![Allied Vision logo](CXP-6 DIN 4)

Bonito PRO

X-2620

- APS-H optical format CMOS sensor
- PoCXP
- 4-DIN type connector
- 79.7 fps at full resolution

26.2 Megapixel CMOS camera for wide temperature ranges - CoaXPress

The Bonito PRO is Allied Vision's brand new high-bandwidth camera series with a CoaXPress interface. Equipped with four DIN 1.0/2.3 connectors the camera is capable to transmit 25 Gbps via quad CXP-6 (6.25 Gbps) high-speed connections. The Bonito PRO features a rugged, fan-less housing design and its powerful feature set make this camera an ideal choice for high-definition imaging applications demanding high-throughput, robustness, and system design-in flexibility. By default, monochrome models ship with no optical filter and color models ship with a Type IRC30 IR cut filter.

Benefits and features

- Monochrome (X-2620B) and color (X-2620C) models
- Extended feature set with Sequencer Control and Multiple Region of Interest selection to support advanced imaging applications
- On-board Defect Pixel and 2D Fixed Pattern Noise Correction for improved image quality
- Simplified firmware update in the field via interface cables using GenICam File Access
- Robust, fan-less design for industrial imaging applications
- Heat-dissipation optimized housing to reduce image noise
- Build-in tripod adapter and multiple mounting holes for eased system integration
- DIN 1.0/2.3 CoaXPress connectors for secure operation in industrial environments
- Single cable solution using Trigger and Power over CoaXPress
- Comprehensive I/O functionality for extended control of connected system components
- Select between B 270 ASG protection glass and filter types: IRC30 IR cut filter or Schneider 486 IR cut filter

See the Modular Concept for lens mount and optical filters options. See the Customization and OEM Solutions webpage for additional options.

Specifications

Bonito PRO	X-2620
Interface	CoaXPress (CXP-6) 4 DIN
Resolution	5120 (H) × 5120 (V)
Sensor	ON Semi PYTHON 25K
Sensor type	CMOS
Shutter mode	Global shutter
Sensor size	Type APS-H
Pixel size	4.5 µm × 4.5 µm
Lens mounts (available)	F-Mount, F-Mount PA, EF-Mount PA, M42-Mount, M42-Mount PA, M58-Mount, M58-Mount PA
Max. frame rate at full resolution	79.7 fps
ADC	10 Bit
Non-volatile memory (Flash)	1024 KB
Imaging performance	

Imaging performance data is based on the evaluation methods in the EMVA 1288 Release 3.1 standard for characterization of image sensors and cameras. Measurements are typical values for monochrome models measured without optical filter.

Quantum efficiency at 529 nm	55 %
Temporal dark noise	14.7 e$^-$
Saturation capacity	8100 e$^-$
Dynamic range	54.4 dB
Absolute sensitivity threshold	15.5 e$^-$
Output	
Bit depth	10 Bit
Monochrome pixel formats	Mono8, Mono10
Raw pixel formats	BayerRG8, BayerRG10
General purpose inputs/outputs (GPIOs)	
TTL I/Os	1 input, 2 outputs
Opto-isolated I/Os	1 input, 2 outputs
Operating conditions/dimensions	
Operating temperature	-20 °C to +70 °C housing (without condensation)
Power requirements (DC)	24 VDC; PoCXP
Power consumption	External power: 15 W at 24 VDC | Power over CoaXPress: 15 W
Mass	500 g (with F-Mount)
Body dimensions (L × W × H in mm)	114.9 × 70 × 70 (with F-Mount and connectors)

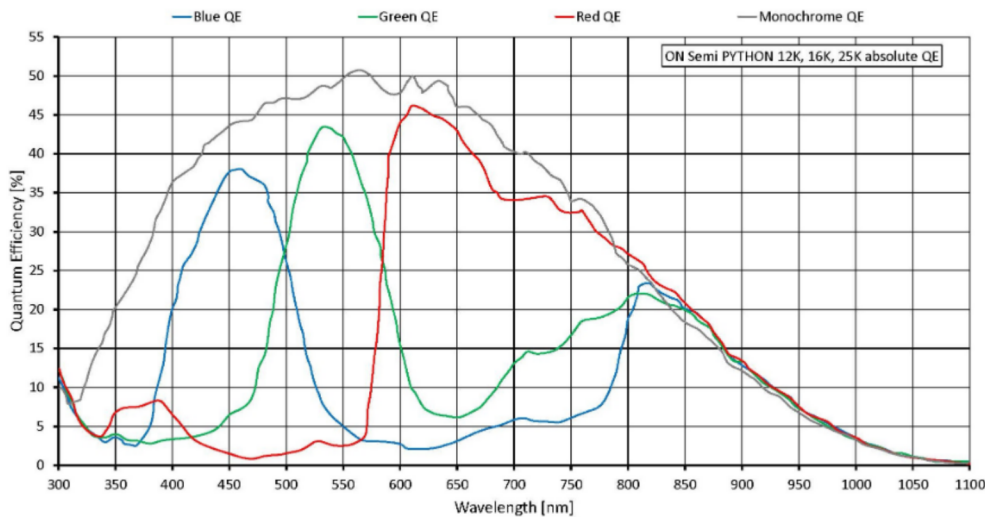| Bonito PRO	X-2620
Regulations	CE: 2014/30/EU (EMC), 2011/65/EU, including amendment 2015/863/EU (RoHS); FCC Class B; CAN ICES-3 (B)

Quantum efficiency

Features

Image optimization features:

- Auto gain (manual gain control: 0 to 22 dB)
- Auto exposure (manual exposure control: 1 μs to 1 s)
- Auto white balance (X-2620C only)
- Binning (horizontal and/or vertical), (sum or average)
- Decimation X/Y
- Gamma correction
- Look-up tables
- Defect Pixel Correction
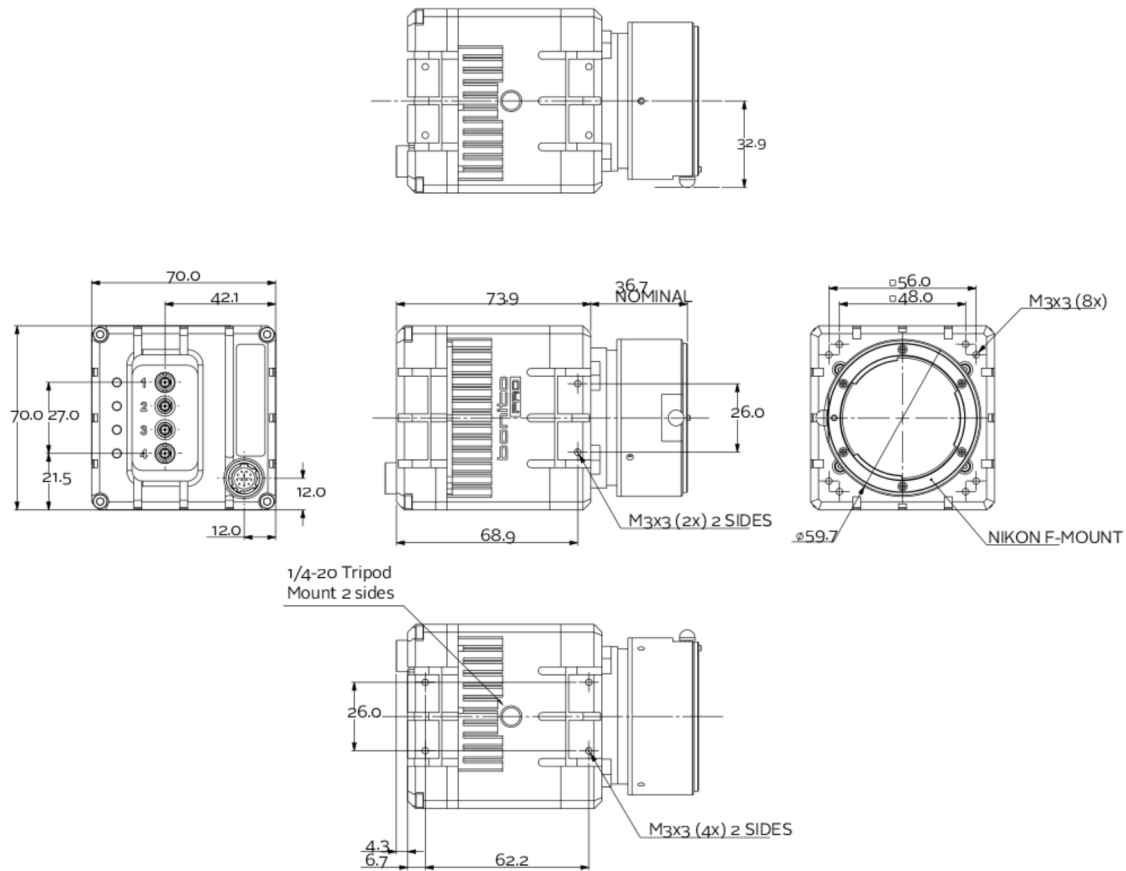- Fixed Pattern Noise Correction

Camera control features:

- Multiple region of interest
- Sequencer Control

- Trigger over CoaXPress
- EF lens control (order option -18)
- Storable user sets
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board and sensor board)

Technical drawing

32.9

70.0
42.1
70.0 27.0
21.5
12.0
12.0

73.9
36.7 NOMINAL
26.0
M3x3 (2x) 2 SIDES
68.9

□56.0
□48.0
M3x3 (8x)
26.0
∅59.7
NIKON F-MOUNT

1/4-20 Tripod Mount 2 sides
26.0
M3x3 (4x) 2 SIDES
4.3
6.7
62.2

Applications

Bonito PRO X-2620 is ideal for a wide range of applications including:

- Automated Optical Inspection of flat panel displays, PCB/electronics, printings
- 2D/3D Surface Inspection (for example, glass)
- Aerial imaging