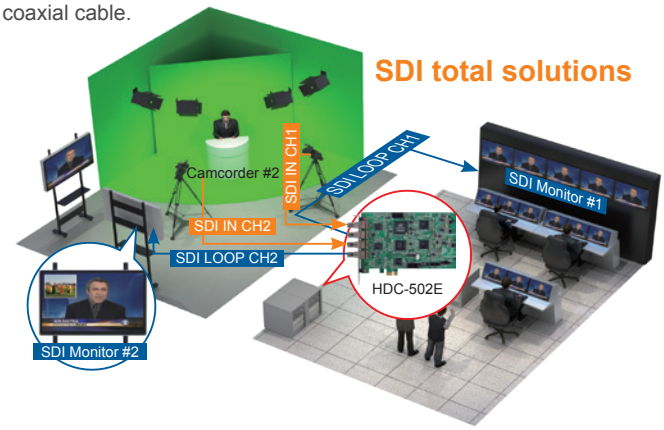
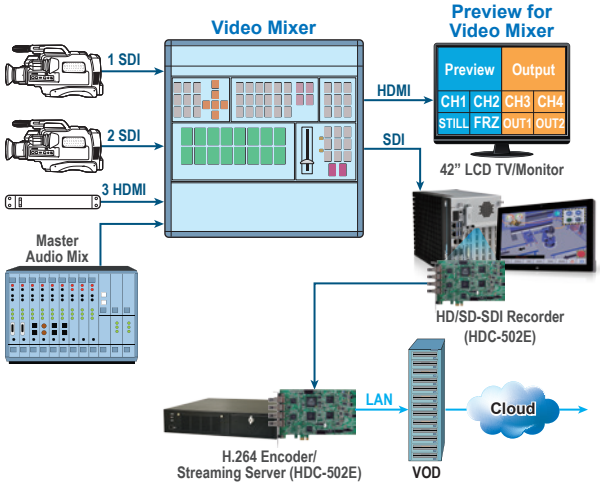
Long Distance High-Definition Compression Solution

Nowadays, more and more equipments are equipped with SDI output for television studios and other broadcasting applications. SDI is a high capacity interface used as a way of exporting uncompressed digital video in real time. That makes it ideal for live feed productions (such as a live TV show), as well as for editing and monitoring video at the highest possible quality. Since SDI is designed primarily for professional use, it is also compatible with a variety of video devices found in broadcast studios, including monitors, tape decks and switchers. SDI exports uncompressed SD and HD video over a coaxial cable.



Broadcasting Solutions

H.264 video encoder can be a part of streaming server in the application for broadcasting

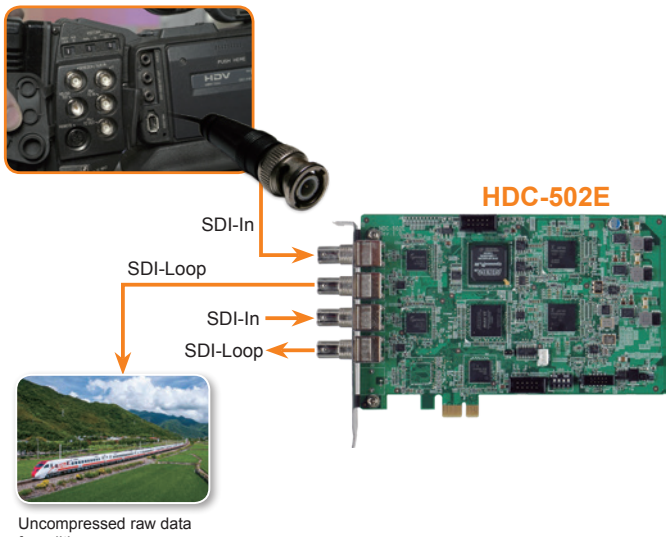


■ Long Distance and High Quality Capture Card

◆ SDI in studio editing field

SDI (Serial Digital Interface) is a family of video interfaces used for broadcast-grade video. A related standard known as high-definition serial digital interface (HD-SDI) provides a nominal data rate of 1.485 G-bit/s. IEI SDI product, the HDC-502E, is designed with 2-channel SDI input, 2-channel SDI loop and 1-channel SDI output for high quality and long distance signal transmission. It achieves this through a 100 m (HD-SDI)/300 m (SD-SDI) coaxial cable without compression and with no data loss for professional studio, broadcast and transportation video applications.

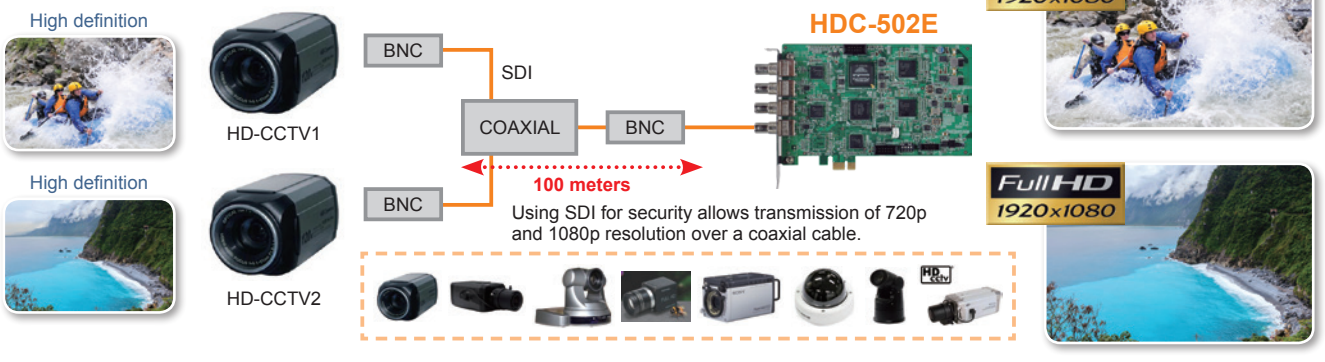
High definition capturing has become a trend of the industrial surveillance. The HD-CCTV camera with SDI interface provides long distance transmission compared to analog camera and IP camera. The advantage is that SDI interface can transmit high-definition 1080p video via coaxial cable instead of network cable. In other words, users can enjoy 1080p HD video over existing analog system without any changes.



Uncompressed raw data for editing

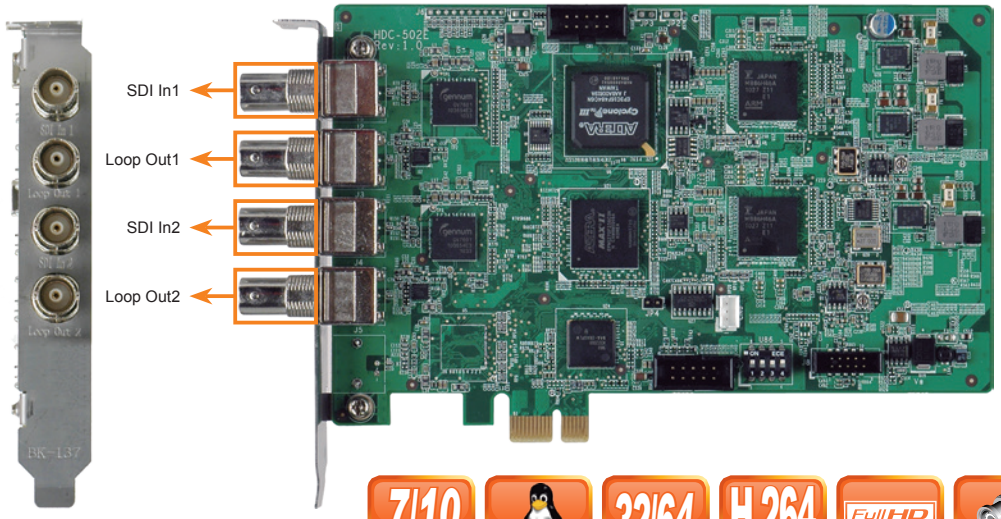
◆ SDI in high quality surveillance field

HD-CCTV1 camera V.S. IP camera



HDC-502E

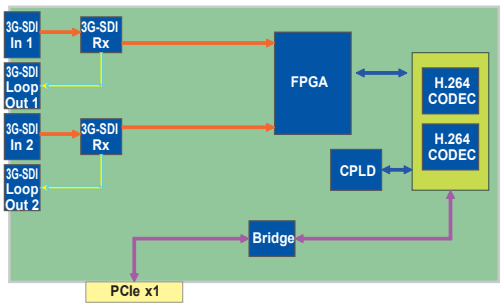
PCIe Video/Audio Capture Card with Two Channel 3G-SDI Inputs, Two Channel 3G-SDI Loop Outputs, 1920x1080@60p and H.264 Hardware Encoder



Features

- 2-channel 3G-SDI input with H.264 hardware compression and 2-channel 3G-SDI output
- High quality video encoding up to 1080p60
- Low power consumption
- SDK available for customer to create customized applications
- Applications: professional studio, broadcast and transportation video applications
- Windows/Linux OS supported

System Block



Specifications

◆ Interface

Video Input	2 channels
Video Input Type	3G-SDI
Audio Input	2 channels
Audio Input Type	3G-SDI
Loop Through Output	2 channels
Loop Through Type	3G-SDI
Bus Interface	PCIe x1

◆ Video Processing

Video Compression	H.264/AVC High Profile Level 4.2
Input Resolution & Frame Rate	1920 x 1080 x 60p / 50p / 30p / 25p / 24p 720 x 480 x 60i 1920 x 1080 x 60i / 50i 720 x 576 x 50i 1280 x 720 x 60p / 50p / 30p / 25p / 24p
Record Resolution / Frame Rate / Bit Rate	1920 x 1080 x 60p, encoding video -bit rate from 6Mbps to 20Mbps 1280 x 720 x 60p, encoding video -bit rate from 4Mbps to 20Mbps

◆ Audio Processing

Audio Compression	MPEG-1 Audio Layer 2
Bit Rate	256k

◆ Functionality

Multiple Card Support	4 cards, 8 channels

◆ System Requirement

System	x86 PC compatible computer, Intel® Pentium® 4 2.0GHz or above for video record Recommends using a DXVA or CUDA capable graphics card for real-time video playback
Memory	1GB or more

◆ Software Support

OS Support	Microsoft Windows 7/10 (32-bit & 64-bit) Linux: Ubuntu 16.04 (64-bit) (Kernel version: 4.4.0-21X64-generic)
SDK	Windows: Provides SDK and demo program with sample source code Linux: Provides SDK and demo program with sample source code

◆ Others

Dimensions (WxH) (mm)	188 mm x 125 mm
Operating Temperature	0°C ~ 60°C (32°F ~ 140°F), non-condensing
Power Consumption	14.2W (12V@0.76A, 3.3V@1.52A)

Packing List

1 x HDC-502E capture card
1 x QIG

Ordering Information

Part No.	Description
HDC-502E-R10	PCI Express video/audio capture card with two channel 3G-SDI inputs, two channel 3G-SDI loop outputs, 1920x1080@60p, and H.264 hardware encoder