

ONVIF Profile Feature Overview v2.1

This table contains a summary of the features of the currently released ONVIF Profiles, for more details or in case of lack of clarity please refer to the Profile Specifications.

- [ONVIF Profile T Specification – Release Candidate v1.4](#) [April 2018]
- [ONVIF Profile A Specification](#) [June 2017]
- [ONVIF Profile Q Specification](#) [July 2016]
- [ONVIF Profile G specification](#) [June 2014]
- [ONVIF Profile C Specification](#) [December 2013]
- [ONVIF Profile S Specification](#) [December 2011 /March 2016 v1.1.1]

Function Lists use the following abbreviations:

- M: Mandatory
- C: Conditional
- O: Optional

Features		Profiles											
		G		Q		S		T		C		A	
		Device	Client	Device	Client	Device	Client	Device	Client	Device	Client	Device	Client
General													
System Settings		M	C	M	C	M	C	M	C	M	C	M	C
User Authentication	WS-Username Token					M	M						
	Digest Authentication	M	M	M	M	O	M	M	M	M	M	M	M
User Handling		M	C	M	M	M	C	M	C	M	C	M	M
Query Services and Capabilities		M	M	M	M	M	M	M	M	M	M	M	M
Device Discovery		M	C	M	M	M	C	M	M	M	C	M	M
Default Access Policy				M									
Network Configuration		M	C	M	C	M	C	M	M	M	M	M	C
Zero configuration				C	C	C	C						
Firmware Upgrade				C	C								
Backup and Restore				C	C								
TLS Configuration				C	C								
IP Address Filtering						C	C					C	C
NTP						C	C	C	C			M	C
Automatic IP Assignment				C	C								
Media Profile Configuration						M	C	M	C				
Media Transport	RTP/UDP					M		M					
	RTP/RTSP/HTTP/TCP					M	M ¹	M	M ¹				
	RTP/RTSP/HTTPS/TCP							C	C				
	RTP/RTSP/TCP/WebSocket							C	O				
	RTP/UDP Multicast					C	C	M	C				
Video													
Video Streaming	MJPEG					M	M						
	MPEG4					C	C						
	H.264					C	C		M ²	M			
	H.265									M			
Video Encoder Configuration					M	M	M	M					
Video Source Configuration					M	C	M	C					

¹ Client must support at least one of UDP and HTTP

² Device must support at least one of H.264 and H.265

Features	G		Q		S		T <small>Release Candidate</small>		C		A	
	Device	Client	Device	Client	Device	Client	Device	Client	Device	Client	Device	Client
Video												
Media Profile for Streaming Ready out-of-the-box						M	C	M	M			
Video Source Mode								C	C			
Video Streaming	RTSP/RTP					M	M	M	M			
Imaging Settings								M	M			
Recording Search		M	M									
Replay Control		M	M									
Recording Control		M	C									
Recording Control	Using an on-board media source	C	C									
Recording Control - Dynamic Recording	Using a Receiver as Source	C	C									
	Recording	C	C									
Recording Control – Dynamic Tracks	Tracks	C	C									
Recording Source Configuration		M	C									
Events												
Event Handling	Pull-point	M	C	M	M	M	M	M	M	M	M	M
	Base-notification					M	M					
Standard Monitoring Events for Devices				M	C							
Media Profile Configuration Events								M	O			
Access Control Events	Door									M	M	
External Authorization Events										C	C	
Duress Events										C	C	
Access Profile Event	Changes on Profile											M
Credential Event	Changes on Credential											M
Schedule Event	Changes on schedule											M
Special Days Schedule Event												C
Reset Antipassback Violation Event												C
Stored Events	Seek									C	C	C
Motion Alarm Events								M	M			
Motion Region Detector Events								C	C			
Tampering Event								M	M			

Features		G		Q		S		T		C		A	
		Device	Client	Device	Client	Device	Client	Release Candidate		Device	Client	Device	Client
Audio													
Audio Streaming	G.711					C	C	C ³	M				
	AAC					C	C		M				
	G.726					C	C						
Audio Output Streaming	G.711							C	M				
	AAC							C	C				
Audio Encoder Configuration						C	C	C	C				
PTZ													
PTZ Move	Absolute					C	C	C	M				
	Continuous					C	C	C	M				
	Relative					C	C						
PTZ Presets						C	C	C	C				
PTZ – Home Position						C	C	C	C				
PTZ Configuration						C	C	C	C				
Additional													
Relay Outputs						C	C	C	C				
Auxiliary commands						C	C	C	C				
Focus Control								C	C				
Digital Inputs								C	C				
Configuration of On-Screen Display (OSD)								M	C				
JPEG Snapshot								M	O				
Motion Region Detector Configuration								C	C				
Metadata Configuration						M	C	M	C				
Metadata Streaming								M	C				

³ If supported, Device must support at least one of G.711 and AAC

Features	G		Q		S		T		C		A	
	Release Candidate											
	Device	Client	Device	Client	Device	Client	Device	Client	Device	Client	Device	Client
Recording												
Recording Search		M	M									
Replay Control		M	M									
Recording Control	Using an on-board media source	C	C									
	Using a Receiver as Source	C	C									
	Dynamic Tracks	C	C									
Recording Source Configuration		M	C									
Access												
Access Profiles											M	M
Credential											M	M
Schedule											M	M
System component information	Access points								M	M		
	Doors								M	M		
	Areas								M	M		
Component state	Access points								M	M		
	Doors								M	M		
	Areas								M	M		
Door control									M	M		
Access control decisions									M	M		
Configuration change notification	Access								C	C		
	Doors								C	C		
	Areas								C	C		
Access point control									C	C		
Reset Anti-Pass back Violation											C	C
Special Days Schedule											C	C
Persistent notification storage											C	C

Revision History

Version	Date	Description	
1.0	28. Sep. 2016	ONVIF Profile Feature Overview v.1	André Eichhorn
1.1	10. Feb. 2017	ONVIF logo updated, Profile A RCv1.2: NTP feature added, hyperlinks to specifications updated	Andreas Schneider
2.0	09. Sep. 2017	ONVIF Profile A v1.0 released, Profile T RC v1.0 added, overall review and consolidation of table for clarity	Andrew Downs, André Eichhorn, Andreas Schneider, Fredrik Svensson, Nicolas Brochu, Hiroyuki Sano
2.1	10. Apr. 2018	Profile T (RC v1.4) updates: <ul style="list-style-type: none"> • Media Profile Configuration Events changed to Client Optional. • Make Snapshot Client Optional. • Remove Audio Output Configuration. Move Profile for Streaming Ready out-of-the-box from Event to Video section. Remove duplicate Zero Configuration entry.	Andrew Downs, Andreas Schneider, Fredrik Svensson