

ONVIF Profile Decision Cheat Sheet

Which ONVIF video profile your camera or VMS needs — what each guarantees, the device-vs-client split, and the Profile S deadline. Modern IP video usually wants T + G + M.

Profile	The job it does	Device must support	Client must support
T	Advanced streaming (2026 baseline)	H.264/H.265, on-screen display, metadata streaming, imaging, motion/tamper events	Receive & configure the stream; PTZ control
G	Recording & edge storage	Record over the network or on-device	Configure, search, and replay recordings
M	Analytics metadata & events	Stream metadata; classify objects per the standard	Consume metadata/events (stream, ONVIF events, or MQTT)
S	Basic streaming (legacy)	Send a configurable video stream	Receive the stream -- deprecating, last submissions 2027-03-31
A / C / D	Access control (separate decision)	Credentials, doors, readers per profile	Operate access control; Profile M bridges analytics

The two-sided rule -- you get the overlap

A profile is conformed to twice: once by the device, once by the client, and their mandatory lists differ (a Profile T client must do PTZ; a Profile T device must do on-screen display and metadata). The working system is the overlap of the two, not the longer list. A Profile T camera with a Profile S client gets you only Profile S.

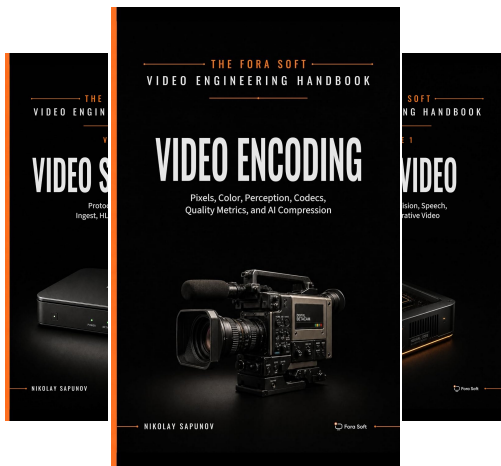
The Profile S deadline -- 2027-03-31

After March 31, 2027, no new products or new firmware can be submitted for Profile S conformance. The reason is security: Profile S mandates username-token authentication, no longer consistent with current cybersecurity advice. Existing devices keep working -- but specify Profile T (digest auth, TLS), which carries virtually all of Profile S, for anything new.

Put these five lines in your specification

Spec line	Why it matters
Name the profile AND the side	Device-conformant is not client-conformant. State both, per component (e.g. 'cameras Profile T device-conformant; VMS Profile T/G/M client-conformant').
Verify on the ONVIF registry	'Supports ONVIF' on a datasheet can be a partial implementation. Confirm the model on onvif.org/conformant-products .
Confirm each must-have feature	Conformance guarantees mandatory features only. Check conditional ones one by one in the ONVIF Profile Feature Overview.
Target Profile T, not Profile S	Profile S closes for new conformance on 2027-03-31; Profile T carries virtually all of it plus stronger authentication.
Judge analytics by measured accuracy	Profile M standardizes the interface, never the precision/recall. Test detection accuracy in your own scene, not by the badge.

Profiles (2026): video S, T, G, M; access control A, C, D; Profile M and D span both. Sources: ONVIF Profiles, Profile S/T/G/M pages and Profile S Deprecation Q&A; ONVIF Profile Feature Overview v2.6. This sheet is engineering guidance; verify the current spec at onvif.org.



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This sheet shows which ONVIF profile a camera or VMS needs, the device-versus-client split and the Profile S deadline. Our seven-volume handbook covers the video under those profiles: start with Volume 1 for H.264 and H.265 encoding, then Volume 2 for RTP transport and latency and Volume 6 for the analytics behind Profile M.

WHAT YOU WILL FIND INSIDE

- H.264 and H.265 profiles and levels in cameras
- Rate control and bitrate for recorded streams
- RTP transport and the latency budget
- Object detection that feeds analytics metadata

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Vol. 3 · Video Streaming II — ABR, CDNs, players, WebRTC, DRM and the economics of delivery

Vol. 4 · Audio for Video I — PCM, codecs, loudness, accessibility, real-time voice processing

Vol. 5 · Audio for Video II — jitter buffers, lip sync, Atmos, quality metrics, neural codecs

Vol. 6 · AI for Video I — models and inference, computer vision, speech, search, generative video

Vol. 7 · AI for Video II — real-time pipelines, agents, serving, cost, compliance, verticals

Writing an ONVIF profile into your camera or VMS spec?

We will review your spec line by line, check device and client conformance for each component, and plan the move off Profile S. 250+ video products shipped since 2005.

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