## ISTRA STREAM d.o.o.

Stanica Roč 1/1 52425 Roč, Croatia

www.istrastream.com info@istrastream.com

+385 91 600 3456 - Aleksandar Merlak

+385 91 181 7780 - Vladimir Jovanović

+385 91 166 6440 - Damjan Nemarnik



#### PLUG AND PLAY METEOR OBSERVATION SYSTEM - PRICE LIST

All prices include tax, but shipping is separate depending on your country

<u>iStreamMeteor PRO:</u> The whole package = Control Unit + Camera Unit



450 EUR (3,330.00 HRK)

# $\frac{iStreamMeteor\ AllSky:}{Aluminium\ Weatherproof\ Enclosure} \textbf{ The\ whole\ package = Control\ Unit + Camera\ Unit + }$



555 EUR (4.107.00 HRK)

## **Individual Parts/Configurations**

#### **Control Unit - 200 EUR (1,480.00 HRK)**

- Raspberry Pi 4 model B Single Board Computer
- Original RPi power supply, 5V 2.5A
- RPi Case with fan
- 4 x Aluminium Heatsink
- Real Time Clock Module
- SanDisk SD 64GB EXTREME card
- Software installed, configured and tested
- Plug and play
- 720p/1080p @ 25 FPS



#### <u>Camera Unit</u> - 250 EUR (1,850.00 HRK)

- Without Weatherproof Enclosure = 175 EUR (1,300.00 HRK)
- Ultra-low-light IMX291 camera, 1280x720, 25 FPS
- Ultra-low light lens, 3.6mm f/0.95, 90°x45° FOV
- 2 x passive Power over Ethernet connectors
- 12V power supply (EU plug)
- Aluminium Weatherproof Enclosure
- Heavy-duty Mounting Arm
- Camera configured and tested
- Plug and play

#### For the same price You can chose this lens:

- Ultra-low light lens, 3.6mm f/0.95, 90°x45° FOV
- Ultra-low light lens, 6mm f/0.95, 55°x27° FOV
- Ultra-low light lens, 8mm f/1.0, 40°x20° FOV
- Ultra-low light lens, 12mm f/1.0, 27°x14° FOV
- Ultra-low light lens, 16mm f/1.0, 20°x10°FOV





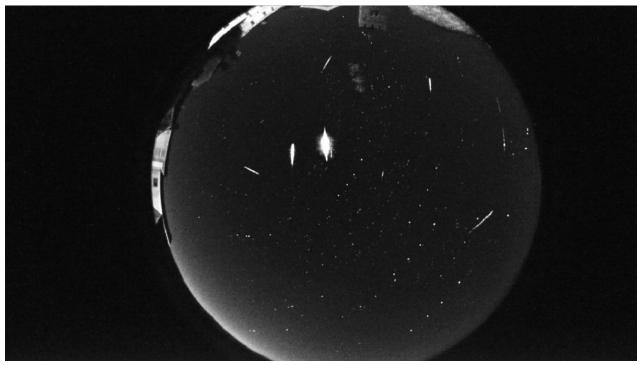
#### <u>AllSky Camera Unit - With Weatherproof Enclosure</u> and with mount for post 355 EUR (2,627.00 HRK)

- Without Weatherproof Enclosure = 250 EUR (1,850.00 HRK)
- Ultra-low-light IMX291 camera, 1280x720, 25 FPS
- Fisheye Lens 1.25mm 180 degree f.2.0
- 2 x passive Power over Ethernet connectors
- 12V power supply (EU plug)
- Camera configured and tested
- Plug and play









2018 AllSky stack (Hum, Croatia) - detected meteors during 10 hours of recording -12 fps mode

#### Software - FREE

- Open-source RMS software: <a href="https://github.com/CroatianMeteorNetwork/RMS">https://github.com/CroatianMeteorNetwork/RMS</a>
- Fully configured

## **About the system**

- $\pm 6^{M}$  stellar limiting magnitude at 25 frames per second with 3.6 mm f/0.95 lens
- Average of <u>15 meteors an hour</u> in dark sky conditions while no major meteor showers are active
  - o 100s of meteors/hr during meteor showers with medium activity!
- Fully automated capture and detection
- Simple initial setup and configuration (only the station code and geo coordinates should be changed) <u>possibility of full plug and play setup prior to shipping if customer provides geo coordinates.</u>
  - Customer only needs to buy 2 ethernet cables of appropriate length at a local store.
- Astrometric and photometric calibration available
  - o Initial calibration done manually, automatic subsequent recalibration
- Free backup of detected data to a cloud server
- Participate in a network of meteor observers from all over the globe! More info: https://gmn.duckdns.org/

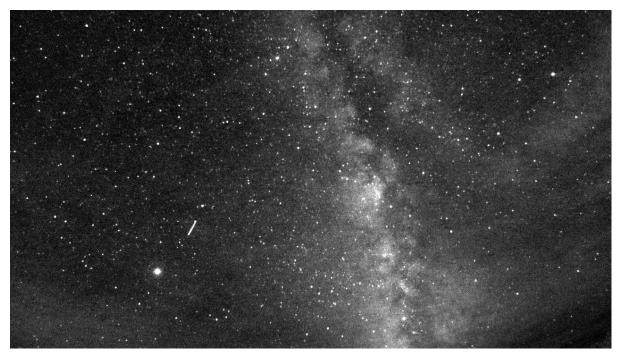
## **Warranty**

We provide a 1-year warranty on the <u>camera board only</u>. We require that the malfunctioning camera board is sent back, and we will send a replacement camera board.

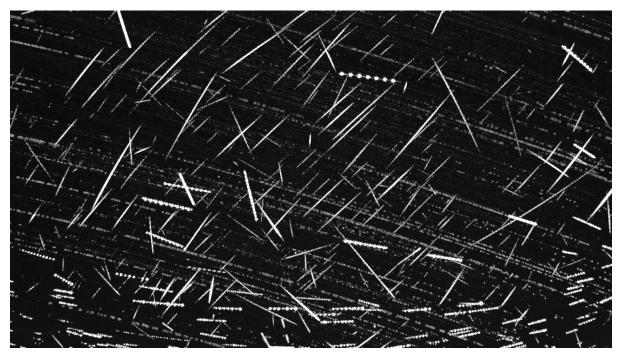
We do not give any warranty on Raspberry Pis, SD cards, power supplies, nor on any other components of the system. The reason is, if any of these break, one can get them locally and replace them with relative ease and minimal cost.

We offer full system diagnosis and repair, please contact us for pricing.

## **Examples of images obtained with the system**



The Milky Way and a meteor from Hum (Croatia) – single maxpixel image (maximum values of 256 video frames,  $\sim 10$  seconds), levels adjusted.



2018 Draconids (Hum, Croatia) – stack of 443 detected meteors during 10 hours of recording.

The shower peak only lasted 2 hours.



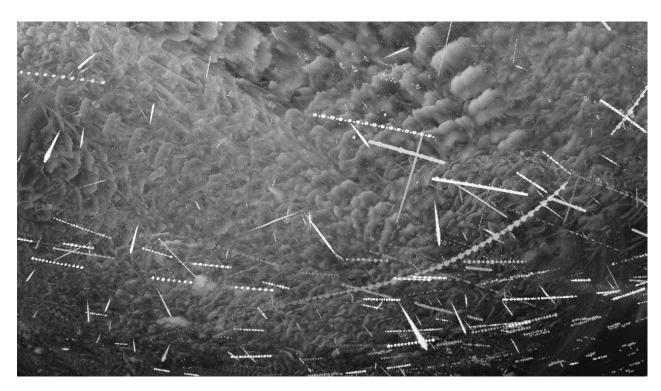
2018 Orionids from Hum (Croatia) – single maxpixel image.



The Milky Way and a meteor from Hum (Croatia) – single maxpixel.



The Milky Way and a meteor from Hum (Croatia) – single maxpixel.



Stack of detection during a cloudy night (Hum, Croatia), 10 hours of recording.

