

ONVIF Network Video Transmitter Suite with Edge Analytics

Introduction

Synesis' ONVIF Network Video Transmitter (NVT) Suite with Edge Analytics enables security solution providers to release intelligent video surveillance devices such as IP-cameras and video encoders compliant with the global standard ONVIF. The customer quickly creates its differentiating IP while reducing the time to market and avoiding the costs of ONVIF protocol stack maintenance. The suite provides an abstraction layer for platform dependent services and libraries.

Rich feature set based on industry standard

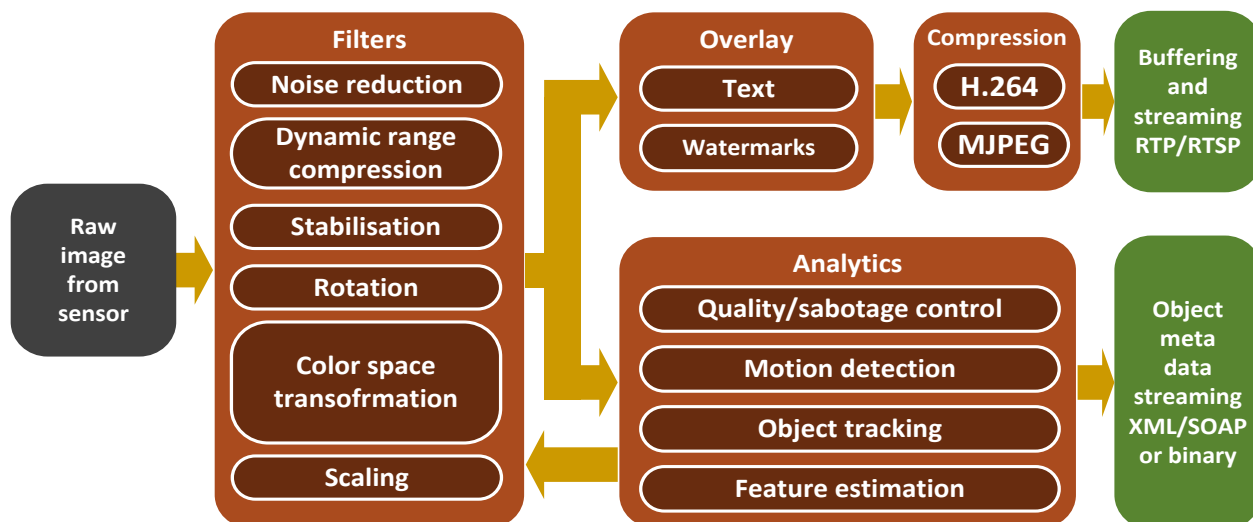
The following feature blocks are available in Synesis' reference designs based on the ONVIF NVT suite:

- Network device discovery
- Live video streaming
- Video capture configuration
- Video compression configuration
- Video analytics configuration
- Event and metadata configuration
- Rule management for alerts
- Secure firmware update
(with optional software copy protection)
- Local storage / network storage recording
- PTZ camera control

The present implementation matches ONVIF version 1.02 while certain advanced features are designed in consideration of the ONVIF 2.0 draft. The standard conformance is validated by the community test tools, third-party VMS integration and internal QA.

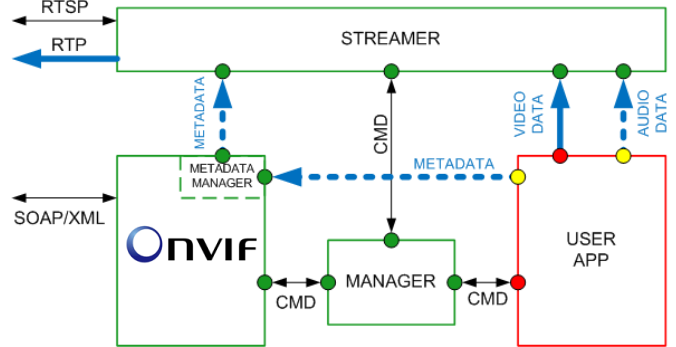
Intelligent video pipeline

The suite is integrated with a camera calibrator, professional video analytics, tampering detectors, various digital filters and a range of codes. These extensions are customisable.



Modular architecture

The modular and flexible architecture of the middleware suite provides cost-effective software customization, third-party integration and maintenance.

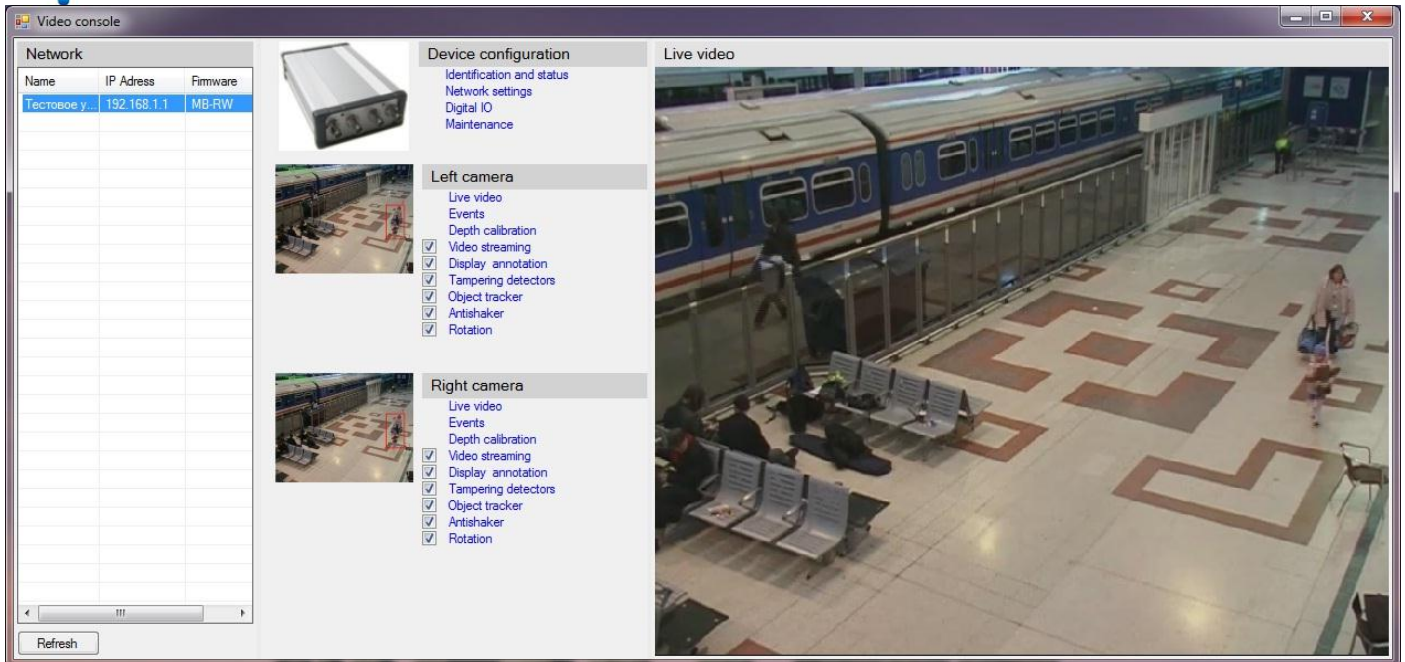


The IP device can be integrated with legacy video management systems (without ONVIF support) by mapping ONVIF calls onto a custom protocol handler. In this way, alternative protocols such as PSIA can be supported.

Key differentiators

The unique proposition of the Synesis' ONVIF solution is determined by:

- Advanced edge analytics support including configuration, rule management, metadata streaming and event notification
- True multichannel architecture of IP device useful for encoders and picture in picture digital zoom
- ONVIF Device Manager (simple ONVIF NVC) with source code under GNU General Public License
- Secure firmware update with software copy protection
- Small code footprint under 32 Mb including the Linux operating system and DSP codec packs



Free ONVIF Device Manager & NVC Library

ONVIF Network Video Client (NVC) Library implements the protocol to manage multivendor IP devices. It supports all the standard ONVIF services as well as advanced video analytics configuration. Based on the library, ONVIF Device Manager is a Windows application providing the graphic user interface (GUI). Both the application and library are developed by Synesis and released to the public domain under GNU GPL. This free software is written in C# are useful to develop ONVIF support in legacy video management systems. <https://sourceforge.net/projects/onvifdm/>

Proven design

The reference design hardware including the camera and multichannel encoder have been successfully integrated with ONVIF compliant VMS such as Milestone XProtect and AxxonSoft Intellect Enterprise. Several manufactures have already licensed the suite and supplied products to end users.

Turnkey solution

Complete reference designs are available directly from Synesis including hardware, middleware, codecs, video analytics and integration with third party VMS.

High definition support

The middleware is integrated with Texas Instruments' and third-party codecs supporting 720p and 1080p H.264 encoding. High performance embedded video analytics is designed to run at high definition for long range object detection and tracking.

Multiple channel support

For multiple channel configurations, the middleware is integrated with H.264 AVC Main Profile codec from Ittiam. Third-party codecs are supported via the TI's Codec Engine (xDAIS) interface. Video analytics and metadata streaming is available on all channels.

Advanced firmware update

The suite includes an advanced firmware update module:

- HTTP POST upload according to ONVIF 2.0 Draft
- Dual image in case of the upload failure
- Embedded software copy protection and license management (optional)
- Centralized update of a large device set via the ONVIF NVC application or third-party VMS

Integration and customisation

Synesis provides design services to integrate the ONVIF suite with the end-user solution and to create differentiating IP for its customers. With the source code license, the customer gains full control of the ONVIF software implementation.

Ordering information

ONVIF Network Video Transmitter (NVT) Suite

Part numbers: MW-NVT-BC Binary code
 MW-NVT-SC Source code

To obtain further information or place order visit our web site at www.synesis.ru or send email to sales@synesis.ru.