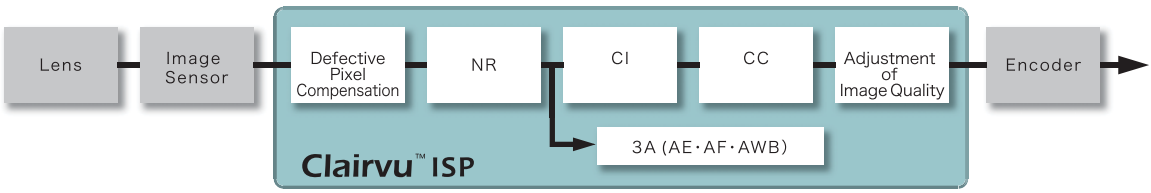
ISP Algorithm Clairvu™

Proprietary ISP (image signal process) engine for crisp, low pseudo - color, low artifact, color image processing.



High Quality Image

Crisp, low pseudo - color, and low artifact color interpolation process produces high quality images equivalent to that of non - real time PC - based DPE application software.

Precision Color Reproduction

Enables precise color reproduction by way of sophisticated color compensation technology (multiple - axis division of the color plain)

High Speed yet Cost Effective

Algorithm engine that processes 1920x1080 progressive image signals at 60fps can be implemented into a relatively small, a medium sized FPGA.

Color Interpolation

Color interpolation process produces color images out of signal output from Bayer array color sensor, and significantly affects its image quality. "Clairvu™" enables high resolution, low pseudo-color, and low noise at the same time.

Auto Exposure

According to the detected luminance conditions, diaphragm (lens iris), gain level, and shutter speed are controlled to keep the brightness of the image constant.

Auto Focus

Contrast detection method that defines the focus position for the maximum contrast as the full focus. Eliminating signal noises as much as possible, auto focus function is effective even for difficult scenes, such as the one under low illumination, telescopic zooming, and others.

Auto White Balance

Human eyes are color flexible and sense the original colors even when the ambient light source changes. To acquire natural images, cameras need to have a similar function to human eyes, in other words, the function to correct the color depending on illuminating conditions. This is a so-called "White Balance" function. In addition to the conventional AWB to make the average color of the image be close to gray, CIS developed auto white balance algorithm to control its balance more precisely, estimating the color of the lighting source.

＜Signal Processing Technologies – Examples ＞

Color Correction

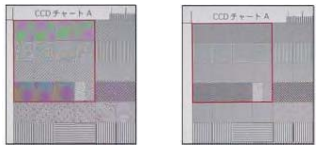
Sophisticated Color Compensation Technology

No Color correction | With Color correction

Color Interpolation

Low Pseudo-color

Non CIS camera | CIS camera



AWB

Auto white balance for natural color

Regular AWB | CIS AWB