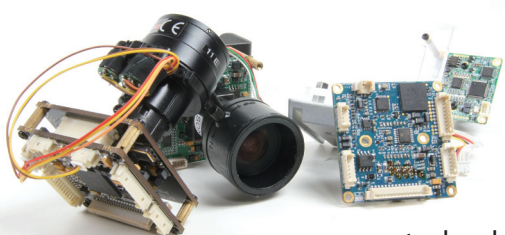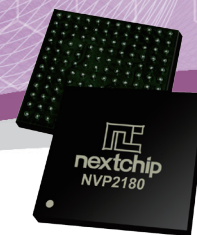# High-performance CCD Image Signal Processor NVP2180/2190

NVP2180/2190 is a high-end and high-performance image signal processor (ISP) to upgrade your CCTV camera.

With αWDR(Alpha Wide Dynamic Range) and F-DNR(Fog Digital Noise Reduction), you will have a distinct image in any severe circumstances: ambient light, fog, rain, etc. αWDR is advanced technology than conventional WDR will make you look into the bright scene as well the dark scene at the same time. This enhanced image can be also improved by using combination of D-WDR and 3D-NR. In addition, new special features include DIS (Digital Image Stabilizer), PIP (picture in picture), Polygon privacy mask zone, which bring with effective higher performances. More features such as sens-up, smart digital zoom, motion detection, and user define OSD, etc. will help you to have better images you need.

Features

- α Wide Dynamic Range (αWDR)
- F-DNR (Defog)
- Semi Autofocus (AF)
- Digital Image Stabilizer (DIS)
- Smart-NR (3D-NR+Motion detection)
- D-WDR
- Low shutter(up to x 256)
- Dead pixel correction
- Motion detection (4 areas)
- Polygon privacy mask (8 zones)
- Smart IR / Smart D-Zoom
- Line-lock external synchronization
- PIP / User defined OSD
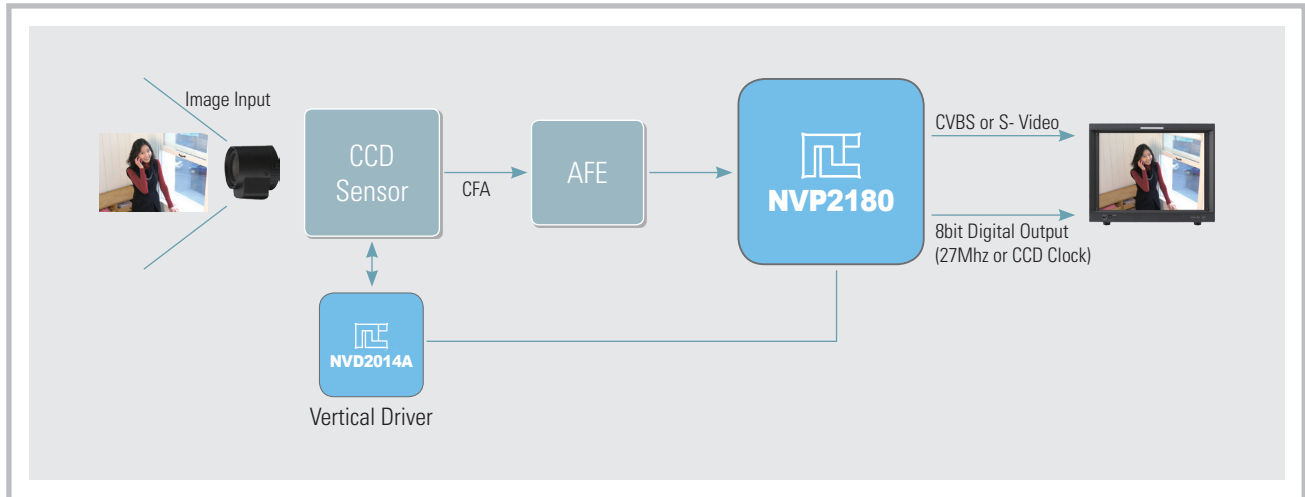- On-Chip SDRAM & MCU & Flash memory

Specifications

In&Out I/F	• Input : NTSC/PAL, Normal / Double Density 760H/960H CMYG color CCD • Output : NTSC/PAL analog S-Video or CVBS BT.656 digital out
Image Process	• Programmable AE/AWB/GAMMA • Support 650TVL / 700TVL • Dead pixel correction 512 points (auto / manual) • On-Chip 1-Ch ADC (4x1 MUX) • On-Chip CCD timing generator
Etc	• Operation voltage : 3.3V/1.8V/1.2V • Package: 144-FBGA (10mm×10mm 0.8p)

Applications

- αWDR high-end analog camera
- 760H / 960H analog camera (box, dome, module, etc.)

Application **Diagram**

● Analog Camera Application

Image Input

CCD Sensor → CFA → AFE → **NVP2180**

CVBS or S- Video

8bit Digital Output
(27Mhz or CCD Clock)

NVD2014A
Vertical Driver

■ Find a blue ocean with NVP2180/2190. With the same image sensor you can excel your competitors.
Embedded MCU, SDRAM and flash memory will enhance the full of new features in your system more cost-effective.

● NVP2180/2190 Main Features

αWDR

Enhanced WDR, αWDR Dynamic Range shows up the detailed image both saturated dark and white field.

F-DNR (Defog)

Be able to distinguish image in harsh condition such as foggy weather.

DIS

Digital Image Stabilizer prevents the unfocused image by shaking and secures the clear image.

650/700TVL

Provide the distinct image with high resolution, 650/700TVL. (Supporting 700TVL with 960H CCD sensor)