C42 beyond 40 Megapixel
for Professional Applications

Exclusive Toshiba 41.5 MP sensor

8k Ultra-High Resolution
41.5 Megapixels @ 7 FPS

4k Superspeed Video
4k@30 FPS, 2k@60 FPS

Superb Picture Quality
HDR, BSI, Noise Reduction

Changeable C-Mount
Option: OIS & Shift-Lens

Changeable C-Mount Integrated UHR-Optics

ZEISS

red dot award 2014 winner

if product design award 2014
C42 For professional Applications

- Life Science (small pixel size)
  Microscopy, Endoscopy, Borescopy
- Logistics / Parcel Service Depots
  Bar Code Reading / Scanning
- Security Monitoring (lightweight)
  Quadrocopter, 3D Aerial Imaging
- Video Conferencing
  Webcam, Eye Tracking
- Medical
  Ophthalmology, Cornea/Retina-Scan
- Machine Vision
  Board Inspection, Line-Scan Camera
- Automotive, Google-Street-View
  Driver Assistance System
- Space, Science, Army
  Micro Satellites, Drones
Application

Machine Vision | Microscopy | Life Science | R&D | Education | Video | Medical

Image sensor

- CMOS, HDR, color noise reduction, defect pixel correction
- rolling shutter with global start, 2/3" sensor class
- 1.1µm pixel size, back side illuminated (BSI)
- raw mode: Bayer8, total sensor size 7728 x 5368 with 41.5 MP, future work: 12bit pixel depth

Region of interest (ROI)

User defined

Minimum integration time

- 4k: 8µs
- Full resolution: 16µs

Power consumption

- Powered by USB 3.0 cable
- 350mA (800mA peak)

Frame rate

- 7 FPS (frames per second) at full resolution (7708 x 5352 pixels)
- >30 FPS video at 4k UHD resolution (3856 x 2168 pixels)
- >60 FPS video at 2k Full-HD

Body

- dimensions: 39mm (W), 39mm (H), 28mm (D), weight: 71g, case material: aluminium
- award winning design, tripod adaptor

Interface

- USB 3.0 superspeed (up to 7m cable with micro-B screw lockers, up to 100m with optical USB 3.0 cable)
- optional: external hardware trigger input (TTL)

Temperature range

- -30°C to 70°C (optimal: 45°C)

Optics

- changeable C-mount for adapting any industrial or microscopic optics
- optional: without cover glass/IR filter

Software

- SDK/API programming interface for Microsoft® Windows® 7/8 and for Linux
- MVTec® Halcon®, Cognex® Vision Pro®

Requirements

- Microsoft® Windows® 7/8, Linux
- OpenGL 3.0, intel® HD5000 or higher
- intel®, Fresco Logic® or Renesas® USB 3.0 controller
Application

- Webcam | Machine Vision | Security | Life Science | R&D | Education | Video | Medical | Computational Photography | 3D

Image sensor

- CMOS, HDR, color noise correction, defect pixel correction
- rolling shutter with global start, 2/3” sensor class, 1.1 um pixel size, back side illuminated (BSI)
- raw mode: Bayer8, total sensor size 7728 x 5368 (41.5 MP)

Region of interest (ROI)

- One user defined window

Minimum integration time

- 4K: 8µs
- Full resolution: 16µs

Power consumption

- Powered by USB 3.0 cable
- 350mA with OIS (800mA peak)

Frame rate

- 7 FPS (frames per second) at full resolution (7708 x 5352 pixels)
- >30 FPS video at 4K UHD resolution (3856 x 2168 pixels)
- >60 FPS video at 2K Full-HD

Optics

- integrated ultra high resolution optics
- software controllable \textit{SHIFT-LENS (X,Y)} and \textit{FOCUS (Z)}
- 79° angle of view diagonal
- aperture F/2.2
- focal length f=26mm
- mechanical optical image stabilizer (OIS)
- easy system integration, thanks to wide angle lens for short working distances

Body

- dimensions: 39mm (W), 39mm (H), 28mm (D), weight: 71g, case material: aluminium
- award winning design, tripod adaptor

Interface

- USB 3.0 superspeed (up to 7m cable with micro-B screw lockers, up to 100m with optical USB 3.0m cable)
- optional: external hardware trigger input (TTL)

Software support

- SDK/API programming interface for Microsoft® Windows® 7/8 and Linux
- MVTec® Halcon®, Cognex® Vision Pro®

Requirements

- Microsoft® Windows® 7/8 (64bit), Linux, OpenGL 3.0, intel® HD5000 or higher, intel®, Fresco Logic® or Renesas® USB 3.0 controller
Optical angle: 79° angle of view diagonal
Focal length: 7.2mm
Aperture: F/2.2
Resolution: >41 MP, optimal for very small pixel size 1.12um
Sensor class: Up to 2/3"
Distortion: Low
Mount: M12x0.5, S-Mount
Application: High resolution optics for action cams (e.g. GoPro, etc.)
Optical system: System of 6 lenses (5 plastic molded high performance plastic, one high precision glass element)
Spectral Response Curves

Chief Ray Angle
C42 Light Field Camera Matrix for 3D Hologram Display

- 5x5 Camera Matrix for 3D Light Field Photography & Video
- Scaleable to any Camera Matrix Size
- Compact Camera Dimension for Mobile Use
- Astonishing State-of-the-Art 3D (glasses-free) with great pop-out Effect
- Eye-Catcher for Promotion Tours, Product Launches, Exhibitions, POS
- Customized Real or Rendered 3D-Content for your individual Product Advertising
Hirose SR38 Series Trigger Connector
Vin max 12V
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