

OVERVIEW

EPL-SSUP is building management software for monitoring and controlling all technical systems of a building on one screen. **EnergyPlus Worker** collects data from field devices, **Tags Editor** prepares the point definitions, and **EnergyPlus SCADA** is the operator interface — all in one package.

Air handling units, boiler rooms, chillers, fan coils and VAV units appear live on realistic 3D screens; power distribution on single-line diagrams, energy use on dashboards and tenants in the metering and billing module. The interface is web based: the same screen in the control room, in the office or on a tablet. Developed in Türkiye.

Key Feature:

Live 3D plant screens built in minutes with the HVAC builder — no coding

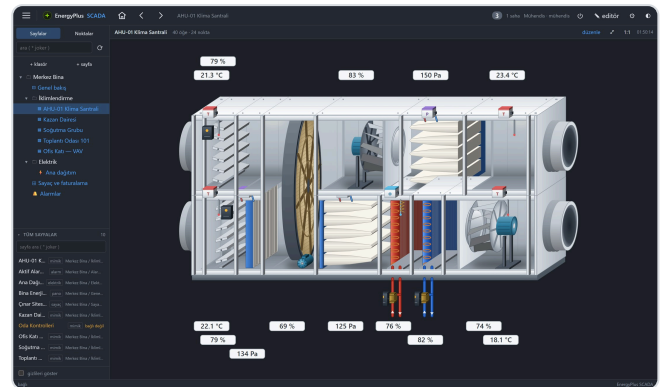


Figure 1 – EnergyPlus SCADA main screen

BENEFITS

♦ The Whole Building on One Screen

Graphics, dashboards, single-line diagrams, metering and billing and alarm pages share one page tree and one permission system. A central server brings many sites together in a single interface.

♦ Screens Ready in Minutes

The HVAC builder assembles an air handling unit section by section and generates the 3D drawing, the sensors and the point list. With 68 ready templates and a 479-piece 3D HVAC library, no drawing tool is needed.

♦ Speaks Every Protocol

Worker reads from and writes to field devices over Modbus TCP/RTU, BACnet/IP and MS/TP, KNXnet/IP, Sedona (SOX), M-Bus and MQTT, and also publishes values to the head end over MQTT. Tags Editor extracts the point list from site with scan and import tools.

♦ Continuous, Reliable Data

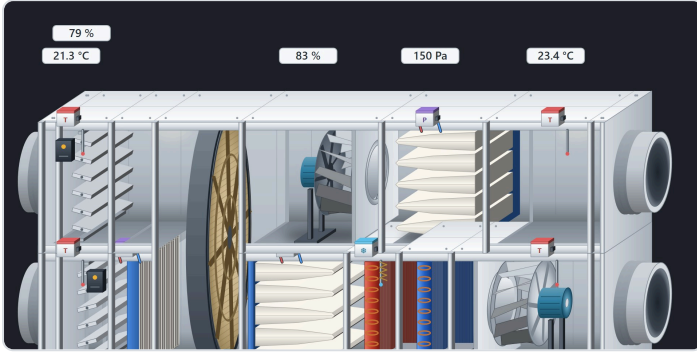
When the database is unreachable, readings are buffered and written once the connection returns. A failing point never stops the others from being read; every value is stored with its quality.

♦ Secure and Auditable

Role and page based permissions, audit trail, TLS encryption, scheduled encrypted backups and updates verified with SHA-256.

ENERGYPLUS SCADA – PAGE TYPES

The right screen for every job. Pages hang in folders; one graphics page serves many devices, so a single AHU screen shows every unit.



Graphics – live 3D plant screen



Dashboard – energy and comfort panel with 19 card types



Single-line – diagram drawn from structure, power analyser values

Çıkar Sırası — Sayış ve Faturalama Ekim 2025

Rapor Okunabilir Dışlamalar Alınabilir Sayılar

İ. Fatura Çıktısı... Fatura kes... Fatura ayar...

ELEKTRİK - SAKAÇ OKUMASI - KWH - KATIP 71.00

Alınan	Tüketim	Pay	Kayıp payı	Tutar	Hesap
D-1 Ahmet Yılmaz	412.00	%17.47	12.00	1,586.20	412 x 3.85 A. kayıp payı %3
D-2 Elif Kaya	365.00	%15.47	11.00	1,405.25	365 x 3.85 A. kayıp payı %3
D-3 Mert Demir	486.00	%21.11	15.00	1,917.30	486 x 3.85 A. kayıp payı %3
D-4 Zeynep Arslan	387.00	%16.17	9.00	1,584.05	387 x 3.85 A. kayıp payı %3
D-5 Can Çelik	351.00	%14.68	11.00	1,381.35	351 x 3.85 A. kayıp payı %3
D-6 Selin Aydın	446.00	%18.91	13.00	1,717.10	446 x 3.85 A. kayıp payı %3
TOPLAM	2,359.00			9,082.15	matrah 7,568.46 KDV 1,513.69 genel 9,082.15

ISITMA - KALORİMETRE - ALAN - KWH - KATIP 170.00

Alınan	Tüketim	Pay	Kayıp payı	Tutar	Hesap
D-1 Ahmet Yılmaz	989.00	%17.47	30.00	1,888.88	989 x 1.92 A. kayıp payı %3
D-2 Elif Kaya	876.00	%15.41	26.00	1,681.92	876 x 1.92 A. kayıp payı %3
D-3 Mert Demir	1,195.00	%23.11	26.00	2,244.40	1195 x 1.92 A. kayıp payı %3
D-4 Zeynep Arslan	689.00	%12.17	21.00	1,322.88	689 x 1.92 A. kayıp payı %3
D-5 Can Çelik	842.00	%14.87	23.00	1,616.94	842 x 1.92 A. kayıp payı %3
D-6 Selin Aydın	1,070.00	%18.90	32.00	2,054.40	1070 x 1.92 A. kayıp payı %3
TOPLAM	5,661.00			10,869.12	matrah 9,057.60 KDV 1,811.52 genel 10,869.12

Metering and billing – tenants, periods, allocation, VAT and invoices

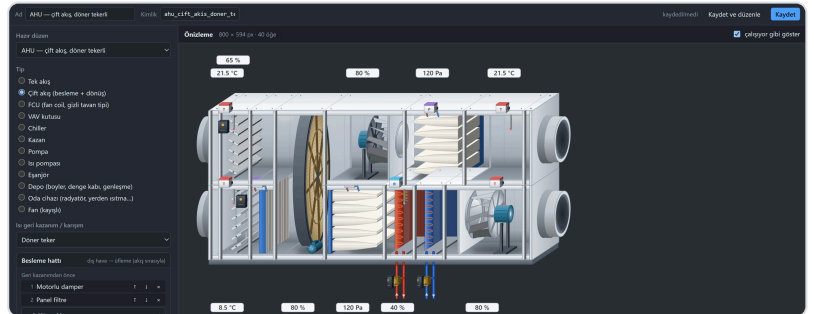
Aktif Tümü Geçmiş ekipman / mesaj ara her önem tüm sahalar Sınıf: hepsi 7 kayıt

Zaman	Ekipman	Mesaj	Değer	Sınıf	Durum
26.10 01:47:48	Kazan-1 Merkez Bina	Brülör arızası — alev sönməsi	arıza	Kritik	aktif Kabul et
26.10 01:39:48	AHU-01 / Isıtıcı Merkez Bina	Donma termostati devrede	4.2 °C	Kritik	aktif Kabul et
26.10 01:24:48	AHU-01 / Torba filtre Merkez Bina	Filtre fark basıncı yüksek kabul filtre değişimi planlandı	310 Pa	Mekanik	kabul edildi operator

Alarms – class, severity, acknowledge and close; e-mail, WhatsApp, Mattermost notifications

HVAC BUILDER

- 12 equipment types: single and dual duct AHU, FCU, VAV, chiller, boiler, pump, heat pump, heat exchanger, storage tanks, room units, fans
- Sections in airflow order: damper, filter, coils, humidifier, fan, silencer; heat recovery as rotary wheel, plate exchanger, mixing damper or adiabatic wheel
- The point list writes itself; bind by name matches device points in one click
- Boilers with 2-4 circuit headers; FCU and VAV with a room panel (setpoint, mode, fan, dimmers, blinds)



3D EQUIPMENT LIBRARY

The 479-piece EnergyPlus HVAC library is drawn in one consistent cut-away style, so operators see what is inside the equipment. Fans spin, burners fire, valves open; an unbound point never leaves an empty box. Pipes, ducts, valves and diffusers snap end to end. 4,895 symbols in total.



ENERGYPLUS WORKER

Runs as a Windows service on the site gateway; reads devices, writes commands and stores history and alarms in a SQL Server database.

- Modbus TCP / RTU, BACnet/IP and MS/TP, KNXnet/IP, Sedona (SOX), M-Bus, MQTT
- MQTT: read from a broker (including JSON fields), publish to a broker and accept commands; TLS
- BACnet COV subscriptions and multiple-property reads; scales to tens of thousands of points
- Block based control engine (Sedona compatible wire sheet)
- Weekly schedules and exception days, written to BACnet and Sedona devices
- Alarm generation and notification: e-mail, WhatsApp, Mattermost
- Buffering during database outages; lossless write-back on reconnect

Tags Editor

- Points of every protocol in one grid; Excel import and export
- Network scans: BACnet, Modbus TCP/RTU, M-Bus, Sedona, MQTT topics; BACnet EDE and KNX import
- Bulk update, formula editor (calculated points), alarm classes and thresholds
- Protection against writing to the wrong protocol's file

Tags Editor — point grid

TECHNICAL SPECIFICATIONS

GENERAL

Product Code	EPL-SSUP
Components	EnergyPlus SCADA 1.42.3 · EnergyPlus Worker 4.12.0 · Tags Editor 2.19.0
Origin	Türkiye
License	Bound to the machine; by features and point count
User Interface Language	Turkish

SYSTEM REQUIREMENTS

Operating System	Windows 10 / 11 or Windows Server 2016 and later, 64-bit
Runtime	.NET embedded in the package; no separate installation
SCADA Desktop Shell	Microsoft Edge WebView2 Runtime (installed by the setup from the internet if missing)
Client	A current web browser (Edge, Chrome) or the desktop shell
Database	Microsoft SQL Server; SQL Server 2022 Express optional with the installer
Installation	Administrator rights

COMMUNICATION

Field Protocols	Modbus TCP, Modbus RTU (RS-485), BACnet/IP, BACnet MS/TP, KNXnet/IP, Sedona (SOX), M-Bus, MQTT
MQTT	Read from a broker (plain value or JSON field), publish values, accept commands; TLS, user/password, QoS 0/1
SCADA Web Server	HTTP / HTTPS, default port 7180 (configurable)
Worker Local API	Default port 7171 (configurable), key based access
Database	Microsoft SQL Server; SQL Server 2022 Express optional with the installer

ENERGYPLUS SCADA

Page Types	Graphics, Dashboard, Single-line, Metering and billing, Alarms
Symbol Library	4,895 symbols (479 3D HVAC), plus your own SVG symbols
Ready Templates	68 equipment and room control templates
Dashboard Cards	19 card types
Single-line Examples	13 ready single-line diagrams
Live Refresh	250 ms (default)
User Roles	Administrator, Engineer, Operator; page and folder permissions
Access	Web browser or desktop shell (kiosk mode)

TECHNICAL SPECIFICATIONS

HARDWARE

Installation	Minimum	Recommended (comfortable)
Worker + SQL Express (site gateway, up to ~2,000 points)	2 cores x64 · 4 GB RAM · 40 GB SSD	4 cores · 8 GB RAM · 128 GB SSD
SCADA server (browser clients separate)	2 cores · 4 GB RAM · 20 GB free disk	4 cores · 8 GB RAM · 64 GB SSD
Single computer: Worker + SCADA + SQL (small/medium building)	4 cores · 8 GB RAM · 128 GB SSD	4-6 cores · 16 GB RAM · 256 GB SSD
Large site (10,000-20,000 points)	8 cores · 16 GB RAM · 256 GB SSD	8+ cores · 32 GB RAM · 512 GB SSD, SQL Server Standard
Panel / operator PC (shell)	2 cores · 4 GB RAM · 1920×1080	4 cores · 8 GB RAM · 1920×1080 or higher, touch

Network: 100 Mbit Ethernet, static IP on the field network. SQL Server Express limits the database to 10 GB; for long history or more than 5,000 points SQL Server Standard is recommended. Disk: SSD is not mandatory but makes a clear difference for history writes and backups.

SECURITY AND MAINTENANCE

Encryption	TLS; self-signed or corporate certificate, fingerprint pinning
Audit Trail	Who wrote what to which point, and when — in the database
Backup	Scheduled and encrypted; pages, symbols, templates, permissions, settings
Updates	From inside the application; nothing installs until verified with SHA-256

LICENSING

License Type	License file bound to the machine code; both products share one license
Features	Modbus, BACnet, M-Bus, Sedona (SOX), KNX, MQTT, SCADA, wire sheet control engine
Point Limit	Licensed point count per protocol
License Installation	Download from server, load from file or from clipboard

DELIVERY

Installation Packages	EnergyPlus SCADA installer; EnergyPlus Worker installer (includes Tags Editor and optional SQL Server 2022 Express)
Documents	Product information and installation guide (Turkish, English)
Updates	From inside the application, over a secure update channel



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