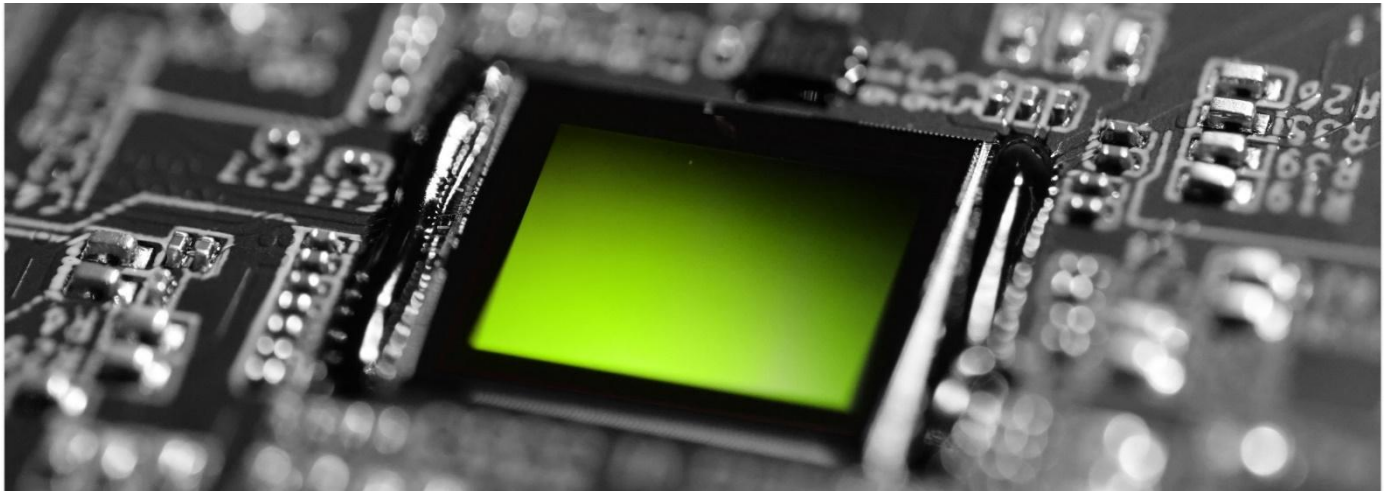




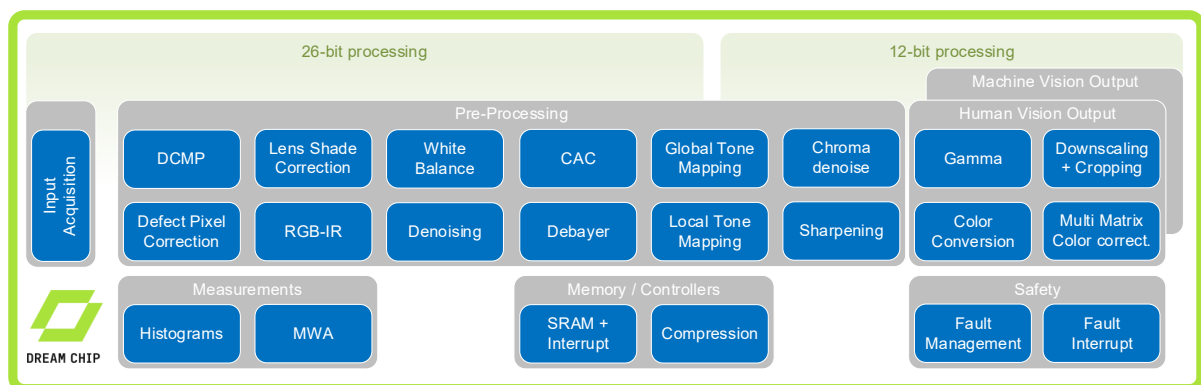
X Series: *ISP-X418*

Dream Chip's Real-time Pixel Processor for Vision applications is a scalable and configurable High Dynamic Range (HDR) capable image signal processor (ISP). The processing pipeline consists of all necessary modules allowing to output HDR tone-mapped images of highest possible quality.

The X Series provides configurable input and output data widths. It supports input image frames with 8 to 26-bit amplitude resolutions, while it can output tone-mapped frames with 12 bits per pixel. Furthermore, the ISP provides a 26-bit DMA data interface as an alternative input path, and a 32-bit PVCI configuration interface.

The RPP ISP has three parallel outputs, one for human vision, one for machine vision and one for Infrared.

The X Series has physical extension for Functional Safety and is ISO26262 certified.



The X4 Series contains new improvements compared to its predecessors. Key differentiations are improved Chroma Denoising, further improved measurement statistics, Multi-Phase Color Correction and area / performance optimizations.

Specification:

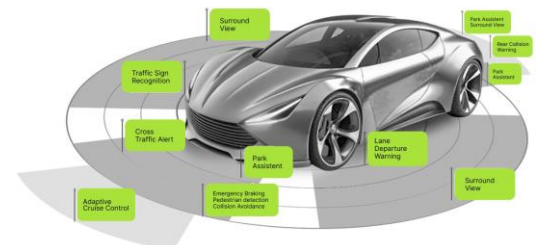
Sensor input	Bayer / clear pixel / mono / infrared 2x2 & 4x4 support RGGB / RCCB / RCCC / RGBIR Configurable 28-bit input (up to 26 valid bits) – up to 64 Mpix resolution
Throughput	1.3 gigapixels / second, e.g. 16 MP @ 60 fps
ISP output	Streaming output for Human Vision, Machine Vision and Infrared Vision

ISP-Advantages:

- Modular approach
- Scalable resolution up to 64 MP
- Customizations
- Very low latency
- Small area footprint
- ISO26262 - ASIL B certified
- FPGA validation platforms available
- Tests with different sensors
- RAW output for calibration
- Calibration tools
- Bit-true simulation tools
- Software example code

Applications:

- Automotive vision
- ADAS applications
- Driver/in-cabin monitoring systems
- High resolution front view
- Machine vision
- Industrial
- Image capture
- Digital video recording



Dream Chip's ISP is designed with a modular approach, allowing seamless scalability to match a wide range of application requirements. This flexibility enables customers to customize functionality, balancing performance, power efficiency, and silicon area optimization. With dynamic resolution from 12 to 28 bits, resolutions up to 64 MP, 120 fps, it delivers **high-speed, high-quality image processing**. Its adaptable architecture allows new features to be integrated or functions to be optimized, ensuring optimal efficiency, reduced power consumption, and a tailored imaging pipeline.

Looking for a **flexible, high-performance ISP solution** tailored to your needs? Let's discuss how Dream Chip can support your project with **scalable architecture, cutting-edge performance, and expert customization**. **Get in touch with our ISP experts today.**

