DREAM CHIP

H-SERIES

Dream Chip's High Speed Real-time Pixel Processer is a scalable and configurable image signal processor (ISP) for standard dynamic range applications. The processing pipeline consists of all necessary modules to support output images of the highest possible quality where it's optimized for area and power.

Features:
– 1 ITU-R BT.656/601 compatible input video interfaces (12 Bit Bayer / 2×12 bit YUV 4:2:2)
– 1 CVI streaming output interfaces for Human Vision
– Throughput of 12 MP @ 120 frames per second (4kp120) which is equivalent to a pixel rate of 1440 MHz.
– Bad pixel correction
– Bilateral denoising
– Black level compensation
– Bayer pixel sensor support
– Clear pixel sensor support
– Color correction
– Cropping of output pictures
– Chromatic Aberration Correction
– Decompanding
– Downscaling support
– Enhanced debayering
– Lens shade correction
– Local tone-mapping
– Monochrome sensor support
– Noise filter
– RAW data presentation
– RGB independent programmable gamma correction for sensor adaptation
– RGB Look-up Table
– Sharpening and blurring filter
– **Extended Statistics**
  • For Automatic White Balance (AWB) measurement and control
  • For Auto Exposure (AE) measurement and control
  • Multiple histogram measurements

Design Options:
– Customizations
– Feature extensions
– Machine vision output
– RGB-IR
– FPGA platforms available

Deliverables:
– Soft IP
– Example software drivers and application
– User Manual, Programming Guide
– Sensor calibration and tuning tools
– ISP simulator