



COMMAND
AND
CONTROL
SOFTWARE



SPECIFICATION V4.7

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LIGHT VERSION

PRYSM SOFTWARE'S PHILOSOPHY

Prysm Software's philosophy for the development of the AppVision™ platform is based on the following values:

- Neutrality
- Opening
- Convergence

NEUTRALITY

We are independent of the systems we integrate, which gives our customers a complete freedom of choice in the systems they wish to use for their projects.

This neutrality allows us to work with all the players in the market and therefore to have a very wide range of drivers at our disposal.

OPENING

Our platform is 100% customisable, either as part of a project or as part of the marketing of an OEM version. Customisation can range from simple customisation of the graphical interface to the development of new functionalities and drivers with our SDK.

CONVERGENCE

For us, the success of a project lies above all in the ability to interface with systems, whether they are physical security or cyber security systems. And also, with applications or systems such as ERP applications, drones, robots, etc. Our platform has been developed to make integration as simple and user-friendly as possible.

Prysm Software's story began with small projects. Simplicity and efficiency were essential to their success. We have capitalised on this know-how and keep this mindset for the development of our platform.

For the success of your small, medium, and large projects. And those who start small and grow quickly.

AppVision™: a unique solution for all project sizes.

THE APPVISION™ CONCEPT

The concept of the AppVision™ software package is to provide a global supervision solution for installations where techniques are set up such as:

- Fire detection systems,
- Intrusion detection systems,
- Video systems: cameras, DVR/NVR, VMS, matrixes, video analytics,
- Access control systems,
- IoT,
- Car plate reading systems,
- Radar and perimeter detection systems,
- Key and Tag management systems,
- Third party applications: traffic management, parking, meteorological, etc.,
- Technical management (BMS)
- Computer networks and equipment,
- Alarm receivers,
- Vehicles scanning systems.

It is an open solution, that can be used on multiple hardware platforms, and which allows systems and applications that do not communicate natively with each other to be federated and controlled in a single interface.

AppVision™ has been designed to be able to create control systems for all types of industrial applications, from the smallest to the largest.

AppVision™ has many features to supervise your installation:

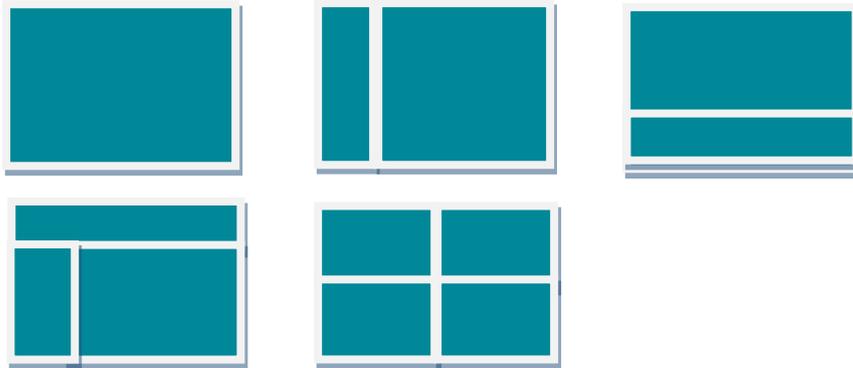
- to create graphical views to visualise or control the status of your installation,
- to archive your application events in a database for a later analysis,
- a complete alarm management,
- to visualise the evolution of the supervision variables in the form of curves, in real time or from data recorded in the event history,
- to exchange data with other applications or computer systems,
- to calculate statistics on the values of the variables supervised,
- setting up automatisms, interaction between events and commands,
- to import and export reports and histories.

AppVision™ is mainly used in the world of security. It is increasingly deployed for SCADA-type technical supervision and IoT networks.

AppVision™ is not dedicated to a particular market or sector. It is deployed in all verticals: smart buildings, smart cities, banks, hospitals, institutions, data centres, ports, railways, education, luxury, military sites, critical infrastructures, prisons etc.

THE USER - SYNOPTICS

The organisation of the workspace is 100% configurable. AppVision™ offers some multi-windowed presentations by default:



AppVision™ supports multi-screen management, each screen has its own presentation.

The windows are filled in very easily by dragging and dropping standard forms.

The user has the possibility to save his workspace. The registration allows him to reload it automatically the next time he logs in. It also allows to define different and customizable environment according to the users.

This interface is based on the use of synoptics: graphic views designed from the assembly of elementary objects or symbols.

AppVision™ comes with a powerful tool for creating synoptics integrated in the configurator, an object-oriented vector graphic editor. It includes numerous functions for creating, moving, dimensioning, aligning objects or groups of graphic objects. This editor is used both to create the synoptics and to create, or modify, the library of custom symbols.

It is possible to import plan backgrounds or symbols created with other graphic tools in standard formats: DWG, DXF, JPG, PNG, GIF, WMF, PDF, BMP.

The synoptics are saved in the standard XAML format. Other tools can be used to create mimic diagrams, such as 3D graphic creation tools.

AppVision™ includes both a windows and HTML5 client options.

ALARM MANAGEMENT

AppVision™ has an advanced alarm manager allowing several features such as:

- Alarm prioritisation by severity level,
- Alarm sorting by area and/or group,
- Display of text or PDF document or web page instructions,
- Consideration of general instructions,
- Management of alarm procedures,
- Alarm report entry with input assistance,
- Alarm pending,

- Alarm history,
- Analysis reports filterable by variable, zone, group, type, etc.,
- Consideration of a counter for recurring alarms,
- Escalation of the severity level over too long treatment time or too many occurrences,
- Printing,
- Export CSV.

All alarm information can be displayed as plain text in the alarm list, or as a graphical display by means of an animation in a synoptic.

OPTIONS

AppVision™ has many options. Some are subject to licensing:

MAILING (EMAIL, SMS)

- Sending email and/or SMS,
- Possibility to create your own customised notification transmitter to systems other than email/SMS.

CURVES & STATISTICS

- Provides a curve representation to track the evolution of the supervised variables over time,
- In parallel with the Curve function, the Statistics function allows you to calculate statistical values on the evolution of the supervised variables: minimum, maximum, average, average deviation, standard deviation, hourly totals, etc.

MULTILINGUAL

Adds the following features:

- To define a specific language for each AppVision™ user,
- To dynamically change the customer's language AppVision™.

GIS MAPPING

It allows the integration of maps from external mapping applications (OpenStreetMap, WMS, ArcGis, etc.) in the background.

WORKFLOW OR ALARM PROCEDURES

It completes the alarm management function by offering the possibility of controlling and conditioning the instructions presented to the user and the corresponding actions.

USER MESSAGE

It allows an operator to create an event following a visual observation. This option also allows a user to create an incident by grouping references to other information managed by the supervisor: alarms, events, videos, messages.

SYNOPTIC OVERLAY

It allows to dynamically overload synoptics with symbols directly in the client AppVision™.

VIDEO OVERLAY

The "video overlay" licensing option allows you to dynamically overlay videos (augmented reality) with graphic data or with symbols directly placed in the image. It is used, for example,

to display the results of certain video analysis systems, or to integrate symbols in the video to access surrounding cameras or control equipment in the image.

AUDIO MANAGEMENT (SIP)

The management of audio systems integrates 2 types of features:

- Command - control of the audio system: to control the events related to an audio call: call request, start/end of a call, opening command in case of an intercom system,
- Two-way audio communication via SIP client included in our application.

Audio sessions can be recorded and encrypted.

VIDEO AUDIT

- Allows you to record the screens of the client workstations in order to replay them in playback to check the reaction of an operator,
- It also allows you to display the contents of one or more screens of other customer workstations live.

SCENARIOS

Scenarios make it easier to create a sequence of actions: variable control, sending emails, loading user environments, etc.

The start of a scenario can be manual or conditionally automated.

USER ADMINISTRATION

User management in AppVision™ is organised on 2 levels:

- User profiles: definition of rights and options,
- The users: specific parameters for each user.

MAIN CHARACTERISTICS

- The structure of user passwords is 100% customisable,
- Setting rights and options by user profile,
- Workspace configuration per user,
- Limitation of access by time program and/or validity period per user,
- Possibility of locking a user account,
- Unlimited number of profiles and users,
- Traceability of user actions identified by their code,
- User authentication can be performed in several ways:
 - directly by the AppVision™ server from its database
 - in connection with an Active Directory or LDAP directory
 - by support of SSO connections
 - with a customised authentication script.

APPVISION™ EXTENSIONS

AppVision™ has several extensions in addition to its central control module:

- **AppVideo™**: which allows the federation of several video management systems,

- **AppControl™**: real multi-brand, multi-site and multi-user access control management software.
- **AppMaintenance™**: which allows for a simplified management of the supervised operation maintenance.

APPVIDEO™

The AppVideo™ extension enables multiple heterogeneous video systems to be federated, monitored and/or controlled: cameras, domes, recorders, matrixes, analytics, etc.

Its main features are as follows:

- Live display and/or playback (with recorders),
- Display in automatic on alarm, on a cyclic display or on several displays with offset,
- Coupling of supervisor alarms with live or playback video sources,
- Definition of pre-defined cycles,
- Dome control (PTZ) and PTZ cameras,
- Digital zoom,
- ONVIF compatibility (video streaming and event),
- Definition of display contexts,
- Display support to third-party application displays: monitors, IP decoders or video wall,
- Photo capture, video capture, printing,
- Acquisition of events produced by video systems: signal loss, activity detection, etc.,
- Multi-vision display with customised layout,
- Timeline with bookmarks,
- Taking into account video alarms:
 - Detection of activities in a sensitive area,
 - Detection of anomalies, etc.

Advantages:

- Mix of video systems: independence from manufacturers,
- Mix of technologies: analogue / IP / megapixel cameras, DVR / NVR,
- Interaction with other sub-systems: PLC, intrusion, fire, access control, intercom, etc.

APPCONTROL™

The AppControl™ extension increases the possibilities of access control supervision offered by AppVision™ by allowing a complete management of rights: profiles, users, time slots.

It is a true access control management software that allows to federate, control and/or command several heterogeneous access control systems.

AppControl™ is a standalone extension.

Its main features are:

- Centralised access management,

- Creation of access profiles and time slots,
- Complete rights management: creation of users and badges,
- Visitor management,
- People organisation by category (permanent, temporary, etc.), and by department,
- Access organisation by access profiles,
- Restricted access by schedules,
- Trombinoscope with shooting form,
- Personalisation and printing of badges,
- Badge enrolment,
- Management of zones with the notion of entry-exit,
- Attendance list,
- People counting, time counting,
- Anti-passback,
- Web server (accessible by web client),
- Import / export tools to external applications.

APPMaintenance™

The AppMaintenance™ module allows to centralise the maintenance management of the various systems connected, or not connected, to AppVision™.

The functionalities provided by the AppMaintenance™ module are the following:

- Management of security installations,
- Customised periodic maintenance planning,
- Planning the replacement of batteries in a plant,
- Planning the replacement of specific parts of an installation,
- Graphical user interface in AppVision™,
- Administration web interface,
- Automatic call-back notifications (email and SMS),
- Generation of an alarm in the event of a missed maintenance date,
- Automatic error reports.

ENVIRONMENT

The minimum configuration required for the server and the client workstation is as follows:

- Windows 10 Professional or Windows Server 2016/2019 (64-bit)
- Intel i7 Quad Core processor
- 16 GB RAM memory
- Hard disk 500 GB
- Full HD graphic card
- USB port
- Ethernet port

It is to be adapted according to the size and complexity of the supervised installation.

AppVision™ also supports virtualized systems (VMware , HyperV, etc) and works in 32 and 64 bits.

AppVision™ is developed with Microsoft Visual Studio development tools and the .NET framework in C# language. The platform is delivered with a SQL Server Express database.

In a multi-station environment, the AppVision™ client has an automatic update mechanism from the server.

ARCHITECTURES

Different architectures are available for the AppVision™ platform:

MONOSERVER

Single-client or multi-user (multi-station): architecture used on simple and standard installations.

REDUNDANCY

It ensures continuity of supervision.

SERVER FEDERATION

Especially used to create central control centres federating local centres.

MIRROR SERVERS (LOAD BALANCING)

Architecture dedicated to large and complex installations.

CLIENT MULTI-SERVERS

Enables a client to connect to multiple servers simultaneously.

CONFIGURATION

The configuration of AppVision™ is largely graphical thanks to a high-level ergonomic HMI. The aim is to minimise the use of scripts.

AppVision™ has a link management tool to create interactions very easily between the different supervised systems.

AppVision™ provides an entry point for writing scripts in C#. Scripts are compiled (DLL) and executed directly by the supervisor.

COMMUNICATION WITH THIRD PARTY SYSTEMS

There are 2 ways to interface AppVision™ with third party physical systems or applications:

- Via standard protocols
- Via a proprietary driver developed with the AppVision™ SDK.

AppVision™ has native support for the following standard protocols: ASCII, ESPA 4.4.4, Modbus (RTU, IP, Time Stamp), OPC DA, OPC UA, BACnet, KNX, SNMP, NMEA, ONVIF (Event, Metadata, S, G, T), SIA, MQTT, SIP, Pelco-D.

All the systems supporting these protocols can be interfaced with AppVision™ without any development. This is notably the case for BMS systems.

AppVision™ can also be configured in server mode for the following protocols: Modbus, BACnet, OPC, SNMP, SIA.

Regarding proprietary protocols, more than 200 drivers are available to integrate the types of systems described on page 2. These drivers have been developed by Prysm or by partners who make them available for projects.

Any system or application with a protocol, both standard and proprietary (API or SDK), can be integrated into AppVision™. All that is necessary is to develop a driver using the AppVision™ SDK, which is accessible and free of charge to all our partners.

COMMUNICATIONS & SECURITY

The AppVision™ server and clients use the HTTP protocol to communicate with TCP port 80 by default. This port is configurable. This dialog is based on REST Web Services that are documented.

Communication between the server and clients can be secured by configuring the HTTPS protocol (TCP port 443, configurable).