

Technical Specifications

Compatibility

Supported IP cameras

- ONVIF compatible cameras
- RTSP compatible cameras

Supported video encoders

- ONVIF compatible encoders

Supported events

- ONVIF events
- Hikvision Smart Events, LPR
- Dahua Events
- Milesight VCA Alarms, LPR
- Sony DEPA
- VCA Technology
- HTTP API
- Optris CS temperature sensor

Supported compression formats

- H.265, H.264, H.264+, Axis Zipstream, MPEG4, MJPEG

PTZ cameras

- ONVIF supported cameras
- RS485 support (Pelco P, Pelco D, Panasonic, American Dynamics)
- Presets
- Patrol functions
- Control PTZ cameras with mouse, keyboard or joystick

IP camera search

- UPnP, ONVIF

Hardware decoding

- NVIDIA graphics processing units
- Intel graphics processing units

Audio recording and playback

- Recording from ONVIF and RTSP supported devices
- Recording from computer's line-in
- Play locally from computer's line-out
- Play over network with speaker-enabled devices (Axis and Dahua)

Digital I/O

- ONVIF devices
- Modbus (e. g. MOXA I/O devices with network interface)
- Xecap 400EF/800EF capture board's I/O unit

Mobile use

- Android and iOS

360° cameras

- Virtual 360° view and dewarping
- Multiple views from single camera
- Mouse control on view
- Support for ImmerVision panomorph optics

Joysticks

- USB HID joystick, controller and button support (Windows and Linux)
- AXIS T8311/8312, controller and button support (separate driver, Windows)

Operating systems

- Microsoft Windows 7 (32 & 64 bit), 10 (32 & 64 bit), Server 2012, Server 2012 R2, Server 2016, Server 2019
- Linux CentOS 6, 7 (64 bit)
- macOS High Sierra, Mojave, Catalina (64 bit)

System Requirements

Server

Operating system	Microsoft Windows 7 (32 & 64 bit), 10 (32 & 64 bit), Server 2012, Server 2012 R2, Server 2016, Server 2019, Linux CentOS 6, 7 (64 bit), macOS High Sierra, Mojave, Catalina (64 bit)
Processor	Intel Celeron, Core i3, i5, i7 or Intel Xeon, multi processor support
RAM	4 GB or more
Disk space for software	1 GB
Disk space for recordings	Depending on camera count, bitrate, frame rate and desired length of recordings

Client

Operating system	Microsoft Windows 7 (32 & 64 bit), 10 (32 & 64 bit), Server 2012, Server 2012 R2, Server 2016, Server 2019, Linux CentOS 6, 7 (64 bit), macOS High Sierra, Mojave, Catalina (64 bit)
Processor	Intel Celeron, Core i3, i5 or i7
RAM	4 GB or more
Disk space for software	1 GB
Disk space for recordings	-
Display driver	Intel or Nvidia, 256 MB RAM or more

Application

Client

- Remote viewing of recordings and real-time image from servers
- Use for control room computers
- Use for control room video walls
- Server settings management on a web interface

Server

- Saves video from cameras on the local hard drive or NAS
- Operates as a link between other components in the system
- Operates either as a service or a graphic interface
- 30-day trial period

Mobile app

- Can be used on a smartphone or a tablet
- Remote viewing of recordings and real-time image from servers
- Use of controllable cameras (PTZ)
- Area search from recordings

Client use

- Uses a TCP/IP connection that can be encrypted
- Can be connected to multiple Obseron servers simultaneously
- Recordings from multiple servers can be synchronized
- Customized buttons enable the management of different functions

Server use

- Can be connected to multiple Obseron servers and clients simultaneously
- Real-time image and recording transfer online either in full quality or transcoded to a smaller stream
- Notification events/alarms and buttons are forwarded directly from the server to the user
- Can work as a service without GUI

Mobile use

- Available for iOS and Android devices
- Real-time and recorded image viewing from Obseron server
- PTZ camera control
- Area search functionality
- Easy-to-use timeline interface
- Application can be downloaded from Apple App Store and Google Play

Google Play and the Google Play logo are trademarks of Google Inc.

Apple and the Apple logo are trademarks of Apple Inc., registered in the U.S. and other countries. Mac App Store is a service mark of Apple Inc.

Window

- Add multiple
- Separate timelines in each window
- Multiple tabs in each window
- Keyboard shortcuts
- Fullscreen mode

Tabs

- Add multiple to one window
- The size of the window changes the layout
- Rename
- Multiply
- Arrange by dragging
- Add camera images from multiple recorders
- Add widgets
- Arrange camera images and widgets freely inside a tab
- Automatic switching with adjustable delay
- Set order and delay of tab switching for each tab
- Can be switched with rules
- Import and export as files
- Share with other users
- Force tab to show for other users by pinning it with admin account
- Indicator for shared and pinned tabs
- Close
- Bring back from 'Closed tabs' menu
- Tabs that do not fit in the window can be opened from 'All tabs' menu
- Show and hide tab bar with keyboard shortcuts
- Keyboard shortcuts

Timeline

- Display recordings of cameras as bars
- Display audio recordings as separate bars
- View synchronized recordings from multiple cameras
- Synchronize timelines from multiple windows
- Zoom with mouse scroll wheel
- Drag to move
- Jump to specific time and day
- Show which days have recordings in calendar
- Show week numbers in calendar
- Show how far the playhead is in the recordings
- Add bookmarks
- List bookmarks
- Move between bookmarks
- Name bookmarks
- Play / Pause
- Play backwards / Pause
- Fast forward (click more than once to multiply speed)
- Rewind (click more than once to multiply speed)
- Frame by frame
- Jump to live feed
- Double click to move
- Make selection(s)
- Clear selection(s)
- Create backup or video clip from selected time period(s)
- Create multiplexed video clip from selected time period(s)
- Show / hide timeline
- Keyboard shortcuts
- Create motion heatmap

Camera image

- Open multiple
- Filter cameras by server, group or if they are connected locally
- Alphabetic listing of filtered cameras
- Close individual cameras
- Close multiple cameras with filter
- Resize with snapping to grid. Grid size can be adjusted.
- Fit to screen for multiple camera images
- Rotate camera image clockwise and counter clockwise
- Stretch to fit selected aspect ratio
- Align inside selected grid cells
- Flip image horizontally or vertically
- Clone
- Right-click to open the Radial Menu
- Enable fisheye dewarping
- Enable Panomorph dewarping
- Show info (camera source, stream type, frames received, frames recorded, frame size, average size, bitrate, frames per second)
- Show recording indicator
- Show camera name
- Show camera and site number
- Show PTZ icon
- Color tag camera name
- Adjustable title bar size
- Dynamic title bar size
- Left-click to enable peek mode, enlarge camera image and show recordings only from selected camera
- Open in fullscreen
- Save image in JPG or PNG with desired resolution
- Save a video clip in MP4 with desired resolution
- Cut between multiple cameras on the fly when recording a video clip
- Save a multiplexed video clip from all cameras in the tab
- Isolate one or multiple cameras to the timeline and view their recordings while others are kept live
- Search motion on selected cameras only
- Search motion on selected areas on selected cameras only
- Control gates or other external devices with rule-customized buttons that can be chosen to the radial menu
- Control PTZ cameras by dragging cursor over camera image
- Show / hide PTZ crosshair with speedometer
- Zoom PTZ cameras with mouse scroll wheel
- Digital zoom with mouse scroll wheel (hold Ctrl when zooming PTZ cameras)
- Select and save PTZ presets
- Select and save PTZ patrols
- Blink camera on map
- Listen to camera
- Speak to camera
- Control with rules
- Highlight camera image on PTZ selection
- Show border around PTZ selected camera image
- Blink camera image with rules
- Blink camera image on map

Users

- Username and password protection
- Multiple users
- Log in automatically
- Log out automatically after inactivity
- Dual authorization
- Limit duration of visible recordings for one user login
- Admin user
- Set passwords
- Permission groups
- Set permission group as default group for new users

Permissions

- | | |
|----------------------------------|------------------------------|
| • View live image | • Access user control |
| • View recordings | • Access group control |
| • Access settings | • Access storage control |
| • Access gallery | • Take snapshot |
| • Remote access to this recorder | • Create video clip |
| • Access to RTSP server | • Quit program |
| • View system errors | • Control camera presets |
| • View user logs | • Control PTZ cameras |
| • Acknowledge system errors | • Import backups |
| • Hardware addition/removal | • Edit tabs |
| • Hardware adjustment | • Import / Export tabs |
| • Access rules | • Access to selected cameras |

Rules

- Control recorder functionality and external devices, and send information on different events
- Add multiple
- Duplicate
- Set name
- Multiple conditions in one rule
- Multiple actions in one rule
- All conditions are met
- Some of the conditions are met
- Release action

Conditions

- Schedule
- Digital input e.g. Modbus
- Another rule
- Loss of video signal
- Wait for another rule
- Motion detection
- Timer pulse
- Setting
- Connection lost
- Recording error
- Button pressed
- Message received
- Counter value

Actions

- Control digital output
- Switch analog video output
- Call PTZ preset
- Internal command
- Notification/Alarm
- Change setting
- Send HTTP URL request
- Place bookmark
- Send email
- Push camera to camera changer
- Write to serial port
- Change tab
- Blink device on map
- Blink camera image
- Increment counter
- Set counter value

Widgets

Buttons

- Trigger rules with multiple conditions and actions
- Add multiple
- Drag to arrange
- Responsive layout
- Buttons in server can be used in clients
- Set name, icon and color
- Set to be toggleable
- Control external I/O devices
- Control program functions

Camera changer

- Open camera image from a list of local and remote cameras
- Switch between cameras with backward and forward buttons
- Change camera by site and camera number
- Change camera with keyboard or joystick numeric keypad
- Change camera with a rule
- Same functions as in a regular camera image
- Open multiple
- A window can have multiple virtual window widgets
- Set automatic switching of camera images with delay and order

Notifications

- Generate from rules
- Thumbnail camera image from event
- Set color for different events
- Link to corresponding camera
- Open camera image from time of the event
- List multiple
- Clear from list
- Clear all
- Show time of the event
- Show name of the camera
- Show information of event

Motion heatmap

- Show live motion heatmap
- Export motion heatmap from selected time interval

Map

- Set JPG or PNG image as a background
- Invert image colors
- Change opacity of background
- Set name
- Group maps
- Breadcrumb navigation
- Place cameras
- Monitor I/O input states
- Create shortcuts between maps
- Set sizes of items
- Dynamic sizing of items
- Show or hide labels of items
- Set position of labels on individual items
- Change map to one containing the camera item when blinking camera on map
- Enlarge cameras to Peek by clicking camera items
- Drag items into place
- Change color and icon of items
- Rename items
- Remove items
- Inherit camera name color to map
- Remove
- Remove all
- Export and import
- Adjust to any size on the grid
- Change maps while in edit mode
- Zoom with mouse scroll wheel
- Drag to move

Counter

- Set desired value from events
- Add to value
- Subtract from value
- Export values as CSV file from desired time period

Point of Sale

- View receipt data in sync with video
- Free text search for receipt data
- Browse receipts with arrow keys

Alarm log

- Alarm can be triggered by digital I/O, connection status, video signal loss, motion detection and more
- Assigning text to alarms
- Assign cameras to specific events
- Filter by time period
- View event by clicking on it
- Dell server alarms (iDRAC)

Backup

- Save full-quality backup of selected event
- Backups can be viewed without a license
- Set start and end points freely
- Use search tools
- Use timeline
- Create snapshots and video clips

Storage space

- Set multiple hard drives
- Limit recording time by a date
- Shows the date of the oldest recording
- Shows storage errors
- Provides solutions to errors

Built-in motion detection

- Functions with all types of cameras regardless of manufacturer
- Sensitivity and noise reduction are adjustable
- Saves the location of motion in the image
- Set areas where motion detection is disabled
- Set separate motion detection areas with different sensitivity
- Recording can be triggered using a camera's own motion detection through ONVIF

License Plate Recognition

- Schedules can be created in the system to restrict vehicle access based on weekdays and time of day
- Each vehicle entered into the system is given a specific access level. Access levels are used to determine which gates will be opened for the vehicle.
- Access levels include restrictions based on time, gate and number of openings
- Access levels can be vehicle-specific or shared
- List of plate recognitions
- Click on plate recognition to show image recording of the event
- Filter search results