

Reolink IP Camera Driver

Version: 20260416

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Integrates Reolink IP cameras, doorbells, and NVRs with Control4 for live video, motion/AI detection events, PTZ control, and snapshot notifications.

IMPORTANT: Create a Separate User Account

You MUST create a dedicated user account in your camera/doorbell/NVR for Control4.

If you use the same account that's logged into the Reolink app:

- ONVIF authentication will fail intermittently
- Settings may not persist when app reconnects
- Event subscriptions may be dropped

Solution: In the Reolink app or web interface, go to Settings > User Management and create a new admin user specifically for Control4 (e.g., "control4" or "c4user").

Quick Configuration (Start to Finish)

1. **Add Driver:** In Composer Pro, search for "Reolink" and add the driver to your project
2. **Place in Room:** Drag the driver into the appropriate room
3. **Set Connection Info:** Select the driver, go to Connections > Camera Test tab, enter IP Address, Username, and Password
4. **Test Connection:** Go to Actions tab and run "Test Connection" to verify credentials
5. **Configure Video:** Run "Detect RTSP Path" action to auto-configure the video stream
6. **Enable Detection:** Run "Discover Detection Capabilities" to enable motion and AI events
7. **For NVR:** Set Camera Type to "NVR" and Channel Number to your camera channel (1-32)
8. **Refresh Project:** File > Refresh Navigators to see camera on touchscreens

Configuration

Camera Test Tab

Setting	Description	Default
IP Address	Camera or NVR IP address	<i>Required</i>
HTTP Port	Web interface port	80
RTSP Port	Video streaming port	554
Username	Camera login	admin
Password	Camera password	<i>Required</i>
Auth Type	Authentication method	Basic

Properties

Property	Description	Default
Camera Type	Standalone camera or NVR channel	Standalone
Channel Number	NVR channel (0-32)	0
Enable Event Monitoring	Enable/disable motion and AI detection	On
Motion Poll Interval	HTTP polling frequency in seconds (1-60)	5
Event Delivery Method	Auto, ONVIF Push, or HTTP Polling	Auto
Active Event Method	Current event method in use (read-only)	<i>Auto-detected</i>
ONVIF Port	Port for ONVIF event subscription	8000
Stream Type	Main Stream (HD) or Sub Stream (SD)	Sub Stream
Audio	Include audio in stream	On
RTSP Format	Auto, h264Preview, Preview, or Manual	Auto
RTSP Path	Manual override for RTSP URL path	<i>Auto-detected</i>
Log Level	Logging verbosity (0-5)	2 - Warning
Log Mode	Output destination (auto-expires after 3 hours)	Off

NVR Support

For Reolink NVRs with multiple cameras:

1. Set Camera Type to "NVR"

2. Set Channel Number to the camera channel (1-32)
3. Add one driver instance per camera channel you want to monitor

Event Delivery: The driver automatically tries ONVIF Push first. If no events are received within 60 seconds (common with older NVR firmware), it falls back to HTTP Polling. You can also manually select a method in the Event Delivery Method property.

Doorbell Support

WiFi Doorbells are NOT supported. WiFi doorbells (battery-powered or WiFi-only models) use Reolink's P2P cloud service and do not expose a local API. Only POE (wired) doorbells can be integrated with Control4.

POE Doorbell Configuration

There are two ways to configure a POE doorbell:

Method	Visitor Detection	Recommendation
Direct IP (Standalone) Connect to doorbell's own IP address	HTTP Polling + ONVIF (full support)	Recommended
Via NVR Channel Connect to NVR IP, specify doorbell channel	ONVIF only (no HTTP fallback for visitor)	Use if direct IP unavailable

Recommended Setup (Direct IP)

1. Find your doorbell's IP address (check router DHCP leases or Reolink app)
2. Set **Camera Type** to "Standalone"
3. Set **Channel Number** to 0
4. Enter the doorbell's direct IP in Camera Test tab
5. Run "Discover Detection Capabilities" to enable visitor detection

Alternative Setup (Via NVR)

1. Set **Camera Type** to "NVR"
2. Set **Channel Number** to the doorbell's NVR channel (1-32)
3. Enter the NVR's IP address in Camera Test tab

4. **Important:** Visitor detection requires ONVIF. If ONVIF fails, doorbell button presses will not be detected.

Why Direct IP is Better

- HTTP polling works for visitor detection (more reliable)
- If ONVIF fails, driver can still detect doorbell button presses
- The NVR API does not expose visitor state for channels

Detection Capabilities

When you run "Discover Detection Capabilities", the driver queries the camera to determine what detection types are supported:

- **Motion Detection** - Available on all cameras
- **Person Detection** - Requires AI-capable camera
- **Vehicle Detection** - Requires AI-capable camera
- **Animal Detection** - Requires AI-capable camera

Sensor bindings are automatically created only for detection types your camera supports. If the camera does not have AI capabilities, only Motion Detection will be available.

Spotlight Control

Cameras with a spotlight (WhiteLed) can be controlled as a light in the Control4 app. The driver automatically detects if your camera has spotlight capability when it connects.

- **Supported cameras:** Reolink Duo, TrackMix, and other models with built-in spotlight
- **Control type:** Simple on/off switch (no dimming)
- **UI integration:** Appears as "Camera Spotlight" light in Control4 app

When the camera comes online, the driver checks for WhiteLed support. If available, the spotlight appears as a controllable light in the Control4 interface alongside your camera.

Event Delivery Methods

Method	Description	Best For
ONVIF Push	Camera POSTs events directly to Control4 (lowest latency)	Standalone cameras, newer NVRs
HTTP Polling	Driver polls camera every N seconds	Older NVRs, legacy cameras

Auto	Tries ONVIF Push first, auto-falls back to HTTP if no events received	Default (recommended)
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Firmware Compatibility: Some older NVR firmware (v2.x) accepts ONVIF subscriptions but never sends notifications. The driver automatically detects this and falls back to HTTP Polling after 60 seconds. Newer firmware (v3.x+) typically works with ONVIF Push.

Note: When a driver is deleted or disabled, all TCP listeners are properly cleaned up to prevent resource leaks.

Actions

Configuration

Action	Description
Test Connection	Verify camera is reachable with current credentials
Detect RTSP Path	Auto-detect and configure correct RTSP stream path
Refresh Device Info	Update camera model, firmware, serial number properties
Import Camera Name	Set driver name in Composer from camera's configured name

Detection Management

Action	Description
Discover Detection Capabilities	Query camera and create sensor bindings for supported AI types
Clear Detection Bindings	Remove all dynamic sensor bindings
Check Motion Polling Status	Show current polling state, method, and interval

Device Control

Action	Description
Get Device Info	Display camera model and firmware in Lua output
Reboot Camera	Restart the camera (takes 30-60 seconds to come back online)

Diagnostics

Action	Description
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Diagnose AI Detection	Test AI detection API and show supported detection types
Diagnose ONVIF	Test ONVIF connectivity and event subscription capabilities

Events

Available in Composer Programming:

Event	Description
Motion Detected / Cleared	Motion sensor triggered or cleared
Person Detected / Cleared	AI detected person presence
Vehicle Detected / Cleared	AI detected vehicle presence
Animal Detected / Cleared	AI detected animal presence
Visitor Detected / Cleared	Doorbell button pressed (doorbells only)
Camera Online	Camera became reachable
Camera Offline	Camera unreachable after 3 consecutive failures

Variables

Variable	Type	Description
Motion Detected	Boolean	Current motion state
Person Detected	Boolean	Current person detection state
Vehicle Detected	Boolean	Current vehicle detection state
Animal Detected	Boolean	Current animal detection state
Visitor Detected	Boolean	Doorbell button pressed (doorbells only)
Camera Online	Boolean	Camera reachability (1=online, 0=offline)
Camera Status	String	Online, Offline, or Connecting
Last Motion Time	String	Timestamp of last motion event
Last Event Type	String	Motion, Person, Vehicle, or Animal
Last Preset	Number	Last PTZ preset called

Troubleshooting

No Video

Run "Detect RTSP Path" action. If auto-detect fails, try manual RTSP Format: `h264Preview` or `Preview`

Driver Status "Offline"

Check IP address and credentials. Run "Test Connection" and check Lua output for errors.

Detection Events Not Firing

1. Verify "Enable Event Monitoring" is set to "On"
2. Run "Discover Detection Capabilities" action
3. Enable motion/AI detection in Reolink app
4. Check "Active Event Method" shows ONVIF or HTTP Polling (not Disabled)

Snapshots Not Working

Verify credentials are correct. Snapshot URL requires valid username/password.

Camera Not Responding

Use "Reboot Camera" action to restart the camera. Wait 30-60 seconds for it to come back online.

Doorbell Button Not Detected

1. **WiFi doorbell?** WiFi doorbells are not supported - only POE doorbells work
2. **Via NVR?** Visitor detection requires ONVIF when using NVR channel. Check that "Active Event Method" shows "ONVIF Push"
3. **ONVIF failing?** Try connecting directly to doorbell IP instead of through NVR (see Doorbell Support section)
4. Enable Log Level 4 (Debug) and press doorbell - check Lua output for "Visitor" or "Doorbell" messages

Support

Configure motion zones, AI sensitivity, and PTZ presets using the Reolink mobile app or web interface.

Version History

Version 20260416

- Initial release