# C2020
## CMOS 3.1 MP
*Camera Link®*

## Imperx: *C2020*

The CLF-C2020 camera features the Sony Pregius IMX-252 Global Shutter CMOS sensor with a native resolution of 2064 x 1544 in a 1/1.8" optical format delivering up to 148 frames per second with Camera Link® Full, PoCL output. The Sony Pregius image sensor delivers outstanding sensitivity and excellent image quality. Imperx puts you in control by providing full access to raw data without corrections. Using the simple intuitive graphical user interface, you can quickly apply or remove image corrections. The C2020's flexibility, image quality, and speed make it suitable for a broad range of diverse and demanding applications, but "one size doesn't fit all," and Imperx can help optimize the camera to your exact requirements.

## Specifications

| Feature | Description |
|---|---|
| Interfaces available | Camera Link® Base, Medium, Full w/PoCL |
| Resolution | 2064 (H) x 1544 (V) |
| Sensor | Sony Pregius IMX-252 CMOS Color/Mono |
| Sensor Format | 7.0 mm (H) x 5.3 mm (V), 1/1.8" diagonal |
| Pixel Size | 3.45 microns square |
| Shutter | Global shutter (GS) |
| Digitization | 8, 10, 12 bit |
| Frame Rate | 148 (8-bit), 121 (10-bit), 54 (12-bit) |
| Pixel Clock Rate | 37.125MHz |
| Dynamic Range | 71dB |
| Output Bit Depth | 8, 10, 12 bit |
| Analog/Digital Gain | Manual, auto; 0-48 dB, 480 steps |
| White Balance | Manual, Auto, Off |
| Shutter Speed | 1 µs/step, 14 µs to 16.0 sec. |
| Exposure Control | Off, internal, external, auto |
| Regions of Interest (ROI) | 2 ROI |
| Binning | 1x2, 2x1, 2x2 |
| Sub-sampling | 1x2, 2x1, 2x2 |
| Trigger Inputs | External, pulse generator, software, computer |
| Trigger Options | Edge, debounce |
| Trigger Modes | Free run, Standard, Fast |
| External Inputs/Outputs | 2 IN (OPTO, LVTTL) / 2 OUT (OPTO, TTL) |

| Feature | Description |
|---|---|
| Strobe Output | 2 strobes, programmable position and duration |
| Pulse Generator | Yes, programmable |
| Data Correction | 4 LUTS; 1 LUT pre-programmed with Gamma 0.45; Bad pixel correction (static, dynamic) |
| Lens Mount | C-Mount (default) |
| P-IRIS | Optional |
| Supply Voltage Range | 12VDC (5V – 30V), 1.5 A inrush |
| Camera Current | Typical: 200mA/12V |
| PoCL | PoCL capable in medium/full mode |
| Size - Width/Height/Length | 37mm (W), 37mm (H), 48.6mm (L) |
| Weight | 91.8g |
| Vibration, Shock | TBD |
| Environmental | -30° C to +75° C |
| Humidity | 10% to 90% non-condensing |
| MTBF | TBD |
| Military Standard | MIL-STD-810F |
| Regulatory | FCC Part 15 Class A, CE, RoHs |

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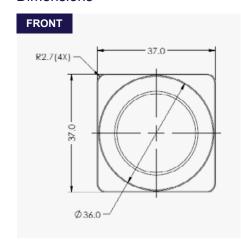
# Imperx: *C2020 Applications*

The CLF C2020 incorporates a number of unique features tailored to reduce system complexity, maximize interface bandwidth, and expand the usable operational range.
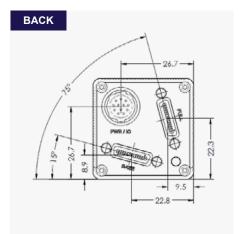
Aerospace ● Satellites ● Surveillance ● Ball Grid Array ● Printed Circuit Board Inspection ● Motion Analysis ● Broadcast Television ● Telepresence ● Unmanned Aerial Vehicles ● Machine Vision ● Intelligent Traffic Systems ● Aerial Imaging ● Open Road Tolling Systems ● Situational Awareness
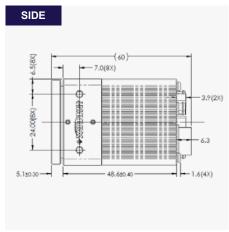
## Absolute Quantum Efficiency

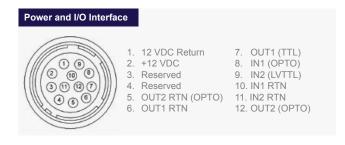Color Spectral Response      Sony IMX252    Mono Spectral Response      Sony IMX252



## Dimensions



FRONT



BACK



SIDE

## Ordering Information

| Interface Available |
| --- |
| Camera Link® Full (CLF) |
| 3G-SDI |

| Sensor Types available |
| --- |
| Monochrome |
| Bayer Color |

| Lens Mounts |
| --- |
| C-Mount (Default) |

| Accessories (Sold separately) |
| --- |
| PS12V04A-Power Supply w/ 1 input and 1 output |

## Software/Drivers/Interface



## Hirose Connectors

**Power and I/O Interface**



1. 12 VDC Return
2. +12 VDC
3. Reserved
4. Reserved
5. OUT2 RTN (OPTO)
6. OUT1 RTN
7. OUT1 (TTL)
8. IN1 (OPTO)
9. IN2 (LVTTL)
10. IN1 RTN
11. IN2 RTN
12. OUT2 (OPTO)

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