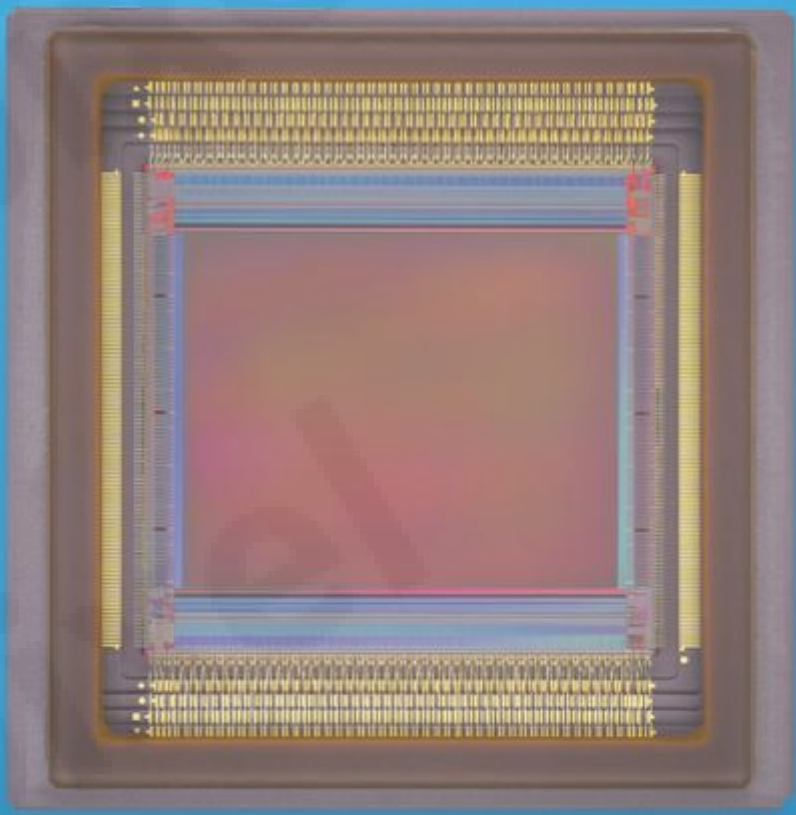


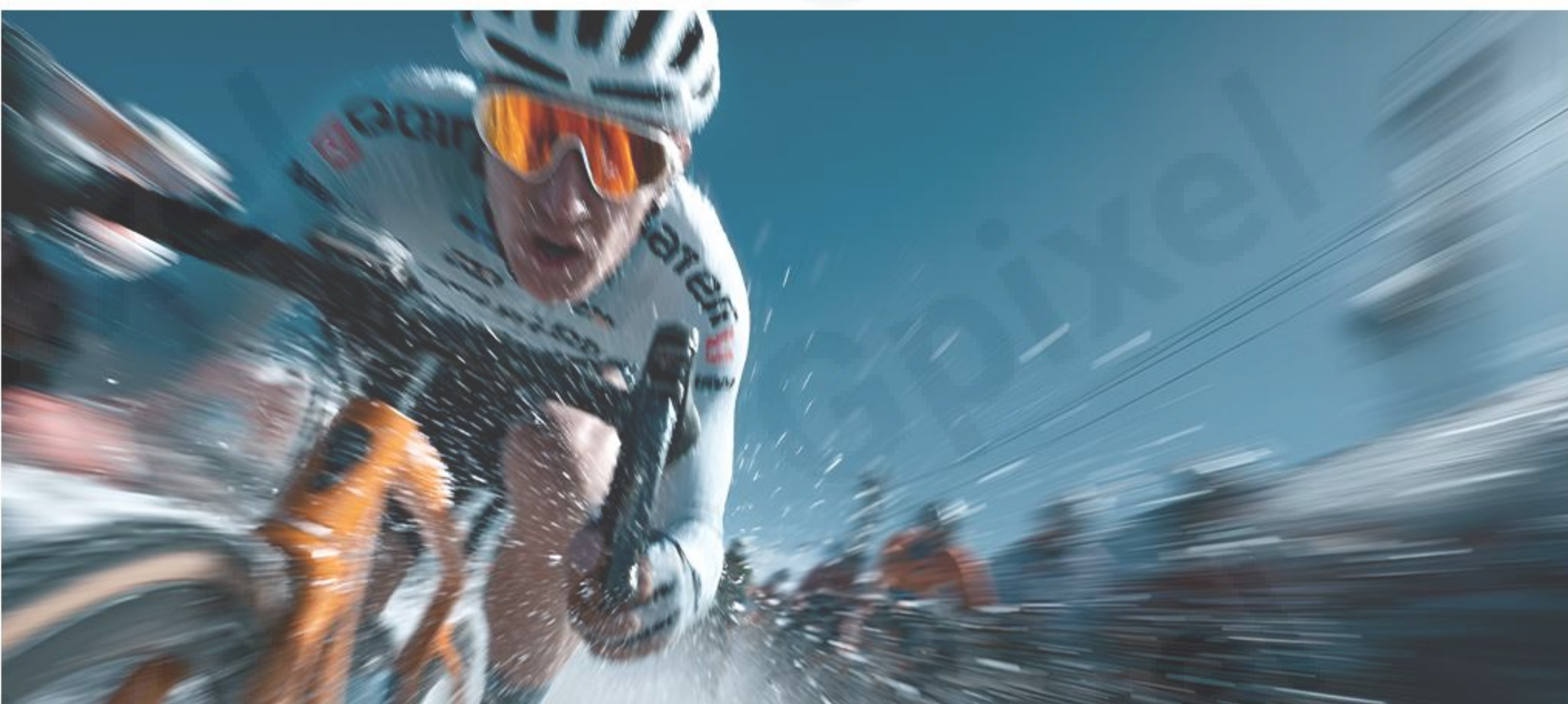


GSPRINT4521

21 MP 4.5 μm 1.84" GLOBAL SHUTTER HIGH SPEED IMAGE SENSOR

GSPRINT4521 is a 21 Megapixel (5120 x 4096) APS sized (29.5 mm) high speed, global shutter image sensor designed with the latest 4.5 μm charge domain global shutter pixel. It achieves more than 28 ke^- FWC, 6.3 e^- temporal noise and > 68.8 dB dynamic range. Using advanced 65 nm CIS process and light pipe technology, the sensor achieves 63% QE and more than 1/40,000 shutter efficiency. With on-chip charge binning, FWC can be further increased to >120 ke^- and frame rate is quadrupled.

GSPRINT4521 will be offered in different speed variants. The full speed variant consists of 160 pairs Sub-LVDS channels running at 1.2 Gbps which delivers a stunning 1000 fps in single gain operation at 8 bit per pixel and full resolution and more than 3000 fps with a ROI of 1024 rows in a dedicated 3D laser profiling mode. These unique features make it an ideal solution for demanding imaging in high-end applications such as high speed 4K video, industrial inspection, motion analysis and life science imaging.



Key Features and Benefits

- ▶ High Frame Rate
- ▶ Low Noise Global Shutter
- ▶ Dual Gain HDR Mode

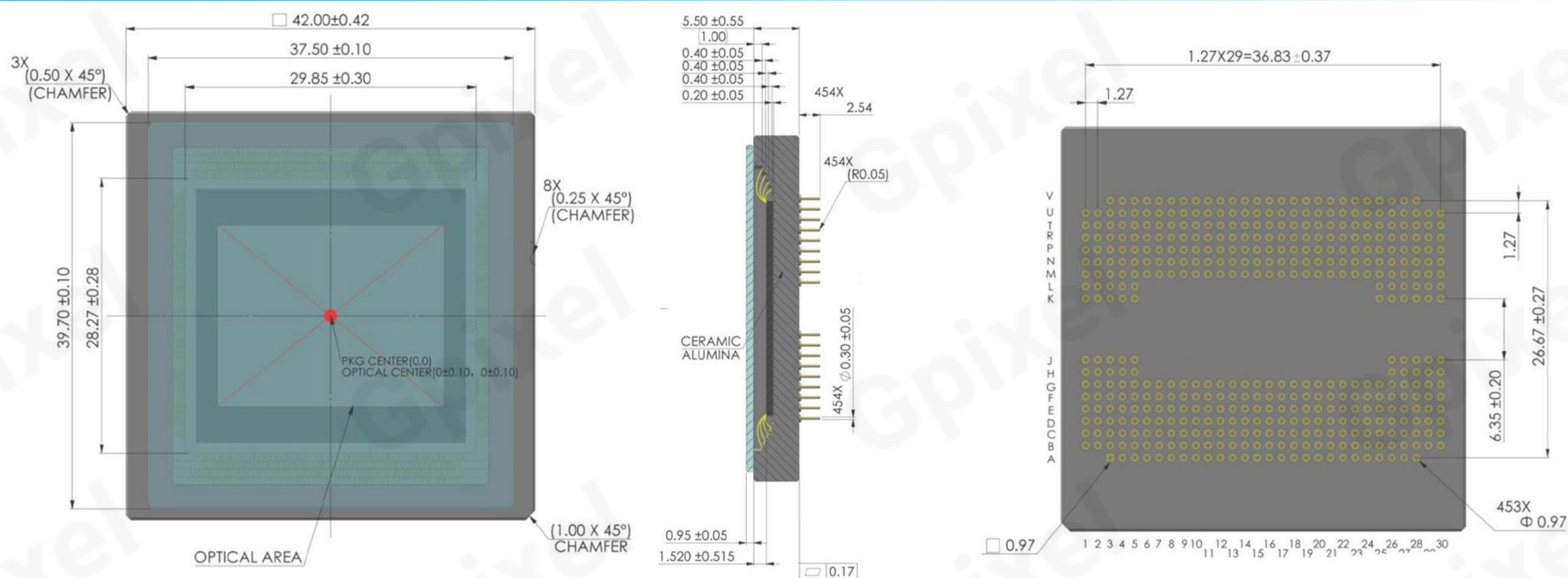
Applications

- ▶ Automation & Inspection
- ▶ Cinematography
- ▶ High Speed Imaging

Specifications

Nr of Active Pixels	5120 (H) x 4096 (V)	Optical Format	APS-C
Pixel Size	4.5 μm x 4.5 μm	Photosensitive Area	23.04 mm x 18.43 mm
Shutter Type	Global Shutter	Peak QE	> 63% (500 nm)
Full Well Capacity	32 ke ⁻	PLS	< -86 dB
Temporal Noise	3.5 e ⁻	Angular Response	17° (80% Response)
Dark Current	11.4 e ⁻ /pixel/s (50°C)	Max. SNR	45 dB
Dynamic Range	68 dB (12 bit)	Max Frame Rate	1000 fps (8 bit) 500 fps (10 bit) 250 fps (12 bit)
Output Format	160 ch Sub-LVDS	Channel Multiplexing	160/156/152/.../4 (any multiple of 4)
ADC	8/10/12 bit	Max. Data Rate	192 Gbps
Chroma	Mono,RGB Color	Power Consumption	6 W
Supply Voltage	3.3 V (analog) 1.8 V (I/O) 1.2 V (digital)	Package	454 pins μPGA (42 mm x 42 mm)

Package Drawing



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