ONVIF / RTSP Multi-Vendor Interoperability Checklist

Run these checks before you buy and as you onboard each camera. The pattern: try ONVIF first, fall back to RTSP for video, reach for a vendor SDK only for named features.

A. Before you buy (per camera model)

- [ ] Confirm the model is in the ONVIF conformant-products database — not just "ONVIF" on the datasheet.
- [ ] Read the Declaration of Conformance and Feature List; confirm the profiles you need (S/T video, G recording, M events).
- [ ] Verify the exact features you depend on (PTZ, imaging, specific events) are listed — a profile alone is not enough.
- [ ] Record the firmware/software version the conformance is tied to.

B. Plan the integration layer

- [ ] Use the ONVIF driver as the default for every conformant camera.
- [ ] Document an RTSP fallback URL for every camera, including the Layer-1 ones.
- [ ] Decide, per named feature, whether a vendor SDK (VAPIX / ISAPI / SUNAPI) is actually required.
- [ ] Keep SDK use contained to specific features — never one SDK per brand by default.

C. Onboarding and operations

- [ ] Pin and record each camera's validated firmware; treat updates as changes to test, not background noise.
- [ ] Put every camera on one common NTP time source before recording starts.
- [ ] Change factory-default credentials; manage credentials centrally.
- [ ] Re-test the integration after any firmware update.

D. Verify before go-live

- [ ] Live video confirmed from every camera (over ONVIF or the RTSP fallback).
- [ ] Events / metadata confirmed where Profile M is required.
- [ ] PTZ and imaging confirmed where the deployment needs them.
- [ ] Fallback tested: disable ONVIF and confirm RTSP keeps the camera recording.

Remember: ONVIF guarantees a baseline, not full feature parity. Conformance is self-declared and pinned to one firmware version, so the Declaration of Conformance — not the datasheet — is the engineering truth. Sources: ONVIF ONVIF Profiles & Conformance Process; IETF RFC 2326 (RTSP) and RFC 3550 (RTP); OASIS WS-Discovery 1.1.