

# AP-3200T-10GE

## Technical Datasheet

IMX252



See the possibilities



## Apex Series



The Apex Series cameras are 3-sensor R-G-B prism cameras that separate the incoming light into red, green and blue wavelengths, which are directed to three separate image sensors.

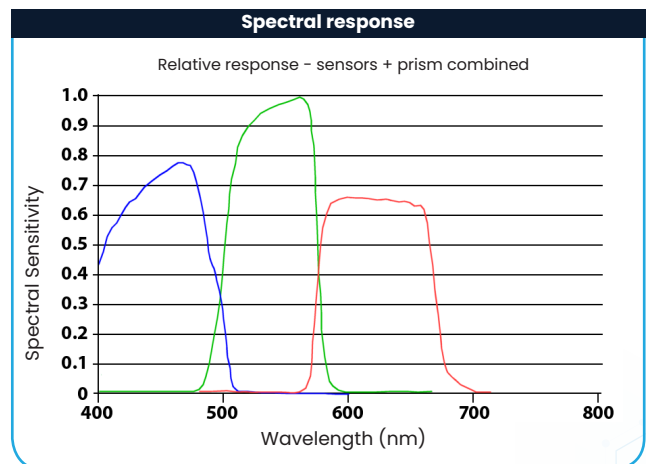
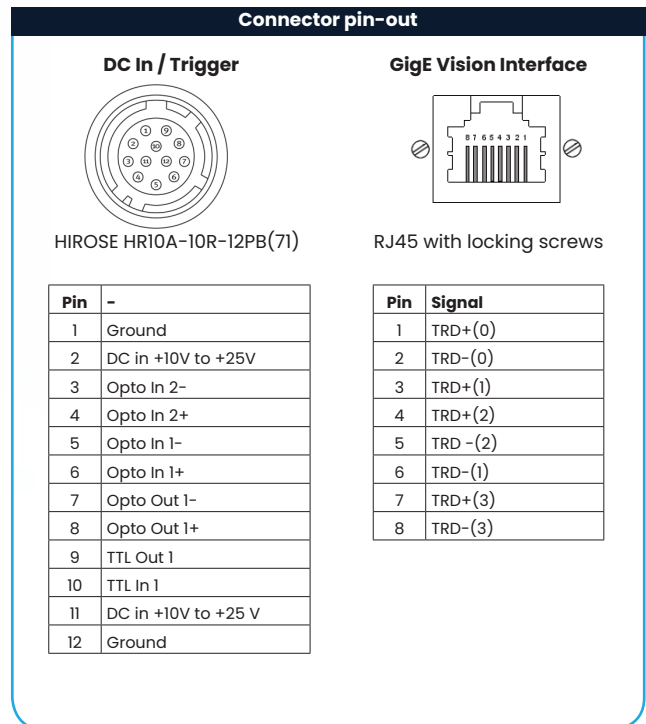
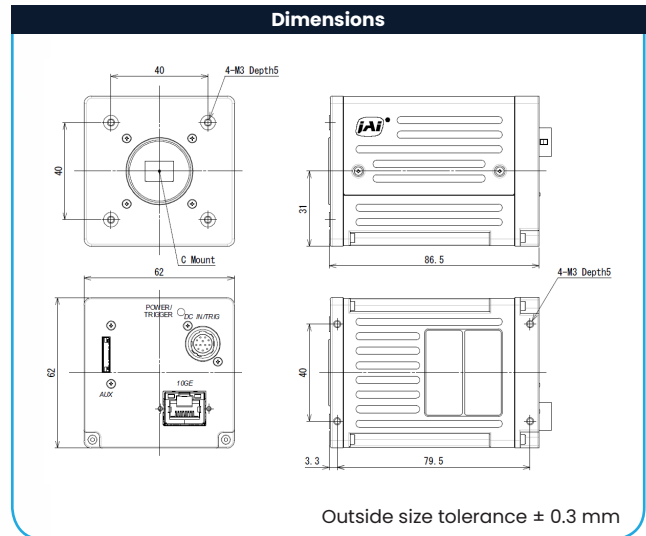
The cameras deliver exceptionally accurate R-G-B raw image data ideal for demanding color machine vision applications across a range of industries including pharmaceutical, electronics, printing/packaging and imaging in microscopy and medical diagnostics equipment.

### Specification Highlights

<b>SENSOR:</b>	IMX252	<b>SHUTTER:</b>	Global Shutter
<b>FORMAT:</b>	1/1.8"	<b>FRAME RATE:</b>	106 fps
<b>PIXEL SIZE:</b>	3.45 x 3.45 $\mu$ m	<b>INTERFACE:</b>	10 Gbps GigE Vision
<b>LENS MOUNT:</b>	C-Mount	<b>RESOLUTION MP:</b>	3.2 MP
<b>SPECTRUM:</b>	Color (Visible)	<b>RESOLUTION WxH:</b>	2064 x 1544 px

Specifications	AP-3200T-10GE
Sensor	1/1.8" 3-CMOS global shutter (IMX252)
Active pixels	2064 (h) x 1544 (v) x 3 (R,G,B)
Frame rate, full frame	106 frames/sec. @ 8-bit
Active area	7.12 mm (h) x 5.33 mm (v) - 8.89 mm diagonal
Pixel size	3.45 μm x 3.45 μm
System clock	74.25 MHz (for pulse generator)
Read-out modes	
Full ROI (single)	2064 (h) x 1544 (v) up to 106 fps H: 16 to 2064 pixels in 16 pixel steps V: 8 to 1544 lines in 4 line steps
Full ROI (single)	Up to 64 non-overlapping scanning areas
Binning	1x2, 2x1, 2x2
EMVA 1288 Parameters	12-bit output format
Absolute sensitivity	3.85 p (λ = 525 nm)
Maximum SNR	40.49 dB
Traditional SNR*	>60 dB (0 dB gain, 10-bit)
Video signal output	8/10/12-bits per channel <sup>1</sup> (24/30/36-bit RGB)
Video modes	Normal, Single ROI, Multi ROI, Sequencer
Gain	Manual control - master mode or individual R/G/B channels Auto gain control - off, continuous, one-push
White balance	Off, 4 presets (3200K, 5000K, 6500K, 7500K), or one-push/continuous AWB using gain or exposure time (3000K to 9000K)
Gamma/LUT	0.45 to 1.0 (9 steps) or 257-point programmable LUT
Shading correction	Flat shading, color shading
Trigger input	Opto In (2), TTL (2), Pulse Generators (4), Software, NAND Out (2), User Output (4), Actions (4)
Exposure modes	Timed/EPS, Trigger Width, Auto
Electronic shutter	(can be set independently for R/G/B channels) Timed: 14.73 μs to 8 sec. in 1 μs steps Trigger width: 14.73 μs to ∞
Auto Level Control (ALC)	Shutter range from 100 μs to 9.4 ms, gain range from 0 dB to +18 dB. Tracking speeds and max. values adjustable.
Pre-processing functions	Color enhancer, edge enhancer, color space conversion (RGB to HSI, XYZ, sRGB, Adobe RGB), blemish compensation (1736 px/channel)
Operating temp. (ambient)	-5°C to +45°C (20 to 80% non-condensing)
Storage temp. (ambient)	-25°C to +60°C (20 to 80% non condensing)
Vibration	3G (20 Hz to 200 Hz, XYZ directions)
Shock	50G
Regulations	CE (EN 55032:2015, EN 55035:2017) FCC Part 15 Class B, RoHS/WEEE
Power	6-pin PoE +10V to +25V DC. 11.6 W typical @ +12 V Not supported.
Lens mount	C-mount
Dimensions (H x W x L)	62 mm x 62 mm x 86.5 mm (excl. connectors)
Weight	270 g
Ordering Information	
AP-3200T-10GE	3-CMOS prism color camera with 10GigE Vision

\*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time.



<sup>1</sup>12-bit output available in video processing bypass mode. See manual for details.

## Product Highlights

- High resolution prism-based 3CMOS camera
- Full spatial resolution and true RGB color values with no interpolation
- Up to 106 fps over high performance 10GBASE-T (10 gigabits per second) interface
- Backwards compatible to NBASE-T (5GBASE-T/2.5GBASE-T) and standard GigE (1000BASE-T)
- Individual analog gain and exposure control for R, G, and B channels
- Color and edge enhancement functions
- On-board RGB to HSI, XYZ, sRGB and Adobe RGB color space conversions
- Single and multi-ROI's
- RGB video output with 8, 10, or 12-bits per channel\*
- Compact size and smart design
- Excellent shock and vibration resistance
- GenICam-compliant GigE Vision 2.0 interface
- C-mount lens mount

\* Some video processing functions not available with 12-bit output

## Additional Product Images



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