



# User Manual

Code: APTI-KIT-PLC-20C2

SURVEILLANCE KIT **APTI-KIT-PLC-20C2** PLC, 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.

Surveillance Kit operating on the basis of the PLC (Power-Line Communication) technology. The kit includes 4 cameras, recorder, the set of dedicated power adapters supporting data transmission via power line and hard drive with a capacity of 1TB.

The PLC (Power-Line Communication) technology allows to transmit the LAN network data via power line. In order to ensure cooperation of system components without any problems, all devices using PLC technology should be connected to one phase in such a way that between them there are no devices mounted directly on the power line (such as electricity meters, short-circuit protection devices, UPSs). The maximum range of data transmission via the power line is 300 m.

Devices included in the kit comply with the IEEE 1901 and HomePlug AV standards, so there is a possibility to connect to the network eg a switch, or a router compatible with one of these standards and connect a whole system to the LAN network, or the Internet.

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:	4 @ 1920 x 1080 px 4 @ 1280 x 960 px 4 @ 1280 x 720 px
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:	100 fps @ 1920 x 1080 px, 100 fps @ 1280 x 960 px, 100 fps @ 1280 x 720 px
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



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Bitrate:	24 Mbps
ONVIF:	✓
Mobile phones support:	Port no.: 554 or access by a cloud (P2P) • Android: Free application <a href="#">FREEIP PRO</a> • iOS (iPhone): Free application <a href="#">FREEIP PRO</a>
Default IP address:	192.168.1.88
Default admin user / password:	admin / 12345
Web browser access ports:	80, 5000, 554
PC client access ports:	80, 5000, 554
Mobile client access ports:	80, 5000, 554
Port ONVIF:	80
Alarm inputs / outputs:	—
PTZ control:	IP Speed Dome Cameras
Motion Detection:	Split the screen into zones : 24 x 18 motion zones
Mouse support:	✓
IR remote controller in the set:	—
Power supply:	12 V DC / 2 A, A dedicated power supply adapter is required with the support of PLC technology (included)
Operation temp:	-10 °C ... 55 °C
Weight:	0.86 kg
Dimensions:	219 x 218 x 40 mm
Supported languages:	English, Bulgarian, Czech, French, Spanish, German, Polish, Portuguese, Russian, Turkish, Hungarian, Italian

## Camera:

Sensor:	1/2.9 " Sony CMOS IMX323
Digital Image Processor:	Hisilicon 3516C
Matrix size:	2.1 Mpx
Scanning system:	Progressive
Resolution:	1920 x 1080 - 1080p
Operation modes:	The main and sub streams can only occur in the configurations shown below : Firmware 3516CV300_IMX323_W_[E0016732]_7.1.35.3 • Main stream : 1920 x 1080 + Sub stream : 720 x 480 + 352 x 288 • Main stream : 1920 x 1080 + Sub stream : 640 x 480 + 352 x 288
Lens:	3.6 mm
View angle:	• 72 ° (manufacturer data) • 79 ° (our tests result)
Range of IR illumination:	30 m
S/N ratio:	≥ 52 dB



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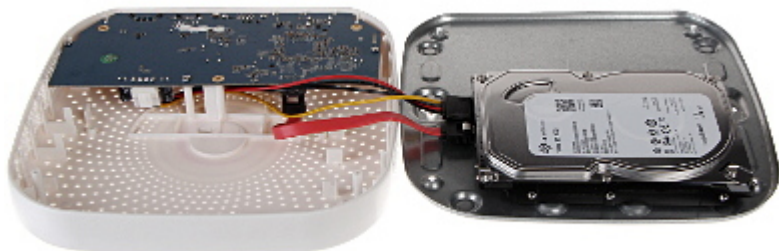
RS-485 interface:	—
Memory card slot:	—
Image compression method:	H.264 / MJPEG
Alarm inputs / outputs:	—
Audio:	—
Bitrate:	64 ... 12000 kbps
Main stream frame rate:	25 fps @ 1080p
Network interface:	10/100 Base-T - 4-pin round connector
Network protocols:	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, SMTP
WEB Server:	Built-in - port 80
Max. number of on-line users:	10
ONVIF:	2.4
Main features:	<ul style="list-style-type: none"><li>• ICR - Movable InfraRed filter</li><li>• Flicker Control - The technology eliminates the tiring eyes flickering image effect</li><li>• Possibility to change the resolution, quality and bit rate</li><li>• BLC - Back Light Compensation</li><li>• Motion Detection</li><li>• Privacy zones</li><li>• Mirror - Mirror image</li><li>• Day/Night mode - configurable</li></ul>
Mobile phones support:	Port no.: 80 or access by a cloud (P2P) <ul style="list-style-type: none"><li>• Android: Free application <a href="#">FREEIP</a></li><li>• iOS (iPhone): Free application <a href="#">FREEIP</a></li></ul>
Default IP address:	192.168.1.168
Default admin user / password:	admin / admin
Web browser access ports:	80
PC client access ports:	80
Mobile client access ports:	80
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:	<ul style="list-style-type: none"><li>• PoE (802.3af),</li><li>• 12 V DC / 1 A, A dedicated power supply adapter is required with the support of PLC technology (included)</li></ul>
Housing:	Compact, Aluminum
Color:	White
"Index of Protection":	IP66
Operation temp:	-20 °C ... 60 °C
Weight:	0.30 kg

Dimensions:	Ø 70 x 145 mm
Supported languages:	English, Bulgarian, Czech, French, Spanish, Dutch, German, Polish, Portuguese, Russian, Turkish, Italian
General information:	
Connecting cable:	—
Power adapter:	<ul style="list-style-type: none"> <li>• 1 pcs : 12 V / 2 A + PLC,</li> <li>• 4 pcs : 12 V / 1 A + PLC</li> </ul>
Country of origin:	China
Manufacturer / Brand:	APTI
Guarantee:	2 years

DVR:



Internal view of the housing:



CAMERA:



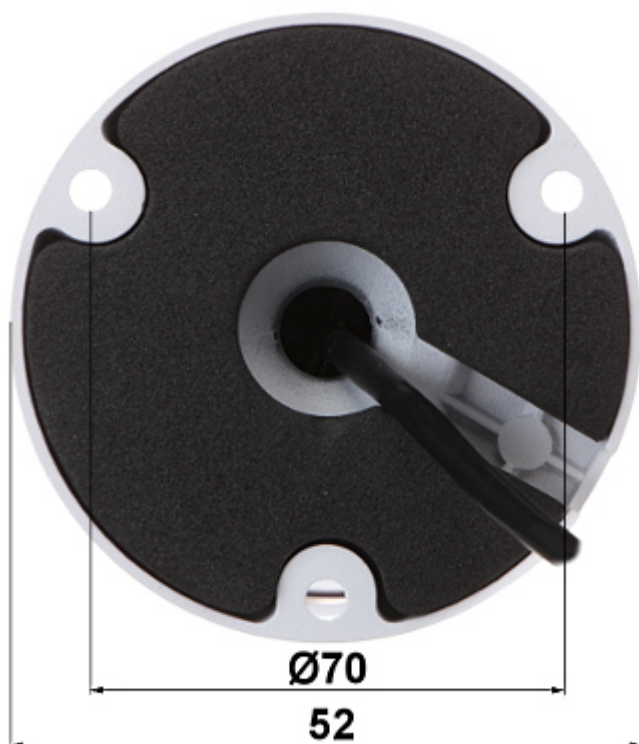
Front view:



Side view:



Wall mounting side view:



Camera connector:





In the kit:



Package:





## PACKAGE

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