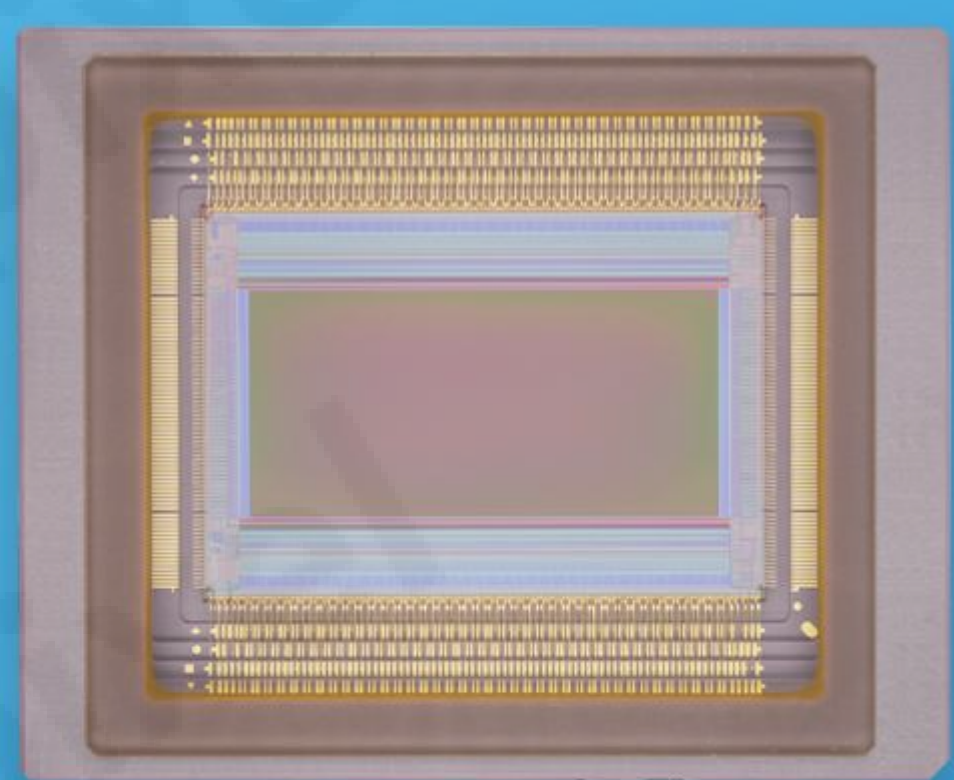


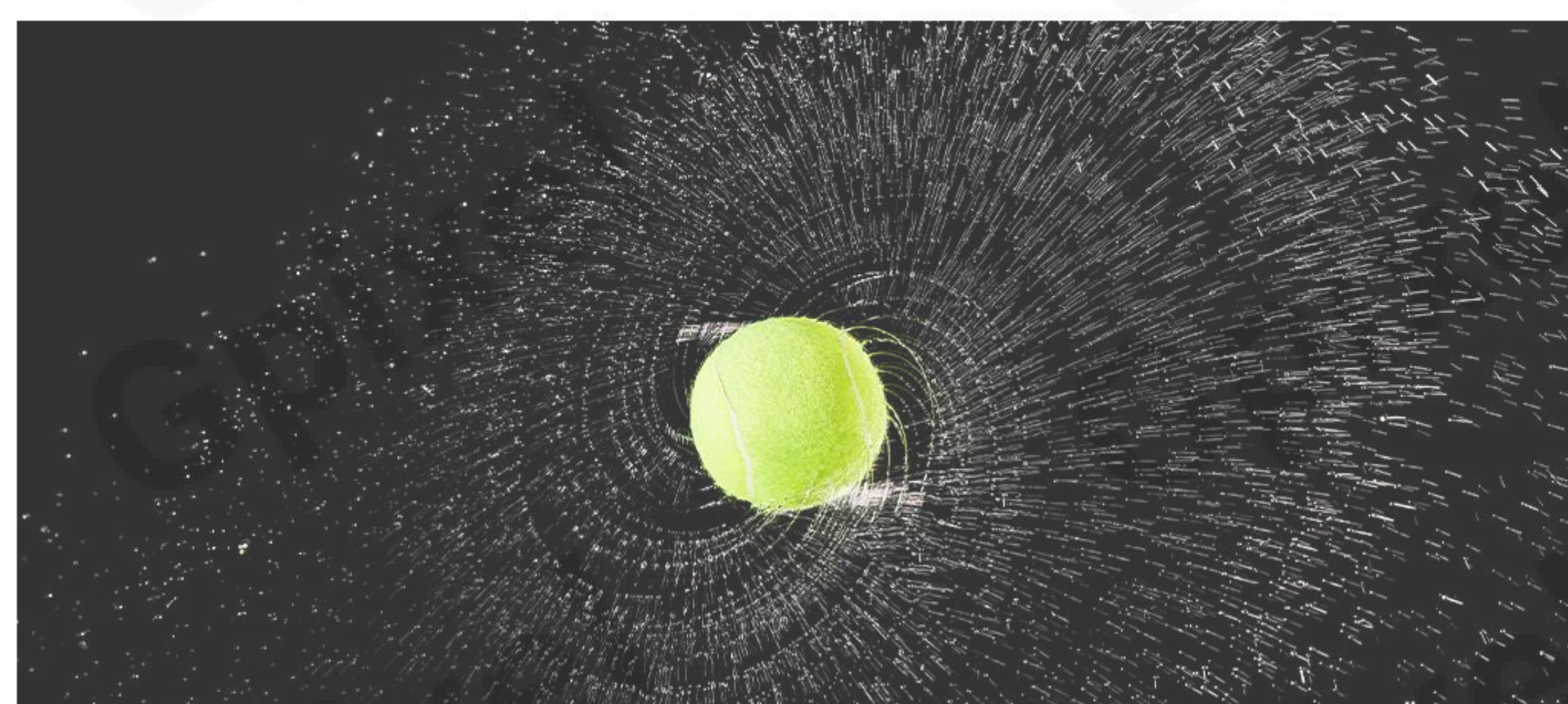


GSPRINT4510

10 MP 4.5 μm 4/3" GLOBAL SHUTTER HIGH SPEED IMAGE SENSOR

GSPRINT4510 is a 10 Megapixel (4600 x 2160) 4/3 sized high speed, global shutter image sensor designed with the latest 4.5 μm charge domain global shutter pixel. It achieves more than 30 ke^- FWC, less than 3 e^- rms read noise and 67.8 dB dynamic range. Using an advanced 65 nm CIS process and light pipe technology, the sensor achieves > 65% 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.

GSPRINT4510 will be offered in different speed variants. The full speed variant consists of 144 pairs Sub-LVDS channels running at 1.2 Gbps which delivers a stunning 1920 fps in single gain operation at 8 bit per pixel and full resolution and 3800 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
- ▶ Vertical ROIs with Speed Boosting
- ▶ Programmable Analog and Digital Gain
- ▶ External Triggering

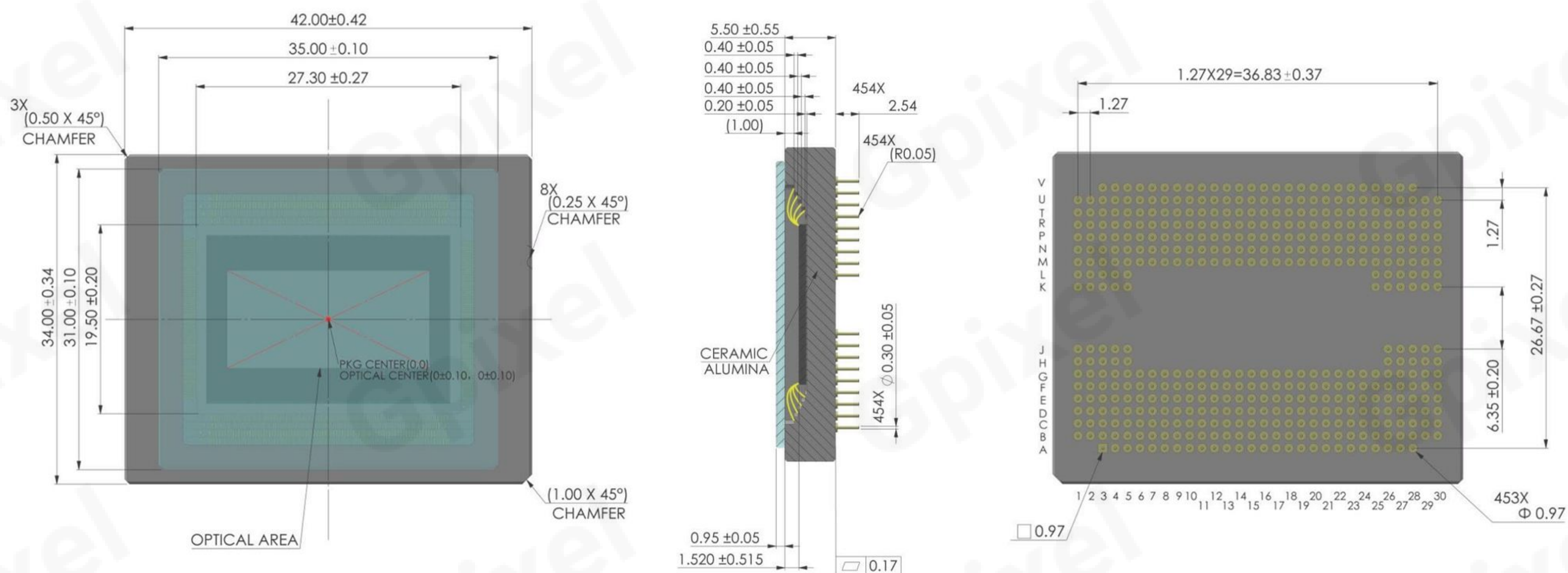
Applications

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

Specifications

Nr of Active Pixels	4608 (H) x 2176 (V)	Optical Format	4/3"
Pixel Size	4.5 μm x 4.5 μm	Photosensitive Area	20.74 mm x 9.79 mm
Shutter Type	Global Shutter	Peak QE	> 67% (550 nm)
Full Well Capacity	> 30 ke ⁻	PLS	< -86 dB
Temporal Noise	< 4 e ⁻	Angular Response	20° (80% Response)
Dark Current	11.4 e ⁻ /pixel/s (50°C)	Max. SNR	44.7 dB
Dynamic Range	68 dB (12 bit)	Max Frame Rate	1920 fps (8 bit) 1000 fps (10 bit) 480 fps (12 bit)
Output Format	144 ch Sub-LVDS	Channel Multiplexing	160/156/152/.../4 (any multiple of 4)
ADC	8/10/12 bit	Max. Data Rate	172.8 Gbps
Chroma	Mono,RGB Color	Power Consumption	2.5 W
Supply Voltage	3.3 V (analog) 1.8 V (I/O) 1.2 V (digital)	Package	454 pins μPGA (42.0 mm x 34.0 mm)

Package Drawing



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GP-PR250801 V1.1

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