Panasonic
BUSINESS

Facial Recognition System for Genetec

FacePRO

Deep learning facial recognition system

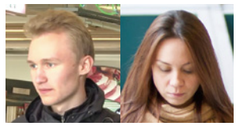
Facial Recognition System for Genetec

Facial recognition server software for Genetec using deep learning technology

Key Features

High performance facial recognition

• High performance Deep Learning facial recognition function distinguishes face orientation, sunglasses, surgical mask, facial aging change


Angled face

Sunglasses

Surgical mask

Facial aging change

	WV-ASF950
Range of angles*	Horizontal range : -45° to +45° Vertical range : -30° to +30°
Minimum size of the face image*	30 pixel (Eye Distance : 15 pixel)

*There might be a change of specification.

Facial recognition function

Registered face detection function

• Issue notification if there is a match with a registered person. Display history in list format.

Use Case

You do not want to overlook the store arrival of a regular customer because you want to be ready to provide priority service.

Register the faces of regular customers, and have a notification sent when one is detected.

Unregistered face detection function (detection of suspicious persons)

• Register faces by area and issue notification if an unregistered person is detected. Display history in list format.

Use Case

You want to monitor suspicious persons about to enter an area where only certain persons are allowed.

Register faces by area and issue notification if an unregistered person is detected.

[Important] • When you install WV-ASF950 (Ver.2.0 or later), please select "Registered face detection function" or "Unregistered face detection function." Only one of these functions can be used on a single server.
• When the "Unregistered face detection function" is used, the time that it takes to issue the alarm is several seconds longer than the conventional recognition function.

Cost Reduction

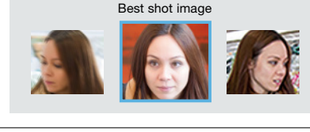
• Up to 20 cameras that have best shot function can be connected to one server. Reduce the system total cost such as server cost, network cost etc.

*The number of cameras that can be connected is determined by the number of people passing and the retention period of the face image.

Best shot

The best shot function sends only the necessary images to the server.

• Face detection
• Face image clipping
• Best shot judgment

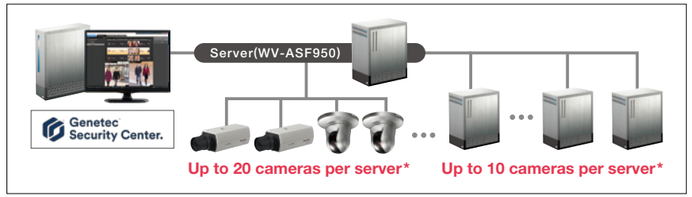


System expandability

• Up to 30,000 faces can be registered and WV-ASF950 can be used in large facilities.

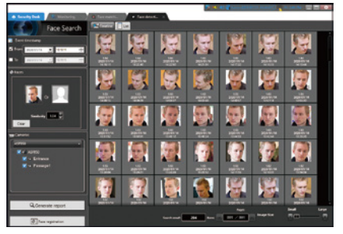
• Max 10 servers up to 2,000 cameras in large system. When unregistered face detection function is selected, up to 1,000 cameras.

*The WV-ASF950 includes license for 4 network cameras. To connect more than 5 cameras to the WV-ASF950, purchase WV-ASFE901 or WV-ASFE904 sold separately. When unregistered face detection function is selected, up to 10 cameras



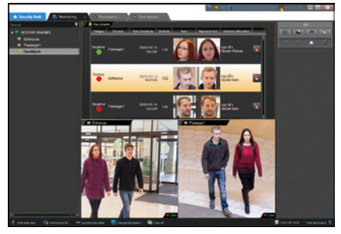
Face search

• Face images that camera detected are stored, and it can be searched later.
• By searching the face database, you can display the result of each cameras in chronological order and find movement locus of persons.
• Specify camera or date in detected face images and display the result in the list in similarity order.



Face Matching

• When it is matched with registered people, alarm of face matching is output in real-time, and display an alarm history in the list.
• Specified screen image can be played back on control monitor with double-clicking on an alarm history.

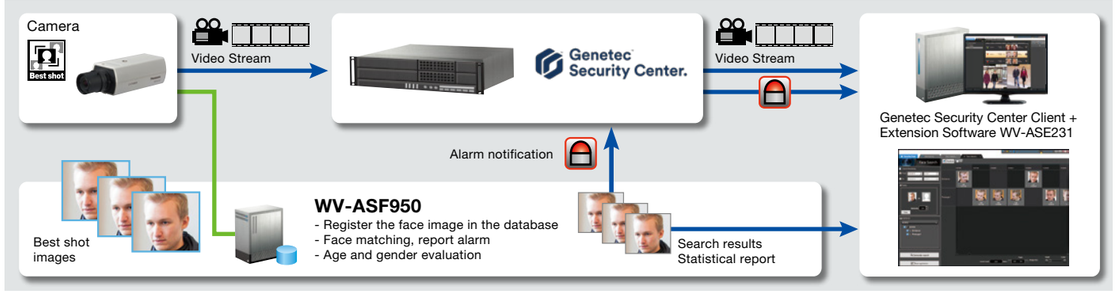


People counting, Age and Gender Statistics

• Count people of detected face and evaluate their age and gender
• Display the result on the screen with statistical graph
• The statistical data can be saved as a CSV file* for analytical use.

*CSV file: A file that can be edited using a spreadsheet software such as Microsoft® Office Excel®

Basic System Connection Example



Industry examples

Airport

Retail

School

Railway

Specifications

Basic Specifications

		Installation Type	
		Registered Face Detection	Unregistered Face Detection[*1]
Basic	Face matching speed	At 1 second in 30,000 registered faces[*2]	At 3 second in 30,000 registered faces[*2]
	Max. number of face in matching list	Up to 30,000 face[*3]	
	Face searching speed in database	3 seconds per 5 million faces[*4]	
	Max. number of face history	Up to 10 million items	
Face Conditions	Range of angles	Horizontal range : -45° to +45°, Vertical range : -30° to +30°	
	Minimum size of the face image	30 pixel (Eye Distance : 15 pixel)	
	Face with sunglass	Yes	
	Face with surgical mask	Yes	
Functions	Registered face matching	Yes	Yes[*1]
	Unregistered face matching	No	Yes
	Face search and associated video playback	Yes	
	People counting / Age and gender statistics	Yes	
system	Max. number of connected camera	10 cameras is suitable, up to 20 cameras per 1 face matching server.[*5]	Up to 10 cameras per 1 face matching server.[*5]
	Max. number of servers	100 servers (10 primary + 90 secondary)	
System Expansion/ Integration	SDK · API support	Yes	
	Notification	Rotation Warning Light / Mail Notification	
	Max. number of client PC that can be linked with the alarm	16	

*1 Depending on settings, Unregistered Face Detection and Registered Face Detection can be used simultaneously. *2 From receiving the face thumbnail to matching in face matching server.
*3 Two Additional Face Registration Kits WV-ASFE951 are necessary. *4 The best case when the time range is narrowed down and the number of search result is 100 faces. Depending on the search conditions, the search time may take several minutes. *5 Deploying plural face servers in a system is acceptable.

System requirements

Hardware

CPU	Intel® Xeon® or Core™ i7 series 3.40 GHz or faster (4-core 8-thread or better)	Graphic	NVIDIA® QUADRO® P5000, NVIDIA® QUADRO® RTX5000
Memory	32 GB or more	Power supply	600 W or more
HDD	1 TB or more	OS	Microsoft® Windows® 10 Pro RS5 (64 bit), Microsoft® Windows Server® 2016 Standard Edition, Microsoft® Windows® Server 2019 Standard Edition

[Important] If the system down of Windows occurred such by unexpected power outage, etc., database may be damaged and the functions such as face search and face verification may not work appropriately. It is strongly recommended to use UPS in order to avoid corruption of data.

Genetec Security Center Client + Extension Software WV-ASE231

CPU	Intel® Core™ i7-4770 or better
Memory	8 GB or more
HDD	120 GB for OS and Security Center applications
OS	Microsoft® Windows® 8.1 Professional (64bit), Microsoft® Windows® 10 Pro RS4(64bit) English/French
Graphic	NVIDIA® QUADRO® K620 2 GB video card
Network I/F	100 / 1000 Mbps

Genetec Security Center Server + Extension Software WV-ASE231

CPU	Intel® Xeon® E5640 2.66 GHz or better
Memory	16 GB or more
HDD	80 GB for OS and Security Center applications
OS	Microsoft® Windows® 10 Pro RS4(64bit) , Microsoft® Windows Server® 2016 Standard Edition with Update English/French
Graphic	Standard SVGA video card
Network I/F	1000 Mbps

Network Camera (face detection)

Network Camera	WV-S1132 / WV-S1131 / WV-S1112 / WV-S1111 / WV-S2531LTN [*6] / WV-S6130 / WV-SPN631[*7] / WV-SPN611[*7] / WV-SPN531A / WV-SPN311A / WV-SPN310A / WV-SP305 / WV-SFV631LT [*6] / WV-SC385 [*8]

*6 Although this is the outdoor model, it can be used as face matching camera for indoor only. *7 The Optional IR-LED(WV-SPN6FRL1) can not be installed with any of the tested Lenses.
*8 After fixing the angle of view, if you control the camera with PTZ operation, the face matching function will not work properly. In this case, set the view of angle properly again by using the preset position function.

Facial Recognition System Software

Facial Recognition System Software	WV-ASF950 Ver. 1.00 or later

Management Software

Management software + Extension software	Security Center V5.6 SR4 / Security Center V5.7 SR1 / Security Center V5.8 + WV-ASE231 Ver. 1.40 or later

Products Lineup

Face matching server

Product Name		**Model No.**
PC Software Package		WV-ASF950, WV-ASF950W
Additional Camera Kit	1ch	WV-ASFE901, WV-ASFE901W
	4ch	WV-ASFE904, WV-ASFE904W
Additional Face Registration Kit		WV-ASFE951, WV-ASFE951W
Upgrade Software		WV-ASF950UGW
Extension Software(for Genetec)		WV-ASE231, WV-ASE231W

* The performance of the face matching function varies depending on such conditions as the camera installation, camera settings, camera adjustment, surroundings and photographic subjects.

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Important
– Safety Precaution: Carefully read the operating instructions and installation manual before using this product.
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• All TV pictures are simulated. • Specifications are subject to change without notice.

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