

COUNT THE NUMBER OF PEOPLE

Instek Digital™ VTrack GateFlow video intelligent feature counts and collects the number of people crossing a virtual gate in a certain direction.

VTrack OccupancyRate can be utilized for two general purposes:

- **business intelligence**

more targeted and effective marketing actions, including increased the effectiveness of trade promotions through collecting the data related to the flow of customers, for verifying the ration between the presence and the selling or the best placement of a product or the impact of a promotional campaign

- **optimize services and management activities**

increase the efficiency of personnel and facilities, significant reduce management costs and monitor the utilization of services and facilities. This through the verification of the data related to the flow of customers for the optimization of personnel displacement of the time of opening/closure of cash, shops, branches, facilities or services.

- **more effective video surveillance**

prevent of critical situations for persons and facilities through the estimation of the number of persons present inside areas with limited accessibility.

Vertical market:

- commercial centers, chain stores, supermarkets
- banks
- ports, airports, railways, public transportation
- theaters, cinemas, museums, sport facilities, casinos, public facilities, post offices
- urban areas
- beaches, lakes, parks, tourism facilities

Key Features

- Full integration with Instek Digital™ VMS Command Center
- More targeted and effective marketing actions
- Reduce management costs
- Windows based software architecture
- Unlimited configurable virtual zones of any shape and size
- Filtering out false alarms due to atmospheric phenomena, variations in environmental condition, vegetation
- Enabling/disabling of the module by external input or time scheduling
- Specific algorithmes for filtering shadows and light changes
- Watchdog functionality: for automatic restart of the module in case of critical errors or hardware unit restart
- Generate reports in csv-format

INSTEK DIGITAL

Instek Digital is a video surveillance business unit of Good Will Instrument Co., Ltd. and focus on the development of high quality digital surveillance solutions. The company inherited over 20-years of surveillance experience. Instek Digital has the luxury of a strong financial background supported by Good Will Instrument Co., Ltd. – has over 40-years of electronics R&D and manufacturing experience. And Good Will Instrument Co., Ltd. is also listed on the Taiwan Stock Exchange.

Instek Digital offers a wide array of video surveillance software and hardware – under the brand of Instek Digital. The core design are based on the following principles; “User-Friendliness”, “Scalability” and “Reliability”. Instek Digital’s solutions are based on an open platform – creating seamless third party integration. With this concept Instek Digital has created a business model that can meet every aspect in today’s surveillance demand. The results speak for themselves – based on small and large projects that we have deployed around the world.

Functional Specifications

- Integrate within Instek Digital™ VMS Command Center
- Modular, scalable and flexible software architecture, available for Windows/Linux o.s. 32/64bit
- Unlimited configurable virtual gates, of any shape and size
- Mono or bi-directional counting for each configured virtual gate
- Detection and tracking of unlimited subjects of interest in the scene
- Robust and reliable in filtering false alarms due to atmospheric phenomena, changing of environmental conditions, vegetation, thanks to the most advanced self-adaptive algorithms based on Self Learning Background Modelling, Foreground Filtering and Multitarget Tracking
- Specific algorithms for filtering shadows and lighting changes
- Filtering of subjects of interest by size and dynamics
- 3D perspective management by linear interpolation on image, or by image calibration
- Unlimited configurable no-processing virtual zones, to inhibit not-of-interest areas in the image
- Unlimited configurable crops of the image, each one processed as separate video source
- Enabling/disabling of the module by external input or time scheduling
- Ability to process at resolution and frame rate different from the source ones
- Function GateFlowAggregator for the collection and management of the counting of several virtual gates configured on one or more cameras, with automatic and real time signaling of counting exceeding a certain configured threshold
- Web-based graphical and numerical visualization of the on-line and off-line counting data
- Manual or configurable reset for each configured counting function
- Scheduling and sending of automatic counting reports
- Export of counting data in csv format
- Interface for the simulation of the processing results, to verify the correctness of the configuration
- VTClient interface for the real time visualization of live and alarms, with bounding boxes and trajectories overlays
- Watchdog function, for the automatic restart of the module in case of critical error or hw unit restart
- Counting data sending according to specific communication/protocol requirements customizable by project
- Automatic and real time GateFlowAggregator's alarms sending to:
 - VMS or NVR compatible platforms
 - I/O contacts, electrical devices, external DVR or NVR units, through Modbus I/O devices
 - e-mail
 - FTP server
 - serial port, PLC
 - unit connected in web through http/TCP call, customizable
 - VTrack-Recorder function, for the storage in local directories of continuous or event-based videos

System	Operating system	Microsoft® Windows™ 10
	CPU	Intel® Core™ i7
	Resolution	CIF
	Frame rate	10
	Streaming protocol	RTSP / ONVIF
	CMS / NVR behavior	trigger, recording, live/map, popup, PTZ, DO
	Keyboard mouse	PS/2 USB
	Ethernet	1 x Gigabit
	USB	4 x USB3.0 + 4 x USB2.0
	Display port	1 x VGA / 1 x DVI-D / 1 x HDMI
Environmental	Operating temperature	0 ~ 40°C
	Humidity	Max. 90%, non-condensing
Electrical	Power input	AC 100V ~ 240V
	PSU	300W
Mechanical	Form factor	2U
	Dimensions w / wo box (WxHxD mm)	535 x 570 x 245 / 445 x 402 x 88
	Weight w / wo box (kg)	12.2 / 8.6

a) The actual video display performance may vary according to type of camera(s) and lighting condition.

b) Product specifications and availability are subject to change without notice.

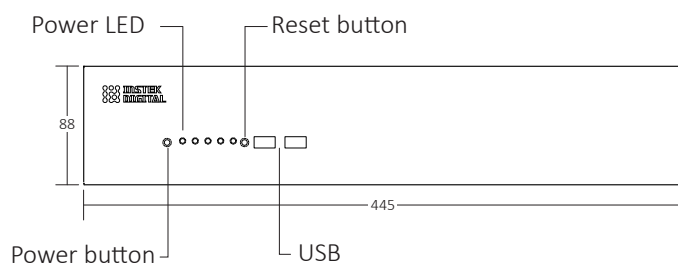
c) Instek Digital is a registered trademark of Good Will Instrument Co., Ltd.

Models:	Description:	Models:	Description:
HR-RV3900-2U	Turnkey	HR-RV30C5-SW	License, 1 channel + 5 rule
HR-RV30S1-SW	Standard software	HR-RV30C6-SW	License, 1 channel + 6 rule
HR-RV30C1-SW	License, 1 channel + 1 rule	HR-RV30C7-SW	License, 1 channel + 7 rule
HR-RV30C2-SW	License, 1 channel + 2 rule	HR-RV30C8-SW	License, 1 channel + 8 rule
HR-RV30C3-SW	License, 1 channel + 3 rule	HR-RV30C9-SW	License, 1 channel + 9 rule
HR-RV30C4-SW	License, 1 channel + 4 rule	HR-RV30CA-SW	License, 1 channel + unlimited rules

Technical requirements for VTrack Software solution:

• Video flow acquisition from:	- minimum size: area of 100 pixels
- IP cameras (optical or thermal), through standard protocols rtp/rtsp, mjpeg or ONVIF	- maximum size: about 1/4 of the image
- analogue cameras (optical or thermal), by IP video encoders through standard protocols rtp/rtsp, mjpeg or ONVIF, or by compatible frame grabber cards	• Suggested camera set-up:
- NVR compatible or through standard protocols rtp/rtsp, mjpeg or ONVIF	- position: at least 3 meters height, the most possible vertical
- off-line videos in all standard formats (avi, asf, mpg, mov, ...)	- lens: not longer than 2,8mm for camera positioned at 3 meters height
• Conditions of the subjects of interest in the image in order to be effectively detected:	• Minimum frame rate: 8fps
- clearly visible to the naked eye in the image, even in difficult environmental conditions (night, heavy rain, fog, glare from the sun or other sources of artificial light, snow, ...)	• Suggested image resolution: CIF (352x288) or QVGA (320x240)
- entirely visible in the image for at least 10-15 continuous frames	• Computational need:
	- CPU (up to 6 video flows in CIF/QVGA resolution at 8fps per single core 2.8GHz)
	- RAM: about 100MB for each processed video flow
	- Intel® HD Graphics / NVIDIA® GT730 or higher graphics card
	- Windows (XP or next) or Linux, 64 bit operating system

Front View RV3900-2U



Rear View RV3900-2U

