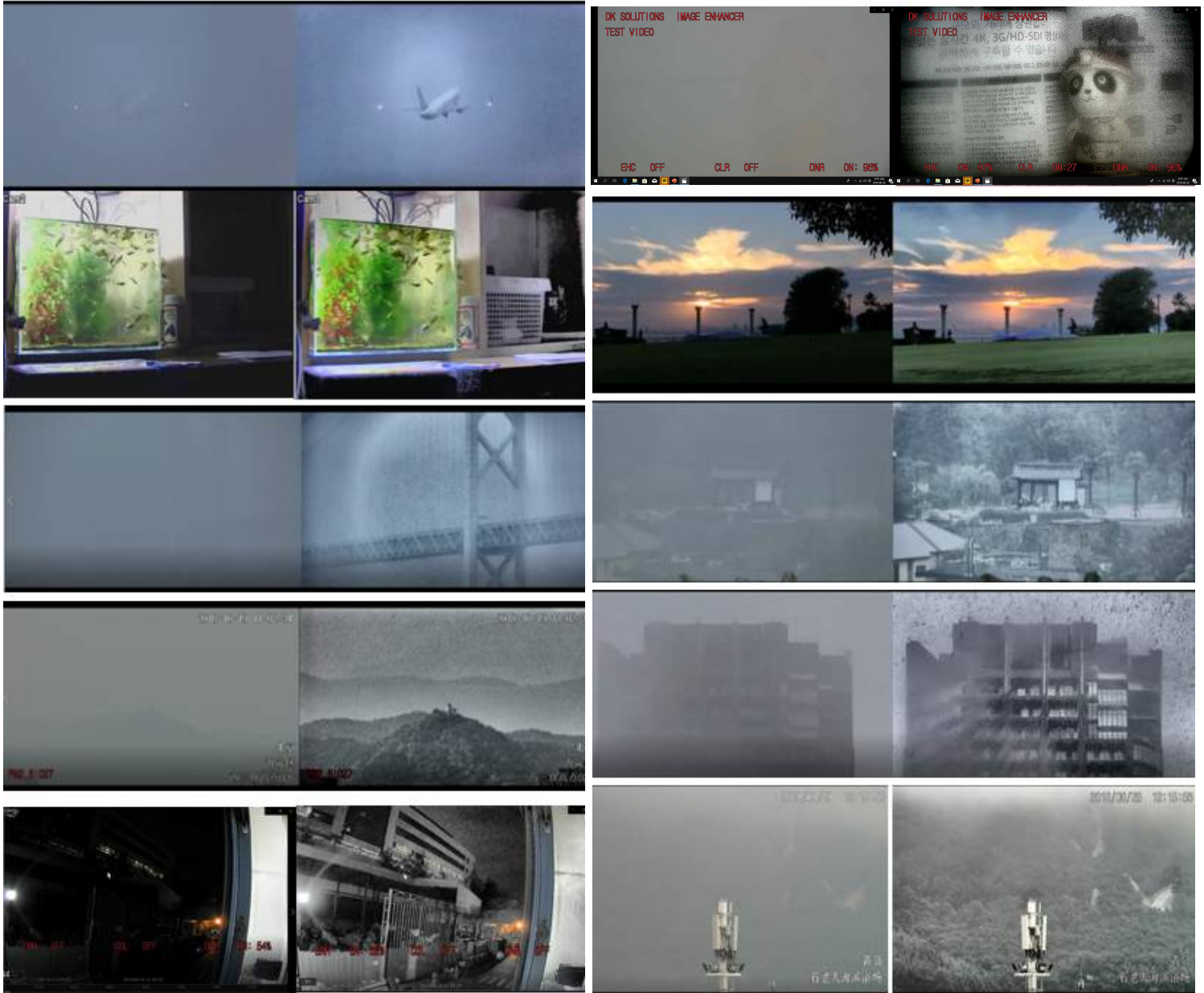# Check what you missed

Real time full HD (HDMI/SDI Interface) video processing unit

Real Time HD Video Enhancement Unit (HD-SDI & HDMI Interface)

PIE-01HD-1U

1. Product Overview

PIE-01HD-1U is a video processing system that significantly improves the visual clarity of Full HD real-time video to provide more information to operators for better decision support. It improves visibility especially in fog, rain, dust, smoke, underwater, low light, and restricted visibility. It is possible to emphasize images with less change in color tone overall, and it is possible to improve precision such as surface inspection. Real-time image processing is possible with little frame delay. No parameter adjustment is required for each scene. In addition to image sharpening, noise reduction and color correction are also available.

2. Image sharpening algorithm

- Explore dynamic areas such as dark areas, whitewashed areas, and areas with poor contrast, and expand the dynamic range with special algorithms for those areas.
- The judgment of the area is processed for each pixel, so even if the extremely bright part and the dark part are mixed due to the backlight, the balance of the whole image is not damaged.
- cccc
- This product reinforces the noise / contrast measures based on this principle.

Real Time HD Video Enhancement Unit (HD-SDI & HDMI Interface)
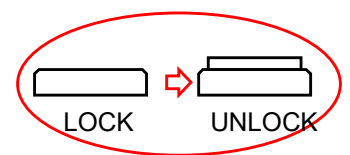
3. Features

- Image sharpening technology (Dynamic Range Enhancement) on a full HD standard video signal

- HDMI or HD-SDI as video input for maximum connectivity

- Improve image clarity in live video

- Real-time video processing with no latency

- Full HD (1920x1080 60Hz) resolution video processing

- Plug & Play architecture

- Front adjustment buttons for image enhancement, color correction, noise improvement

- Remote control of image processing by serial communication

- On screen display of level adjustment

- Both HDMI and HD-SDI output at the same time

- Various applications (military, medical, disaster monitoring, fire fighting, cultural property exploration, maritime surveillance, aerial photography)
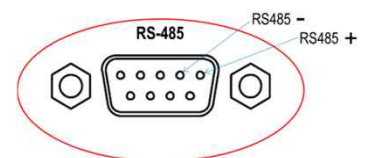
4. Part Descriptions

LED Indicator Enhancement Lock Button
Color
DNR

LOCK UNLOCK

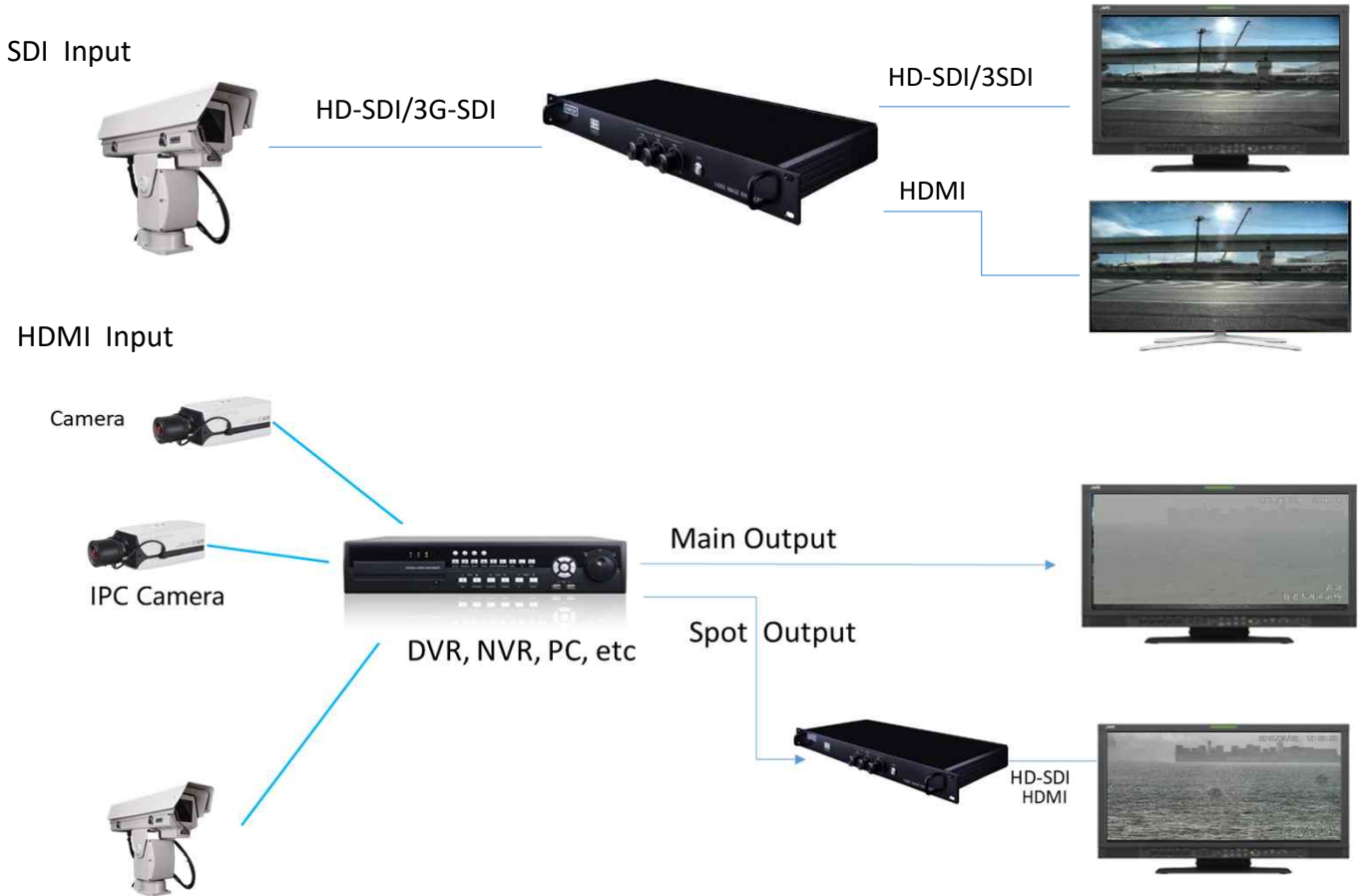The red LED will be on when unlocking and the image can be improved with the control button

HDMI SDI
Input Input SDI
Output

HDMI
Output

RS-485
Serial

Network
(RJ45, N/A)

Power Switcher
(AC100~220V)

RS-485 RS485 −
RS485 +

Real Time HD Video Enhancement Unit (HD-SDI & HDMI Interface)

5. Basic Configuration

SDI Input

HD-SDI/3G-SDI

HD-SDI/3SDI

HDMI

HDMI Input

Camera

IPC Camera

DVR, NVR, PC, etc

Main Output

Spot Output

HD-SDI
HDMI

6. Technical Specifications

① Model No ：PIE-01HD-1U
② Video Processing Algorithm ：DRE(Dynamic Range Enhancer)
    - Front Adjustment Button, RS-485, TCP/IP (TBD)
③ Function : Enhancement, Noise Reduction, Color Adjustment
④ Video Input ： HD SDI, SD SDI (BNC, 75Ω), HDMI(Ver. 1.3)
⑤ Video Output (Processed)： Both HD-SDI(BNC,75Ω) and HDMI
⑥ Video Format：
    - 1080p/30, 1080p/25
    - 1080i/60, 1080i/50
    - 720p/60, 720p/50
⑦ Serial Interface ：RS-485
⑧ Control Software ：
    - OS：Windows
    - Function：Function ON/OFF (Enh, NR, COR)
    - Level Adjustment
⑨ Operation Temperature : 0 ~ 55 ℃
⑩ Power Input : DC12V or AC110~220V

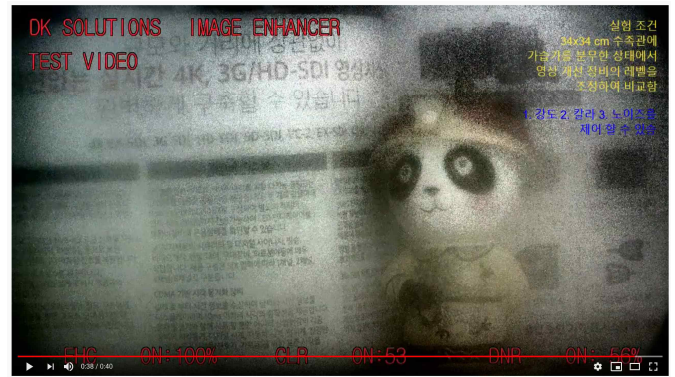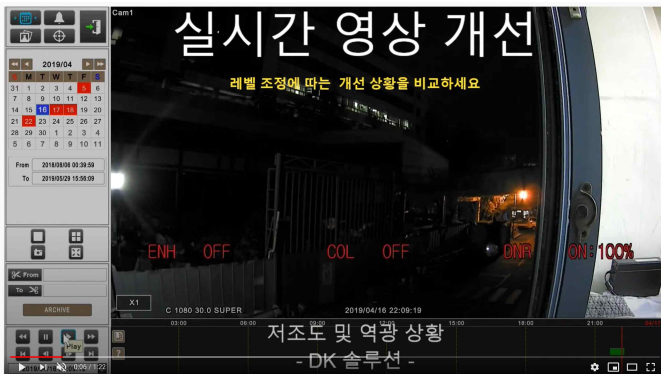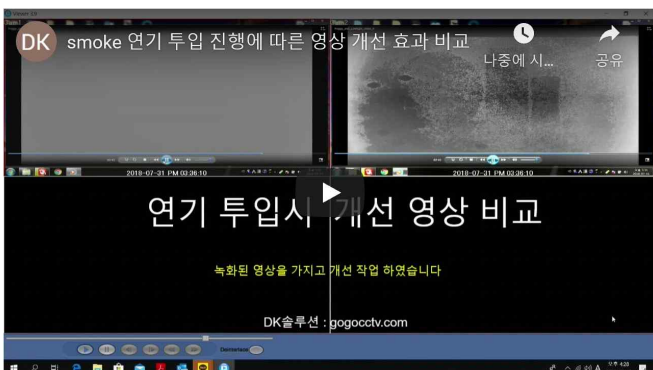# Real Time HD Video Enhancement Unit (HD-SDI & HDMI Interface)

6. Youtube link

https://youtu.be/Cx2VDoFTpbo

https://youtu.be/-bMnEA0rYS8

https://youtu.be/sLkkmgH1oEY

https://youtu.be/2dwM4uiGaAE

https://youtu.be/JMul0rC5UZo

https://youtu.be/zN_S-BSs84M

https://youtu.be/_q5OuyVSQT4

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