



# User Manual

Code: DH-TPC-BF2120P-1F4

IP HYBRID THERMAL IMAGING CAMERA **DH-TPC-BF2120P-1F4** 1.0 mm - 1.3 Mpx, 4 mm - 1080p  
DAHUA

## 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.

The DH-TPC-BF2120P-1F4 Thermal Imaging Camera is a modern solution that allows to detect the presence of people, animals and vehicles regardless of prevailing vision conditions. The device is equipped with sensitive VOx microbolometer that allows to observe the objects in fog, smoke and in the absence of illumination. An additional advantage of the TPC series cameras is the ability to detect fire and send a signal to the alarm control panel when it occurs.



Sensor:	Uncooled VOx microbolometer
Matrix size:	160 x 120 px
Pixel pitch:	12 µm
Thermal sensitivity (NETD):	< 50 mK @ F1.1
Spectral range:	7 µm ... 14 µm
Color palettes:	14
Lens:	1.0 mm
View angle:	56 °
Resolution:	1280 x 960 - 1.3 Mpx , 1280 x 720 - 720p
Operation modes:	Main and sub streams may be in any configuration  Firmware 2.403.0000.0.R, build : 2017-07-27 • Main stream : 1280 x 960, 1280 x 720 • Sub stream : 640 x 480, 320 x 240

#### VIDEO CAMERA:

Sensor:	1/2.8 " Progressive Scan Exmor CMOS
Matrix size:	2.1 Mpx
Scanning system:	Progressive
Lens:	4 mm
View angle:	• 86 ° (manufacturer data) • 75 ° (our tests result)
Optical zoom:	—



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Digital zoom:	x 16
Min. illumination:	0.005 Lux (color) @ F1.8 0.0005 Lux (B/W) @ F1.8
Range of IR illumination:	35 m
S/N ratio:	> 50 dB (AGC off)
Resolution:	1920 x 1080 - 1080p 1280 x 720 - 720p 704 x 576 - D1
Operation modes:	Main and sub streams may be in any configuration Firmware 2.403.0000.0.R, build : 2017-07-27 • Main stream : 1920 x 1080, 1280 x 720, 704 x 576 • Sub stream : 704 x 576, 353 x 288

## General information:

Standard:	TCP/IP, CVBS
Video output:	CVBS - 1 Vpp / 75 $\Omega$ , BNC
RS-485 interface:	✓
Memory card slot:	Micro SD memory cards up to 128GB support (possible local recording)
Image compression method:	H.264 / MJPEG
Alarm inputs / outputs:	2 / 1
Audio:	• External microphone input • Audio output
Bitrate:	640 ... 8192 kbps - H.264
Main stream frame rate:	25 fps @ 1280 x 960 25 fps @ 1080p
Network interface:	10/100 Base-T (RJ-45)
Network protocols:	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x Radius
WEB Server:	Built-in, NVR compliance
Max. number of on-line users:	20
ONVIF:	16.12
Mobile phones support:	Port 37777 • Android: Free application <a href="#">DMSS</a> • iOS (iPhone): Free application <a href="#">DMSS</a>
Default IP address:	192.168.1.108
Default admin user / password:	admin / admin
Web browser access ports:	80, 37777
PC client access ports:	37777
Mobile client access ports:	37777
Port ONVIF:	80



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RTSP URL:	rtsp://admin:haslo@192.168.1.108:554/cam/realmonitor?channel=1&subtype=0 - Main stream rtsp://admin:haslo@192.168.1.108:554/cam/realmonitor?channel=1&subtype=1 - Sub stream
Main features:	<ul style="list-style-type: none"><li>• The possibility of overlapping the image from a thermal imaging camera in a classic image</li><li>• WDR - 120 dB - Wide Dynamic Range</li><li>• ROI - improve the quality of selected parts of image</li><li>• 3D-DNR - Digital Noise Reduction</li><li>• PIP - Picture In Picture</li><li>• IVS analysis : crossing the line (tripwire), intrusion, abandoned/missing object, object detection (people, vehicle), fire detection - The IVS analysis functions can be defined independently for the thermal imaging camera and the vision camera</li><li>• Audio detection</li><li>• Motion Detection</li><li>• Configurable Privacy Zones</li><li>• BLC/HLC - Back Light / High Light Compensation</li><li>• AGC - Automatic Gain Control</li><li>• Sharpness - sharper image outlines</li><li>• Mirror - Mirror image</li><li>• Day/Night mode (color/b&amp;w/auto)</li><li>• ICR - Movable InfraRed filter</li></ul>
Power supply:	12 V DC / 1000 mA (power adapter included)
Power consumption:	≤ 12 W
Housing:	Compact - Metal
Color:	White
"Index of Protection":	IP67
Operation temp:	-30 °C ... 60 °C
Dimensions:	Ø 90 x 238 mm
Weight:	0.88 kg
Supported languages:	English
Manufacturer / Brand:	DAHUA
Guarantee:	<b>3 years</b>



Side view:



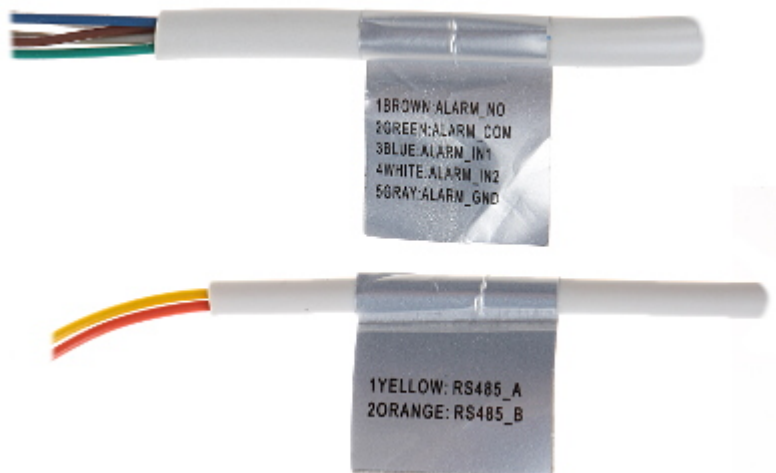
Mounting side view:



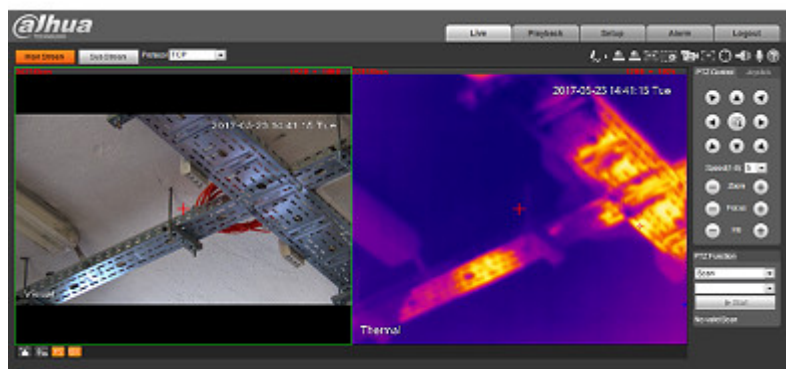
Camera connectors:



Connectors description:



Example captures of device interface:



PACKAGE

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