ONVIF Solutions

ZUKEN ELMIC,Inc

ONVIF | The IP-based Security Standard

ONVIF is a global and open industry forum with the goal to facilitate the development and use of a global open standard for the interface of physical IP-based security products. Or in other words, to create a standard for how IP products with video surveillance and other physical security areas can communicate with each other.

ZUKEN ELMIC, Inc. is a member of the ONVIF.

We are the member of the ONVIF and have been committed to development of the ONIVF technologies since its early stage. Ze-PRO NVT released in 2009 is now implemented in a production environment.

ONVIF

ZUKEN ELMIC is the only supplier worldwide , who offer a total protocol stack

a) Fulllfilling ONVIF requirements

b) High quality stack

c) Offering

Ze-PRO® IP Cam	(stack for Camera server side)	
Ze-PRO® IP Rec Server	(stack for Recorder / server)	
Ze-PRO® IP Mon	(stack for Monitor client side)	
Ze-PRO® IP Rec Clients	(stack for client Recording side)	* under development

4 SW modules for complete ONVIF function

	Server	Client
Streaming Profile S	**Ze-PRO IPcam** NVT (Network Video Transmitter) Device Discovery / Device Management Real Time Streaming / Media Configuration Image Configuration / PTZ control Event handling / Device IO Security	**Ze-PRO IPmon** NVC (Network Video Client) Device Discovery / Device Management Real Time Streaming / Media Configuration Image Configuration / PTZ control Event handling / Device IO Security
Recording Profile G	**Ze-PRO IPrec（Server）** NVS (Network Video Storage) Device Discovery / Device Management Real Time Streaming / Receiver Configuration Recording Search / Recording control Event handling / Replay control Security	**Ze-PRO IPrec（Clien** NVS (Network Video Storage) Under development

Ze-PRO RTP (Recommended)

Supporting Features

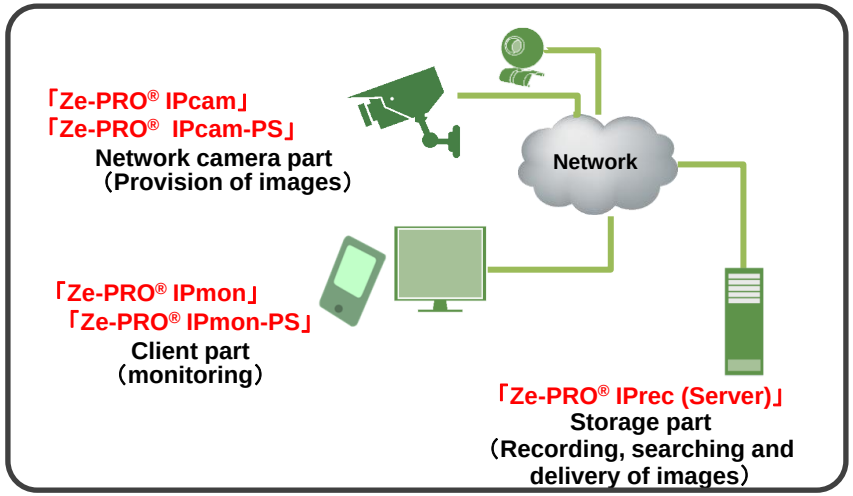
Offered form	Source code license	Binary code license
Operating Environment	Windows,Linux	Windows, Linux

Protocol Middleware for Implementing Network Camera Systems Compliant with the ONVIF

Ze-PRO® IPcam /IPmon/IPrec

● Ze-PRO IPcam、Ze-PRO IPmon、Ze-PRO IPrec（Server）、Ze-PRO IPcam-PS、Ze-PRO IPmon-PS

Ze-PRO IPcam, Ze-PRO IPmon and
Ze-PRO IPrec are the protocol middleware products developed by ZUKEN ELMIC, Inc. compliant with the interface standards defined by the ONVIF (Open Network Video Interface Forum) for security network products. These products enable easy development of network cameras, video cameras and video recorders compliant with the ONVIF specifications.



Features

- Implements ONVIF Core Spec Ver.2.4.2 (Iprec ,IPmon) (IPcam, IPmon),ProfileS
- Passed the ONVIF Test Spec. Ver.14.06 (Only for NVT)
- Corresponding to Profile S. Enables easy compatibility of version and selectable minimum functions reduce user`s cost reduce.
- Enables easy control of media by integrating with Ze-PRO RTP library
- Enables easy porting as OS/system/device dependent parts of this product are separated
- Provides sample programs (CUI/GUI) that enable immediate connection to a NVT over the network and reproduction of media
- Proven support, customization and SI services based on our extensive development experience with monitoring cameras

Low End System Architecture

Streaming

IP Camera

「Ze-PRO® IPcam」
Network camera part
（Provision of images）

IP Monitor

「 Ze-PRO® IPmon」
Client part
（monitoring）

High End System Architecture

Streaming

IP Camera

Recording

IP Monitor

「Ze-PRO® IPcam」
Network camera part
（Provision of images）

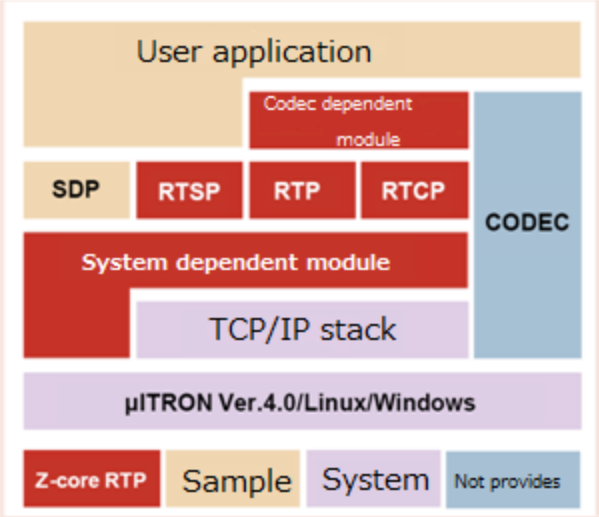
「 Ze-PRO® IPmon」
Client part
（monitoring）

「Ze-PRO® IPrec Server」
Storage part
（Recording, searching and delivery of images）

「Ze-PRO® IPrec Client」
Client Storage part
（Recording, searching and delivery of images）

Ze-PRO RTP

RTP/RTSP library



Features

- Compliant with RFC1889/RFC1890/RFC2326
- Implements many codec (H.264,MPEG-4,MPEG-2, JPEG,G.711,G.726,G729,MP2/3,AMR,AAC)
- Buffering control followed transfer jitter and optimal caluculation function of playback delay enables easy player-development
- Enables synchronized playback or lip synch
- Windows/Linux/Embedded Linux/µITRON4.0
- Compact program size
- Optimizes size and processing speed for embedded. Enables customize for each applications.
- Corresponding to multicasting
- Corresponding to IPv6
- Corresponding to RTP over RTSP
- Corresponding to RTP over HTTP
- Corresponding to ONVIF
- Simple user interface
- System-dependent components are placed separately to ensure easier porting.
- Selectable various event notification function
- Provides support, customize service and SI backed by extensive IP camera-developing experience.

Track record of RTP library（extract）

Results	Application	OS	CPU
1	Next-generation car navigation system	Linux	Intel/MIPS
2	IP camera viewer ※shipped on the market	Windows	Intel
3	Telemedicine ※has been shipped	Windows	Intel
4	IP camera ※shipped on the market	ITRON	SH
5	Hi-speed wireless access system ※shipped on the market	Linux	Power PC
6	LSI for IP camera ※shipped on the market	Linux	ARM9/ARM11 ASIC chips
7	Public-network base station ※shipped on the market	None	TI DSP
8	MPEG4 network module ※shipped on the market	ITRON4.0	ARM7

Track record of RTP library（extract）

Results	Application	OS	CPU
1	Drive recorder ※shipped on the market	Linux	ARM9
2	Security camera ※provides evaluation board	Linux	R-Mobile A1
3	Security monitor ※provides evaluation board	μITRON	RZ/A1H
4	Security monitor ※shipped on the market	Linux	TMS320DM8168
5	LSI for low-end IP camera ※will be shipped in 2015	Linux	ARM9/ARM11 ASIC chips
6	Security camera ※shipped on the market	Linux	FA626TE
7	Intercom ※shipped on the market	Linux	ARM9

Track record of ONVIF library（extract）

Results	Application	OS	CPU
1	IP camera ※shipped on the market	Linux	ARM9
2	IP camera	μITRON4.0	ARM9
3	LSI for IP camera ※shipped on the market	Linux	ARM9/ARM11 ASIC chips
4	IP camera ※shipped on the market	Linux	TI DM365
5	Monitoring software	Windows	Intel
6	Development environment of IP camera ※provides evaluation board	ITRON3.0	V850
7	Video analysis device	μITRON4.0	TI TMS320DM3XX
8	Video analysis monitoring software	Windows	Intel
9	Infrared IP camera	Linux	TI DM365
	Security monitor ※provides evaluation board	μITRON	RZ/A1H
10	Intercom ※shipped on the market	Linux	ARM9
11	LSI for low-end IP camera ※will be shipped in 2015	Linux	ARM9/ARM11 ASIC chips

Own Technology For Network Security Camera