User Manual
Code: APTI-KIT-NVR-20V2
SURVEILLANCE KIT APTI-KIT-NVR-20V2 4 CHANNELS - 1080p 3.6 mm

## Warning!

Please read the user manual included in this work as it contains important information related with safety of installation and use of the device.
Only persons who read the user manual may use the device.
The user manual must be kept because it may be required in the future. The device is to be used exclusively for purposes specified in this user manual.
The device must be unpacked prior to starting-up. After removing the packaging make sure the device is in working order. If the product has defects, it should not be used until it is repaired.
The product is intended for use at home and commercial use and may not be used for other than intended use.
The manufacturer is not liable for damages resulting from not adhering to the rules contained in the user manual, therefore, we recommend to follow the aforementioned safety rules for operation and maintenance of the device. In this way you will ensure yourself safety and avoid causing damage to the device.
The manufacturer and the supplier are not liable for losses or damages arising out of the product, including financial or intangible losses, loss of profits, income, data, pleasure from use of the product or other products related with it - indirect, incidental or consequential loss or damage. The above provisions apply whether the loss or damage concerns:

1. Deterioration of quality or the lack of operation of the products or products related with it due to damage as well as the lack of access to the product when it is undergoing repair, which results in stoppage the loss of user's time or a break in business activity;
2. Improper results of operation of the product or products related with it;
3. It applies to losses and damages according to any legal category, including negligence and other losses, termination of a contract, expressed or implied guarantee and strict liability (even if the manufacturer or the supplier was notified about the possibility of occurrence of such damages).

## Safety measures:

Particular attention at designing was directed to quality standards of the device where ensuring safety of operation is the most important factor.
The device must be secured against contact with caustic, staining and viscous fluids.
The device was designed in such a way that it restarts operation when power supply is restored after a break.
Attention! We recommend using protections to further protect the device from possible overvoltages in installations. Surge protectors are effective protection against accidental pass to the device voltages higher than the rated. Damages caused by pass the voltages higher than specified in manual, are not under warranty.
Turn off the device before transporting it.
Prior to connecting the device to a power source check whether the supplied voltage is consistent with rated voltage specified in the user manual.

## Proper product disposal:

A marking of a crossed out waste bin indicates that the product may not be disposed together with other household waste in the entire EU. To avoid possible damage to the natural environment of health due to uncontrolled waste disposal, therefore, it should be handed over for recycling, propagating in this way sustainable use of natural resources.
To return a worn-out product, use a collection and disposal system of this type of equipment or contact a seller from whom it was purchased. He will then be recycled in an environmentally-friendly way.

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The surveillance kit includes 4 cameras, DVR with Seagate 1 TB hard disk, DC $48 \mathrm{~V} / 1.25 \mathrm{~A}$ power adapter and 4 connecting cables with 20 m length each. The recorder included in the kit has a built-in 4-port PoE switch, so you can power the attached cameras directly from the recorder. The H. 264 video compression standard using to record video data, allows to get the best possible quality of recorded image at minimal network transfer and disk storage capacity. The menu options layout has been designed for all users, even beginners can easy navigate and change parameters in DVR settings without any problem.
IP camera with efficient H. 264 image compression algorithm for clear and smooth video streaming at maximal resolution of 1080p.
Attention! The DVR has installed the Seagate 1TB ST1000VM002 hard disk.


| Standard: | TCP/IP |
| :---: | :---: |
| Supported resolutions: | $\begin{aligned} & 4 \text { @ } 1920 \times 1080 \mathrm{px}, \\ & 4 \text { @ } 1280 \times 960 \mathrm{px}, \\ & 4 \text { @ } 1280 \times 720 \mathrm{px} \end{aligned}$ |
| Audio support: | 4 Channels - Audio from cameras |
| Video outputs: | 1 pcs HDMI 1 pcs VGA |
| Audio outputs: | - |
| Audio inputs: | - |
| Image compression method: | H. 264 |
| Maximal total frame rate: | $\begin{aligned} & 100 \mathrm{fps} @ 1920 \times 1080 \mathrm{px}, \\ & 100 \mathrm{fps} @ 1280 \times 960 \mathrm{px}, \\ & 100 \mathrm{fps} @ 1280 \times 720 \mathrm{px} \end{aligned}$ |
| Supported hard drives: | 1 x 6 TB SATA, In the kit : 1 TB Seagate |
| Recording modes: | Manual, Motion Detection, Schedule |
| Network protocols: | ONVIF, Private |
| External storage devices backup: | Records backup at (.avi) format to USB (pendrive) |
| Searching and playback the records: | Records searching: timeline or file list. Playback: forward, fast Playback max. 1 camera in the same time |
| Network functions: | Network Client Software and IE browser: live view, playback and backup of the records, configuration of the recorder parameters |
| Bitrate: | 24 Mbps |
| ONVIF: | 2.4 |

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| Mobile phones support: | Port no.: 554 or access by a cloud (P2P) <br> - Android: Free application FREEIP PRO <br> - iOS (iPhone): Free application FREEIP PRO |
| :---: | :---: |
| Default IP address: | 192.168.1.88 |
| Default admin user / password: | admin / 12345 |
| Web browser access ports: | 80, 554 |
| PC client access ports: | 5000, 554 |
| Mobile client access ports: | 554 |
| Port ONVIF: | 80 |
| Alarm inputs / outputs: | - |
| PTZ control: | IP Speed Dome Cameras |
| Motion Detection: | Split the screen into zones : $24 \times 18$ motion zones |
| Mouse support: | $\checkmark$ |
| IR remote controller in the set: | - |
| Power supply: | 48 V DC / 1.25 A |
| Operation temp: | $-10^{\circ} \mathrm{C} \ldots 5{ }^{\circ} \mathrm{C}$ |
| Weight: | 0.94 kg |
| Dimensions: | $220 \times 219 \times 53 \mathrm{~mm}$ |
| Supported languages: | English, Bulgarian, Czech, French, Spanish, German, Polish, Portuguese, Russian, Turkish, Hungarian, Italian |


| Sensor: | 1/2.9 " Sony CMOS IMX323 |
| :---: | :---: |
| Digital Image Processor: | Hisilicon 3520D |
| Matrix size: | 2.19 Mpx |
| Scanning system: | Progressive |
| Resolution: | $1920 \times 1080-1080 p$ |
| Operation modes: | The main and sub streams can only occur in the configurations shown below : <br> Firmware 3516CV300_IMX323_TF_W_7.1.38.4 <br> - Main stream : 1920 x 1080 + Sub stream : 720 x $480+352 \times 288$ <br> - Main stream : $1920 \times 1080+$ Sub stream : $640 \times 480+352 \times 288$ |
| Lens: | 3.6 mm |
| View angle: | - $72^{\circ}$ (manufacturer data) <br> - $80^{\circ}$ (our tests result) |
| Range of IR illumination: | 20 m |
| S/N ratio: | $\geq 52 \mathrm{~dB}$ |
| RS-485 interface: | - |
| Memory card slot: | - |

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| Image compression method: | H. 264 / MJPEG |
| :---: | :---: |
| Alarm inputs / outputs: | - |
| Audio: | - |
| Bitrate: | $64 . .12000 \mathrm{kbps}$ |
| Main stream frame rate: | 25 fps @ 1080p |
| Network interface: | 10/100 Base-T - RJ45 |
| Network protocols: | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, SMTP |
| WEB Server: | Built-in - port 80 |
| Max. number of on-line users: | 10 |
| ONVIF: | 2.4 |
| Main features: | - DNR - Digital Noise Reduction <br> - ICR - Movable InfraRed filter <br> - Flicker Control - The technology eliminates the tiring eyes flickering image effect <br> - Possibility to change the resolution, quality and bit rate <br> - BLC - Back Light Compensation <br> - Motion Detection <br> - Privacy zones <br> - Mirror - Mirror image <br> - Day/Night mode - configurable |
| Mobile phones support: | Port no.: 80 or access by a cloud (P2P) <br> - Android: Free application FREEIP <br> - iOS (iPhone): Free application FREEIP |
| Default IP address: | 192.168.1.168 |
| Default admin user / password: | admin / admin |
| Web browser access ports: | 80,554 |
| PC client access ports: | 5000, 554 |
| Mobile client access ports: | 554 |
| Port ONVIF: | 80 |
| RTSP URL: | rtsp://user:password@ip_address:80/0 - Main stream rtsp://user:password@ip_address:80/1 - Sub stream |
| Power supply: | - PoE (802.3af), <br> - 12 V DC / 500 mA |
| Housing: | Dome, Aluminum |
| Color: | White |
| "Index of Protection": | IP66 |
| Operation temp: | $-20^{\circ} \mathrm{C} \ldots 60^{\circ} \mathrm{C}$ |
| Weight: | 0.30 kg |
| Dimensions: | $\emptyset 93 \times 70 \mathrm{~mm}$ |
| Supported languages: | English, Bulgarian, Czech, French, Spanish, Dutch, German, Polish, Portuguese, Russian, Turkish, Italian |

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General information:

| Connecting cable: | $4 \times 20 \mathrm{~m}$ - UTP cat. 5, RJ45 |
| :--- | :--- |
| Power adapter: | $1 \mathrm{pcs}: 48 \mathrm{~V} / 1.25 \mathrm{~A}$ |
| Country of origin: | China |
| Manufacturer / Brand: | APTI |
| Guarantee: | 2 years |

DVR:


Internal view of the housing:

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CAMERA:


Camera is out from clamping ring:

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Camera mounting side view:


In the kit:


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Package:


PACKAGE

| Dimensions (L x W x H): 0x0x0 mm | Gross Weight: 0 kg |
| :--- | :--- | :--- |

