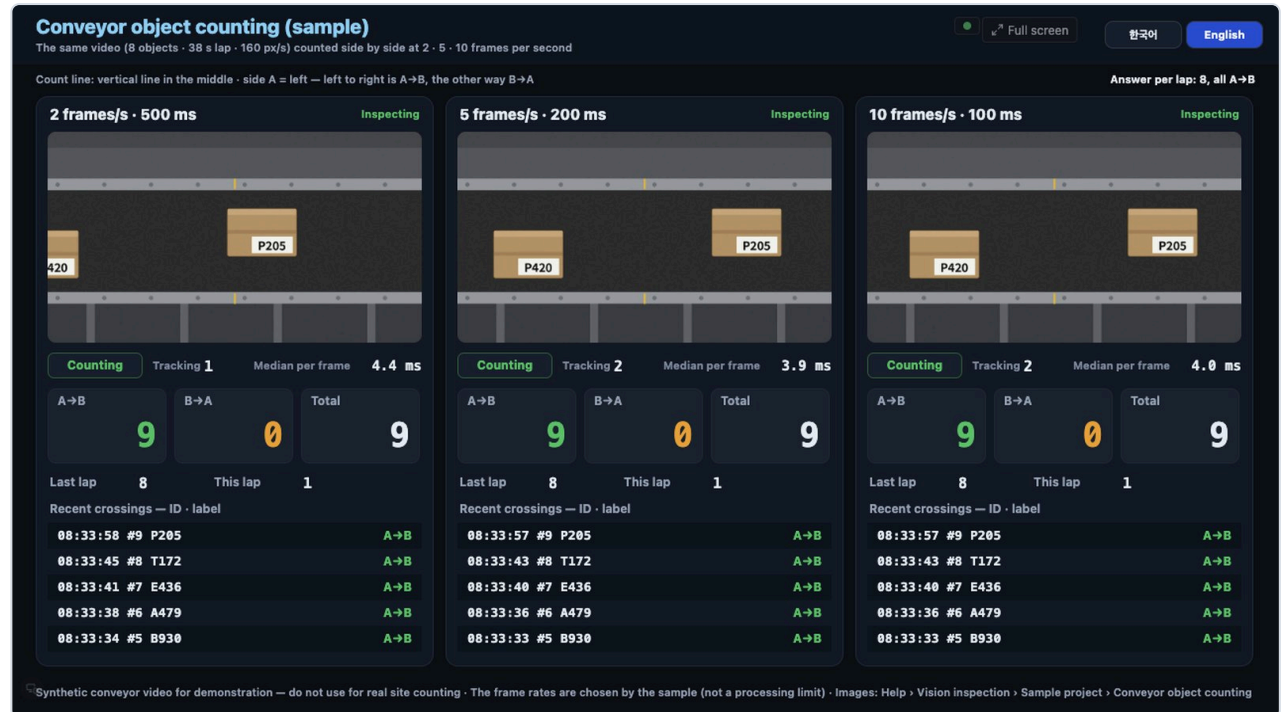
- 3 vision jobs · 3 recipes
- 3 folder-playback cameras (you create)
- Synthetic video, 76 · 190 · 380 frames (ZIP)
- 39 tags
- 1 script
- 1 screen (KO/EN)
- Vision function r17 or later

Where to look

- Motion regions learn the empty belt as background; object tracking counts boxes that cross the line in the middle. Each 38 s loop has 8 boxes, all A→B, for all three.
- Each newly confirmed box has its label (1 letter + 3 digits) read and logged as an event with number, direction and label.
- Majority learning is on, so no ghost regions remain when the flow starts with a box in view. Counts accumulate in the gateway and survive a restart.
- The frame rates are the sample's choice, not a processing limit. Video and labels are synthetic; not for real counting as is.

How to open

Image ZIP → three folder-playback cameras conv2_cam, conv5_cam, conv10_cam (500, 200, 100 ms) → open the sample.



Run screen: 2, 5 and 10 frames/s all count the same (0.1.0.21)



Vision job card: count, recent events, text score (Korean UI)

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.22

Multi-beam Eccentricity Inspection

“다광축 편심 검사”

Shoots the light spot of each of the 24 beams of a bar-type multi-beam sensor, measures center, eccentricity and size, and shows a per-beam table, verdicts, a report and three profile charts.

Contents (counted from the bundle file)

1 vision job · 1 recipe 1 folder-playback camera (you create)

24 synthetic images (ZIP) 292 tags 1 script · 2 alarm rules

Tag recipe (2 models) · 1 report 1 screen (KO/EN)

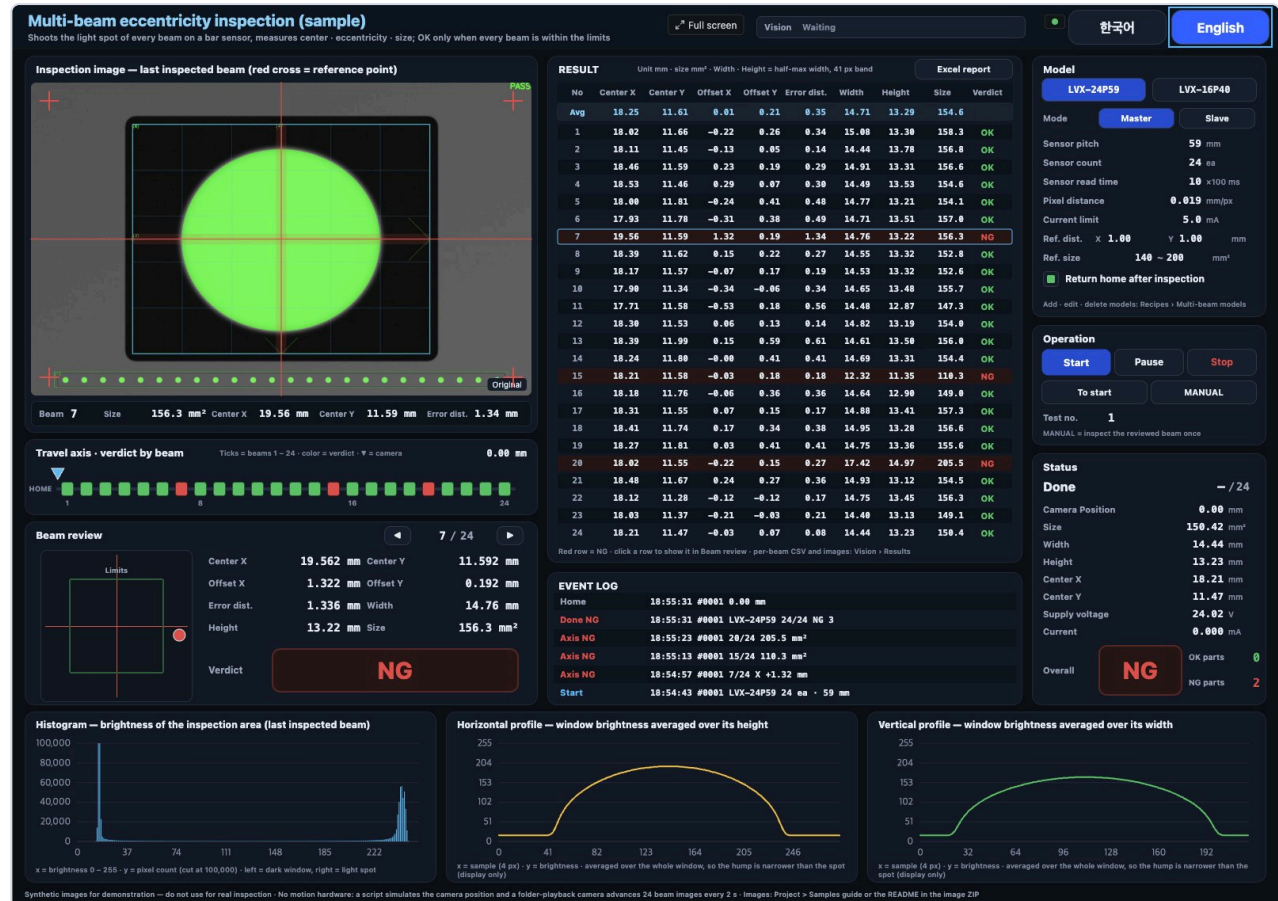
Vision function r22 or later

Where to look

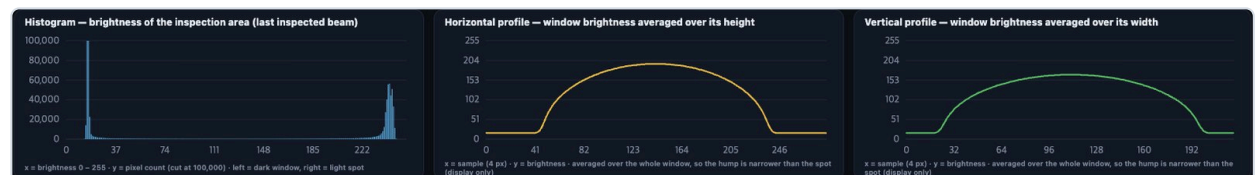
- Line profiles along a horizontal and a vertical line (41 px band) through the spot give the half-max width and the offset from the reference point, converted to mm by the pixel distance.
- OK only when every beam is within the reference distance and size. One loop (model LVX-24P59): beams 7, 15 and 20 of 24 are NG.
- A beam that could not be measured shows '-' and is left out of the average. The model is picked by a tag recipe (24-beam and 16-beam).
- No motion hardware: a script simulates the camera position. Model names and images are made up; not for real product inspection.

How to open

Image ZIP → folder-playback camera ecc_cam (folder ecc-axes, 2000 ms) with the 24 images → open the sample → Start on the screen. Camera first.



Run screen: loop done, 3 of 24 beams NG, three charts along the bottom (0.1.0.23)



Histogram and horizontal and vertical profiles: charts drawn straight from the result arrays

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.24

Person Detection

“사람 감지 — 감지 모델 올리기 · 레시피에 묶기 · 사람 수”

Finds people in a camera image, draws boxes with name and score on the result image, and shows the current head count and the top score. The model file and the images are not included; you upload them.

Contents (counted from the bundle file)

1 vision job · 1 recipe (object detector)

1 folder-playback camera (you create)

No model or images (you upload)

1 tag

1 screen (KO/EN)

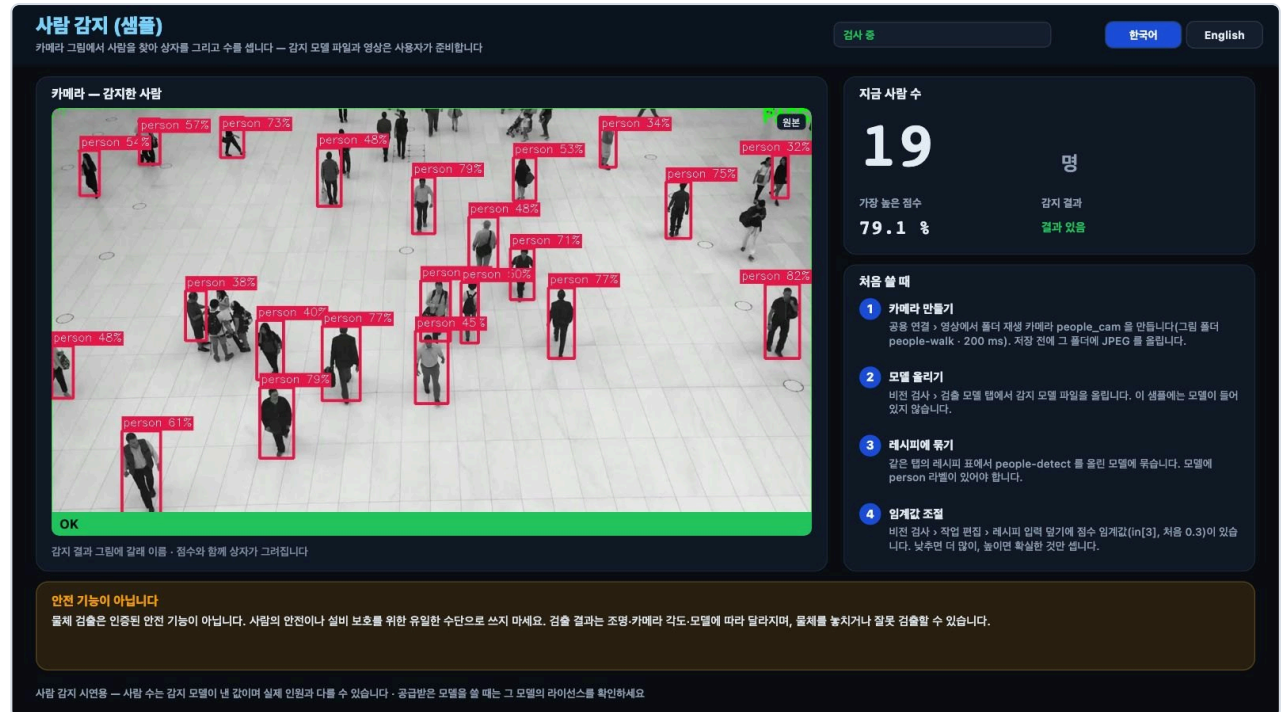
0.1.0.24 · vision function r25 or later

Where to look

- Upload a model in Vision inspection → Detection models; only files that pass a separate checker are stored. Bind recipe people-detect to it on the same tab (the model needs a person label).
- Change the score threshold with the recipe input override in the job editor (starts at 0.3). Lower counts more; higher counts only sure ones.
- Limits per model and threads: CM4 32 MiB and 4, Windows 128 MiB and 8. One camera on a CM4: 5 frames a second (about 140 ms each).
- Object detection is not a certified safety function: never the only means of protecting people or controlling access. The count can differ from reality.

How to open

Folder-playback camera people_cam (folder people-walk, 200 ms) with JPEGs of people → open the sample → upload and bind a model on the Detection models tab. Check the licence of any supplied model.



Run screen: 19 people found, top score 79.1 % (stock footage cleared for commercial use; Korean UI)

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.24

Barcode Cart on a Phone

“바코드 장바구니 — 휴대폰 화면 · 스캐너 연속 입력 · 합계 기록”

Stand a phone up and scan with a Bluetooth or USB barcode scanner: items pile into the cart without tapping an input field. Without a scanner, scan with the phone camera.

Contents (counted from the bundle file)

1 screen (portrait phone 390×844, 2 pages)

55 tags

1 script

1 collection rule · 2 queries · 1 record DB

Operator account

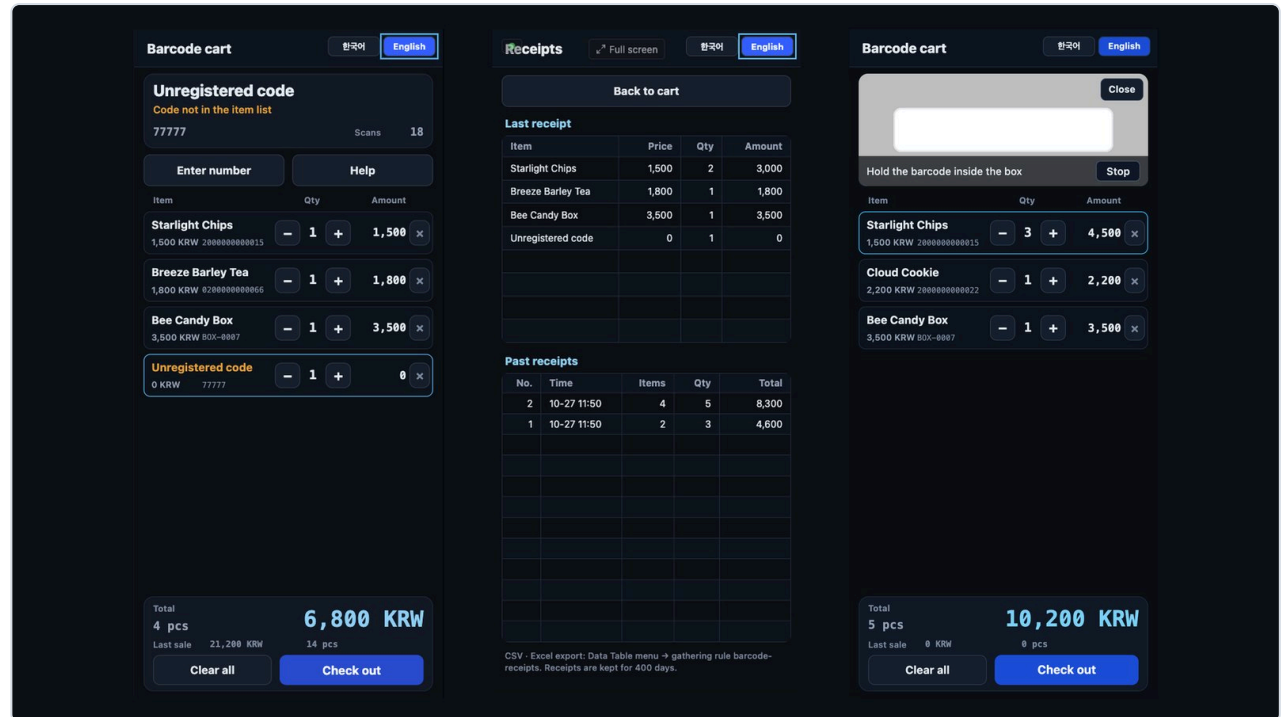
0.1.0.24

Where to look

- The same code adds 1 to the quantity; a code not in the item list comes in as an unregistered code. Quantity $\pm$, delete row, total, clear all.
- Check out stores a receipt (name, code, unit price, quantity and amount per item, plus the total) in the record DB for 400 days; past receipts have their own page.
- Phone-camera scanning works only on a screen opened over HTTPS (<https://<gateway>:8443>). Trust the gateway certificate on the phone once.
- Items and barcodes are made up. Not yet measured with a real scanner or an iPhone.

How to open

Log in on the phone browser with an operator account → open the sample → barcode-cart screen. Pair the scanner as a keyboard (HID) with Enter as the last character.



From left: continuous scanner input with an unregistered code, receipts, camera scan panel

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.24

Downtown Traffic CCTV Viewer

“천안 도심 교통 CCTV 뷰어 — 지도 · 여러 대 · 크게 보기”

Places six cameras on a map by the location and name in a public CCTV list, shows them 3 × 2 or one large, marks each connected or not, and shows how old the last picture of a lost camera is.

Contents (counted from the bundle file)

1 screen (8 slides)

6 cameras (you create)

Synthetic images (ZIP)

0 tags

KO/EN

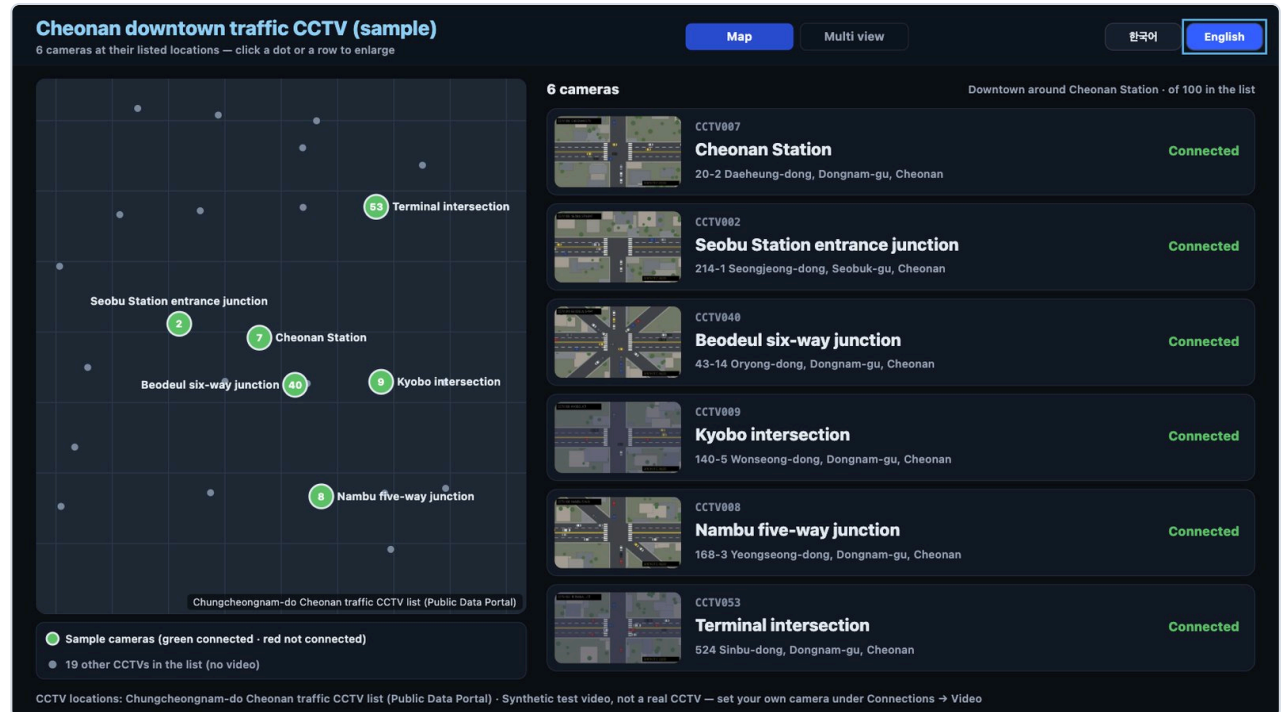
0.1.0.24

Where to look

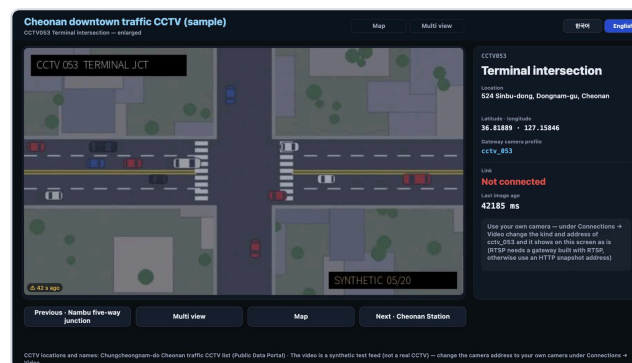
- Map, multi view and a large view per camera. Cameras are found by their names in Shared connections → Video.
- With your own cameras, change only the address of the same-named camera: RTSP (H.264) works in the 0.1.0.24 release builds, otherwise an HTTP snapshot address.
- The video is a drawn synthetic intersection. Do not connect to the public video server; the provider states that holding many cameras open gets an IP blocked.
- Locations and names: Cheonan City traffic CCTV list (Korean public data portal). Two bad coordinates: one corrected, one left out.

How to open

Image ZIP → six folder-playback cameras cctv_007, cctv_002, cctv_040, cctv_009, cctv_008, cctv_053 (folders cctv-007 ..., 500 ms) → open the sample. Without cameras every tile shows not connected.



Map with the six cameras and the rest of the list as grey dots



Large view of camera 53 after its link was lost

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.20

Boxing Scoring & Scoreboard

“복싱 경기 채점 · 전광판”

Two rings with three judges each. The operator console runs the rounds, judge tablets enter scores, and the board shows time, round and winner. The 30-second signal and the bell ring from the board's audio element on a tag signal.

Contents (counted from the bundle file)

13 screens (board, console, score card per ring)

1 judge tablet template + 6

272 tags

1 script (100 ms state machine)

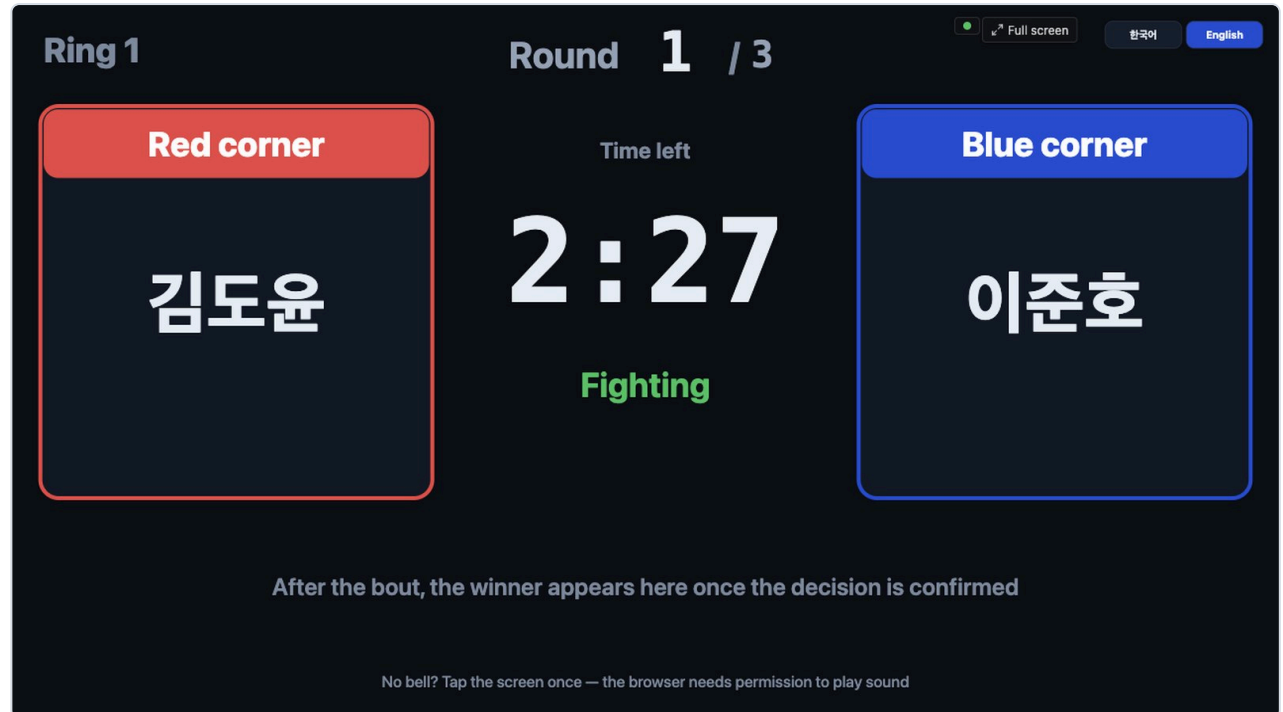
Play signal tag (0.1.0.20)

Where to look

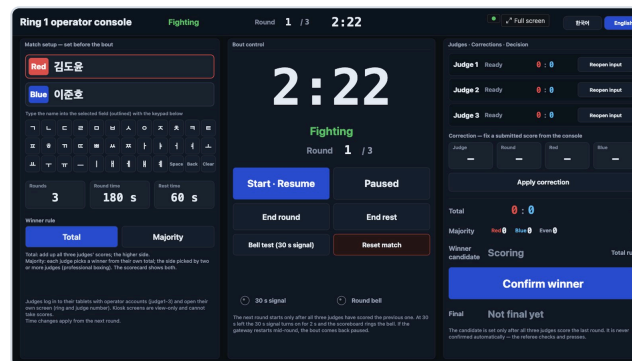
- Each ring runs a 100 ms state machine: waiting, fighting, paused, rest, scoring closed, decision. Round timer, 30-second signal, bell.
- Judges enter 7 to 10 on a keypad; a submitted card locks. Reopening and corrections are done from the console.
- Total and majority (unanimous, majority, split, draw) are shown side by side; the winner appears on the board only after the console confirms.
- If the browser blocks sound, an 'enable sound' button appears; the first tap grants permission.

How to open

Project → Samples → boxing sample. Press Start on the console. Each ring and judge has its own tablet screen.



Ring 1 board: round 1 of 3, time left



Ring 1 operator console: setup, round control, judge status

Taken on a test gateway with the sample open

03 LinkVion SCADA Sample project · bundled from 0.1.0.21

Cafe with Three Displays

“카페 디스플레이 3대 — 메뉴판 · 픽업대 · 창가”

The three displays of a virtual cafe change with the daypart schedule, and one change of sold-out, price, order number or notice on the phone console shows on all three.

Contents (counted from the bundle file)

2 screens (18 signage pages, 2 console pages)

3 registered displays 22 tags 1 script

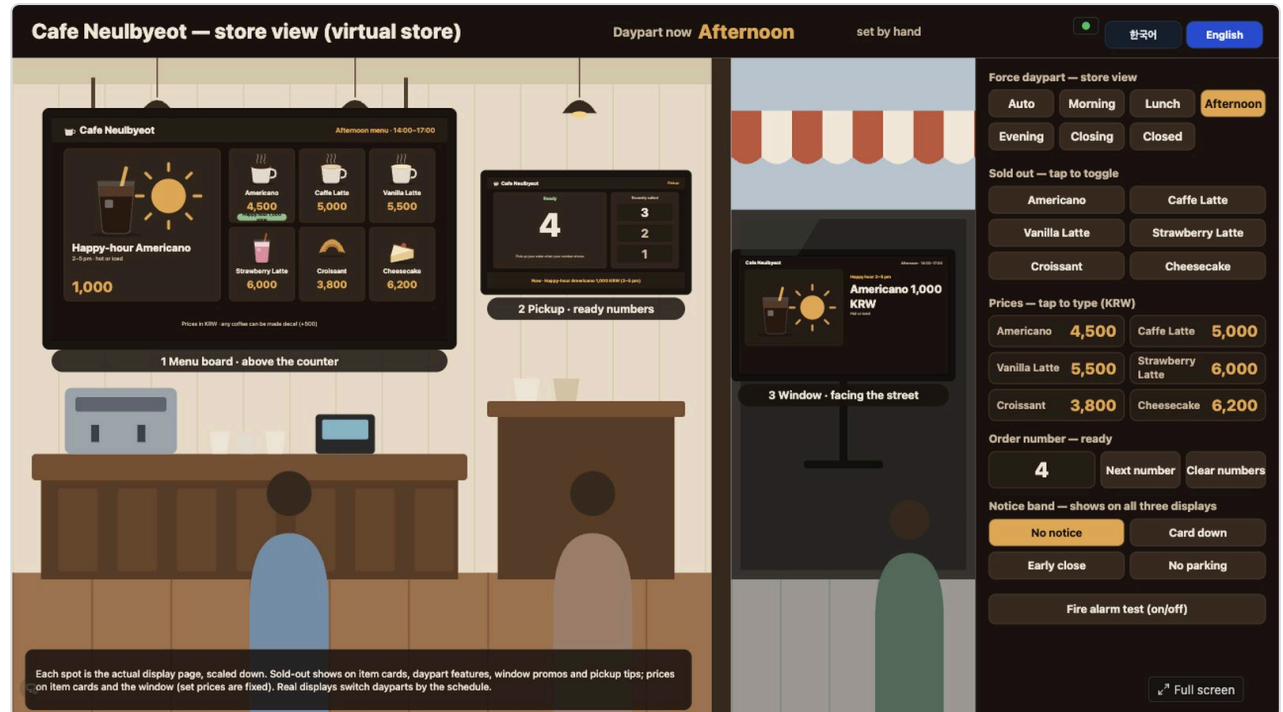
19 schedule rules (1 fire emergency) Opening hours

Where to look

- Menu board (portrait), pickup and window (landscape) screens change for morning, lunch, afternoon, evening and closing.
- A sold-out item swaps the feature, the window promo and the pickup tip for an alternative. Advancing the order number updates 'ready' and 'recently called' at pickup.
- One fire signal puts an evacuation notice on all three displays (emergency schedule).
- The 'store view' page shows all three displays scaled down, for demos. Five screens at once exceed the trial limits.

How to open

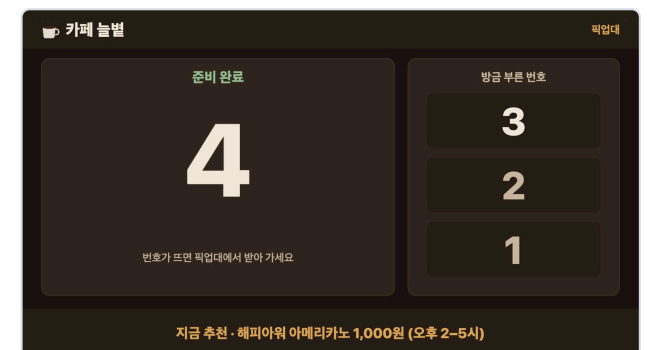
Project → Samples → cafe sample. The three displays are added to the display registry; open the signage address in each device's browser.



Store view: three displays and the control panel (afternoon)



1 Menu board, afternoon (Korean)



2 Pickup: ready number 4 (Korean)

Taken on a test gateway with the sample open

03-1 LinkVion SCADA

Process & Equipment

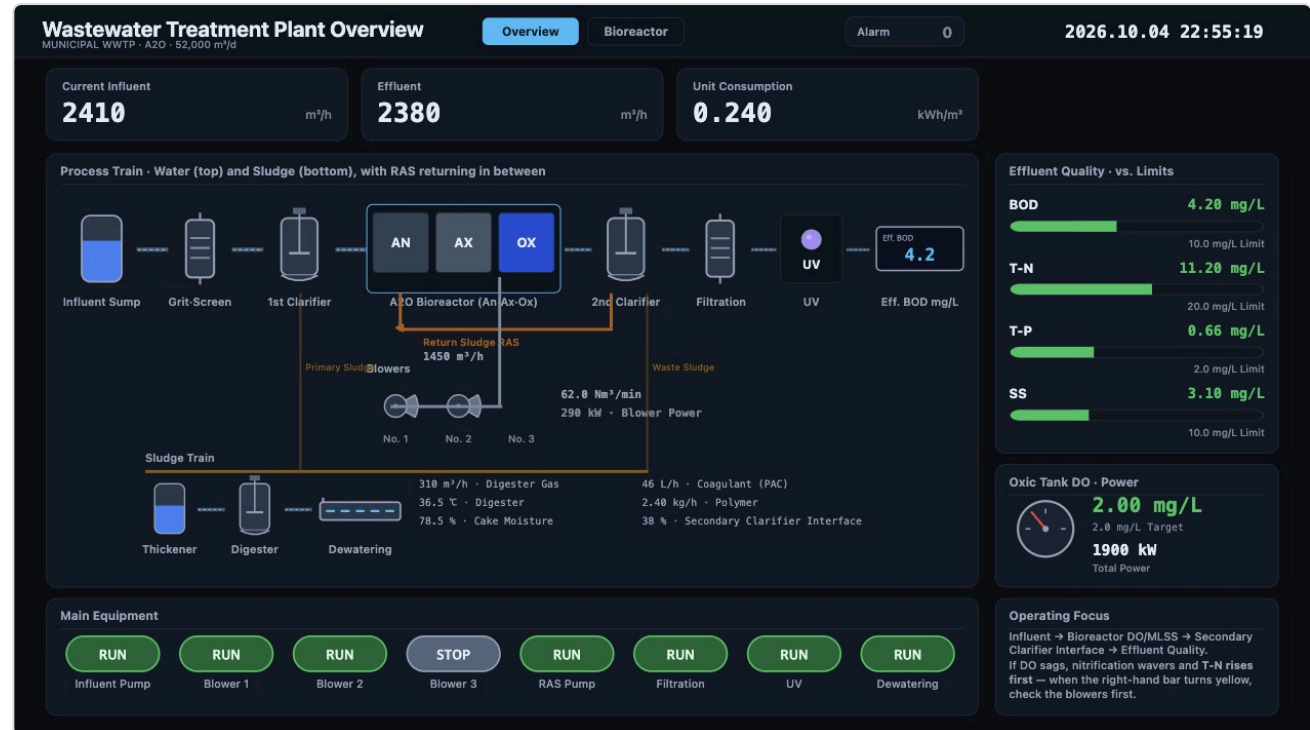
Draw the plant as it is built, bind tags, and the values flow over it.

Key features

- Water treatment moves levels, flows and pumps with the values and shows effluent quality against permit limits.
- Geothermal and HVAC recolor piping by mode, with COP and lift alongside.
- Food lines overlay the target temperature curve on the actual one. Vehicle inspection points at failed connectors on a 3D car.
- Run and stop commands go through a confirmation dialog.

Samples

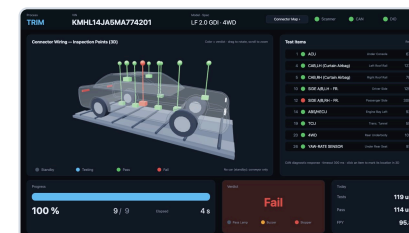
“Wastewater Treatment Plant Overview” · “Pharmaceutical Water System (PW/WFI)” · “Ground Source Heat Pump Monitoring” · “Coffee Roasting — Profile Monitoring” · “Vehicle Connector Check — 3D (Sample)” · “Robot Arm Line — 3D Model”
Open SCADA View → Design → Samples and search for the title.



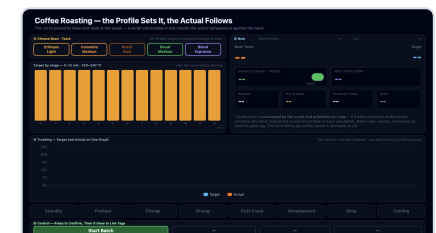
Wastewater treatment overview



Ground source heat pump



Vehicle connector check in 3D



Coffee roasting

03-2 LinkVion SCADA

Energy & Wide-area

Sites too large for one screen are split across maps and several screens.

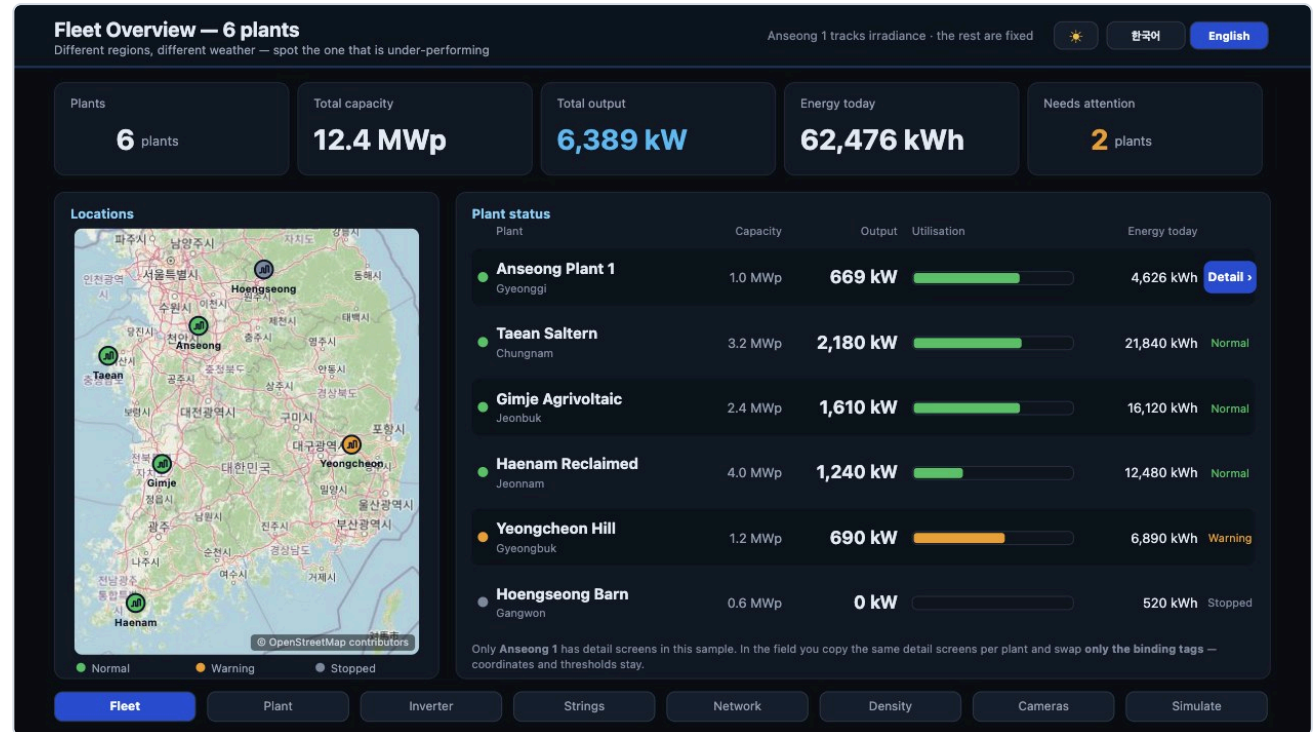
Key features

- The solar sample drills down from the fleet overview to inverters and strings within one project.
- Eight control-room screens and three phone screens read the same tags.
- Observation points sit on a map by latitude and longitude and turn normal, caution or alarm color.
- Gate opening commands are written after confirmation. CCTV video sits in the same screen set.

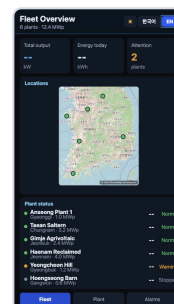
Samples

“Solar Power Plant Monitoring” · “Solar Power Plant — Mobile (Portrait)” · “Soyang Dam Basin Monitoring” · “Sluice Gate Control”

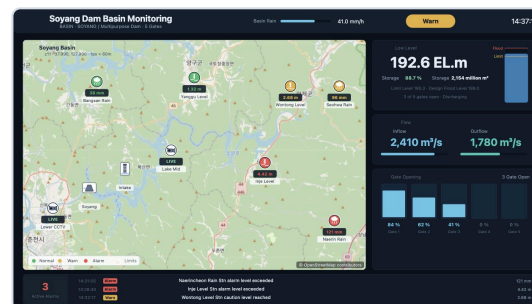
Open SCADA View → Design → Samples and search for the title.



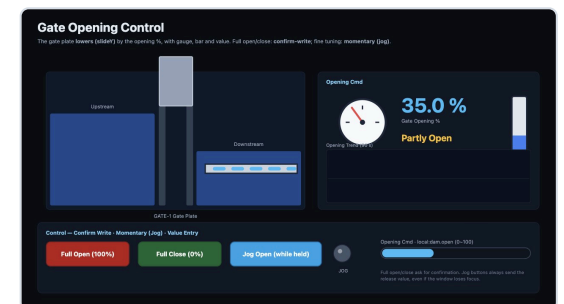
Solar power plant monitoring



Phone screen



Soyang dam basin



Sluice gate control

03-3 LinkVion SCADA

Control Room

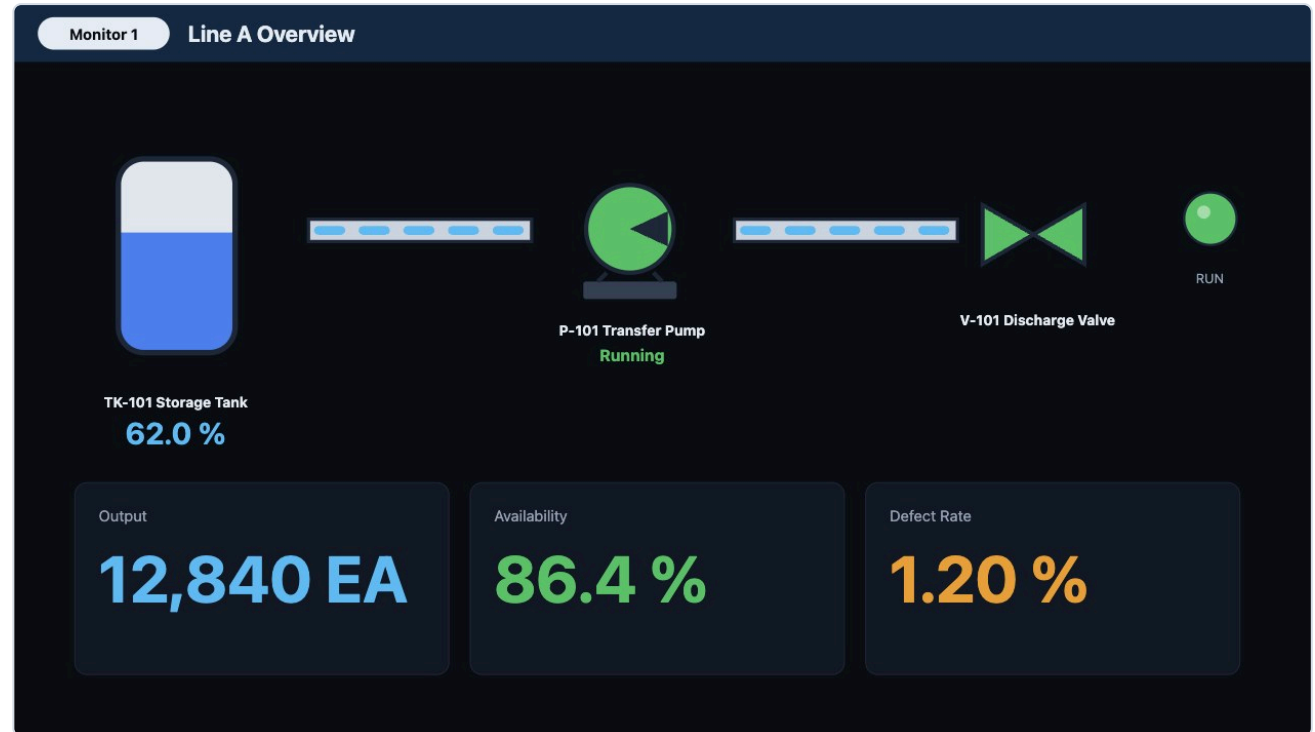
Tie several monitors into one project and run them as one set.

Key features

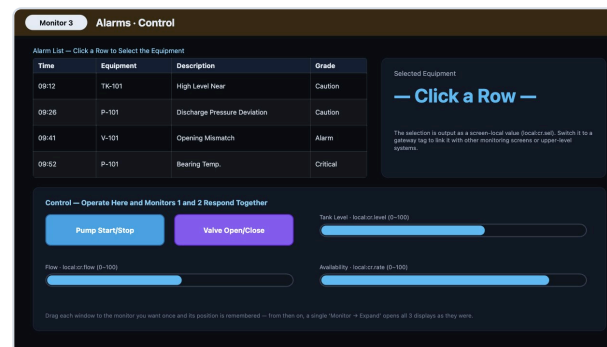
- Monitors 1, 2 and 3 get overview, trends, alarms and control in advance.
- Act in one window and the screens on the other monitors respond.
- A side menu swaps only the content frame. Master layers and screen navigation.
- Alarms keep a raise, acknowledge and clear history. User roles decide who may operate.

Samples

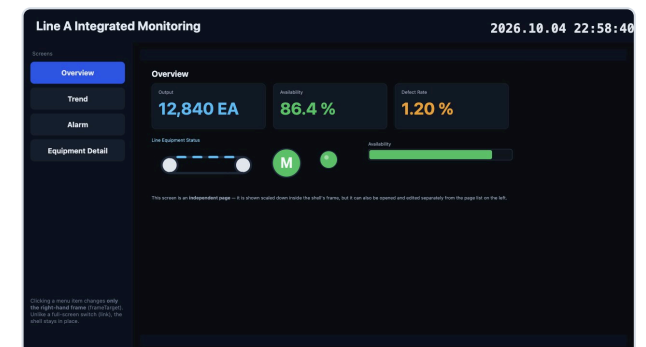
“Control Room, 3 Displays (Multi-monitor)” · “Menu + Frame Dashboard” · “Master Background + Screen Navigation”
Open SCADA View → Design → Samples and search for the title.



Control room, monitor 1



Monitor 3: alarms, control



Menu + frame

03-4 LinkVion SCADA

Signage & Kiosk

Information boards for people, and reception and ordering screens that answer a touch.

Key features

- Video, playlists and moving backgrounds. Portrait screens (1080×1920) are designed in portrait.
- Register displays, schedule them by group, and raise an emergency screen on a tag such as a fire signal.
- The called number advances on its own, and quantities and totals are calculated on screen.
- Booking database query results feed tables and door-side panels directly.

Samples

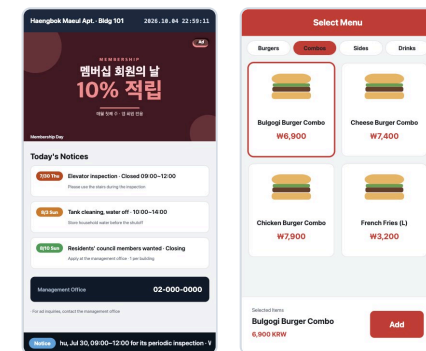
“Cafe Menu Board” · “Apartment Elevator Display (Portrait)” · “Clinic Waiting List” · “Fast Food Ordering Kiosk” · LinkVion Signage bundle (“링크비온 사이니지 — 로비·식당·생산동”) Open SCADA View → Design → Samples and search for the title.



Cafe menu board



Clinic waiting list



Elevator, portrait

Ordering, portrait

START

Start with the Samples

The three products are not separate purchases but layers of one program. Start with the layer you need.

1 Log in to the gateway

Install LinkVion and open it in a browser; the Box runs when powered.

2 Open a sample project

Project → Samples. It replaces the current project, so use a test gateway.

3 Tour each layer

Tags and alarms in gateway mode, history and reports in middleware, operation in SCADA View.

4 Connect your equipment

Planned together after seeing the site, starting from the sample's tag names.

I The 23 bundled samples (as of 0.1.0.24), by product

Sample project	Gateway	Middleware	SCADA
Smart Farm Greenhouse (“스마트팜 온실 감시”)	31 tags · 7 alarms	4 analytics ch. · 1 recipe · 1 script	1 screen
Solar Power Plant (“태양광 발전소 통합 감시”)	65 tags	1 DB link · 2 queries	2 screens
Wedding Hall Guide (“예식장 안내 · DB 연동”)	—	1 DB link · 2 queries · 2 commands	1 screen
Pharmaceutical Water (“제약용수 시스템 (PW/WFI)”)	67 tags · 6 alarms	history · 1 script	1 screen
Ground Source Heat Pump (“지열 냉난방 시스템 (GSHP)”)	118 tags · 6 alarms	history · 1 script	1 screen
Wastewater Treatment (“하수종말처리장 종합운전”)	57 tags · 5 alarms	history · 1 script	2 screens
LinkVion Signage (“링크비온 사이니지 — 로비·식당·생산동”)	3 tags · 2 sim. signals	—	8 screens · 6 rules · 1 table
Coffee Roasting (“커피 로스팅 — 프로파일 감시”)	38 tags · 1 alarm	1 recipe · 2 schedules · 1 report · 1 script	1 screen
Food Plant (“식품 공장 — 장비 연결 · 수집 · 해법 · OEE”)	2 Modbus TCP links · 38 tags · 3 alarms	5 rules · 3 HACCP CCPs · 1 OEE asset · 2 queries	1 screen (2 pages)
Exhibition Hall Operation (0.1.0.11)	2 Modbus TCP links · 162 tags · 15 alarms	2 rules · 2 queries · 1 report · 3 scripts	1 screen (5 pages)
Night Landscape Lighting (0.1.0.11)	2 Modbus TCP links · 212 tags · 28 alarms	1 report · 3 scripts	2 screens (PC, phone)
Durability Test Wall (0.1.0.11)	2 Modbus TCP links · 353 tags · 42 alarms	2 rules · 3 queries · 1 report · 3 scripts	2 screens (engineer, board)
Event Game Booth (0.1.0.11)	2 Modbus TCP links · 46 tags · 1 alarm	1 rule · 2 queries · 3 scripts	3 screens
Vision Inspection Line (0.1.0.13 · precision 0.1.0.17)	4 vision jobs · 1 calibration · 4 expression tags · 1 alarm	inspection records · result images	1 screen (2 pages, KO/EN)
License Plate Recognition (from 0.1.0.16)	1 vision job · 26 tags · 2 alarms	1 judge script	1 screen (KO/EN)
Parking Entrance Plate Scene (0.1.0.19)	1 vision job · 30 tags · 2 alarms	1 judge script	1 screen (KO/EN)
Conveyor Object Counting (0.1.0.19)	3 vision jobs · 39 tags	1 event script	1 screen (KO/EN)
Boxing Scoring & Scoreboard (0.1.0.20)	272 tags	1 state-machine script	13 screens · play signals
Cafe with Three Displays (0.1.0.21)	22 tags	1 script · opening hours	2 screens · 3 displays · 19 rules
Multi-beam Eccentricity Inspection (0.1.0.22)	1 vision job · 292 tags · 2 alarms	model recipe · 1 report · 1 script	1 screen (KO/EN) · 3 charts
Person Detection (0.1.0.24)	1 vision job (detector) · 1 tag	—	1 screen (KO/EN)
Barcode Cart (0.1.0.24)	55 tags	1 rule · 2 queries · 1 script	1 phone screen (2 pages)
Downtown Traffic CCTV Viewer (0.1.0.24)	6 cameras	—	1 screen (8 slides)

Device connections: Food Plant and the four 0.1.0.11 samples (loopback Modbus). Six vision samples need folder cameras and the vision function. The rest use virtual tags. A trial opens samples within its limits.

Not claimed in this brochure

Deliveries, customers, certifications · full SECS/GEM · certified safety functions · sACN input · ArtSync · real plate reading · on-site counting · spoken calls. Power, lighting, OSC: simulated devices only.

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