CAMERA SOLUTIONS

H.265/H.264 Encoder
OEM Kits
EXPAND YOUR REACH

Z3’s Camera Solutions bring you the latest video compression technology to solve the dilemma of high quality video requiring too much bandwidth. Never before has integrating H.265 video in resolutions up to 4K been so simple and cost-effective.

Our camera solutions provide the highest quality image at the lowest bandwidth, latency and power. These robust systems bring together video encoding, integrated remote camera configuration and control, while supporting multiple input formats including LVDS, Composite, SDI and HDMI.

Video with this clarity is a perfect fit for UGV, UAV, inspection, remote monitoring, security and surveillance, video conferencing and more. Upgrade to H.265 and expand your reach with Z3’s Camera Solutions.
H.265/H.264 Encoded Video
Choose to output highly efficient H.265 compressed video or industry standard H.264 video.

Display Features
Resize your video into lower resolutions while maintaining full field of view. View multiple cameras with PIP display.

ONVIF Profile S Compliant
ONVIF® Profile S adds additional remote camera control options and easy integration into existing surveillance infrastructures.

Remote Camera Control
Our Camera Solutions feature remote control via VMS, webserver, SSH or API. PTZ via RS-485 and integrated control/configuration support for cameras including Sony VISCA®, DRS, FLIR® and others over the IP network.
HE4K-DCK-1x
Compact 4K Camera Dock

- Natively integrates with FCB-ER8300/8530/8550 Sony 4K Block Cameras
- Pass VISCA™ Camera Control Commands over IP
- Integrates with ultra low-light Sony UMC-S3CA camera via Micro HDMI Input
- Low Bandwidth, Low Latency Video Encoding
- Simultaneous encode of H.265 and H.264

Technical Interfaces
- Video from Sony 4K block cameras via KEL ribbon cable¹, GigE, USB 2.0, Audio Input, RS-232, RS-485, Composite Output, Micro HDMI Input

Video Codecs
- H.265, H.264 and MJPEG

Encoding Resolutions
- 4K UHD & HD up to 30 fps (2160p, 1080p, 720p & lower)

Output Formats
- RTP, RTSP, MPEG-2 TS, RTMP and TS File

Features
- Ability to Resize 3840x2160 Camera Input to Lower Resolutions Keeping Full Field of View
- Pass VISCA™ Camera Control Commands over IP and PoE
- Easy-to-Use HTTP/HTTPS web server
- ONVIF® Profile S
- Simultaneous Stream and Record to SD Card or USB
- PoE
- Optional Chassis for Camera and Encoder Board
- Compatible with HE265-DEC decoder

Specifications
- Encoder Board Size: 58 x 58 x 13mm (2.28 x 2.28 x 0.51in)
- Weight: 87.9 g (3.10 oz)
- Temperature: -5°C to 70°C
- Power Consumption: 4.5W typical (not including camera)

Ordering Options
HE4K-DCK-1x
- OEM Production Set
- HE4K-DCK-1x Encoder Boards and Documentation

HE4K-DCK-RPS
- OEM Starter Kit
- HE4K-DCK-1x Encoder Boards, KEL Ribbon Cable, Power Supply, Software SDK and Documentation

¹KEL ribbon cable sold separately

*Assumes proper thermal design is implemented to dissipate heat adequately to support the temperature rating
**HE2K-DCK-1x**

Compact HD Camera Dock

- Natively integrates with FCB-EV7520(A) Sony Block Cameras
- Pass VISCA™ Camera Control Commands over IP
- High Quality Efficient H.265 Video Encoding
- Low Bandwidth, Low Latency Video Encoding
- Simultaneous encode of H.265 and H.264

**Technical**

**Interfaces**

Video from Sony FCB-EV7520(A) block camera via KEL ribbon cable¹, GigE, USB 2.0, Audio Input, RS-232, RS-485, Micro-HDMI Passthrough, Composite Output

**Video Codecs**

H.265, H.264 and MJPEG

**Encoding Resolutions**

60, 59.94, 50, 30, 29.97, 25 @1080p and 720p

**Output Formats**

RTP, RTSP, MPEG-2 TS, RTMP and TS File

**Features**

- Low Latency, Low Power
- Ability to Resize 1920x1080 Camera Input to Lower Resolutions Keeping Full Field of View
- Pass VISCA™ Camera Control Commands over IP
- Easy-to-Use HTTP/HTTPS web server
- ONVIF® Profile S
- Simultaneous Stream and Record
- PoE
- Optional Chassis for Camera and Encoder Board
- Compatible with ZEUS® decoders

**Specifications**

- Encoder Board Size: 58 x 58 x 13mm (2.28 x 2.28 x 0.51in)
- Weight: 93 g (3.28 oz)
- Temperature: -5°C to 70°C+
- Power Consumption: 4.5W typical (not including camera)

**Ordering Options**

<table>
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<tr>
<th>HE2K-DCK-1x</th>
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¹KEL ribbon cable sold separately

*Assumes proper thermal design is implemented to dissipate heat adequately to support the temperature rating*
FV4K-DCK-1x
Dual Camera 4K Video Encoder

- H.265/H.264 Dual Camera Video Streaming
- Interfaces with Sony 4K Block and Thermal Cameras
- High Quality Low Latency Encoding
- Pass Camera Control Commands over IP

Technical Interfaces

Visible Camera Formats
- Sony FCB-ER8300/8530/8550 via KEL ribbon cable and Micro HDMI

Thermal Camera Formats
- FLIR® Tau®2 (digital), DRS Tamarisk (digital), LVDS, Composite

Recording
- USB or Micro SD

Additional Interfaces
- GigE, Audio Input, RS-485, Composite Output, Serial

Video Codecs
- H.265, H.264 and MJPEG

Encoding Resolutions
- 4Kp30, 1080p (up to 60fps), 720p, NTSC/PAL, VGA, CIF and QVGA

Output Formats
- RTP, RTSP, MPEG-2 TS, RTMP and TS File

Features
- Low Latency, Low Power
- Ability to Resize 4Kp30 Input
- Output two independent encoded streams or Picture-in-Picture stream
- Pass Camera Control Commands over IP
- PoE
- Easy-to-Use HTTP/HTTPS web server
- ONVIF® Profile S
- Compatible with HE265-DEC and other ZEUS® decoders

Specifications

Encoder Board Size
- 58 x 58 x 13mm (2.28 x 2.28 x 0.51in)

Weight
- 92 g (3.25 oz)

Temperature
- -5°C to 70°C

Power Consumption
- 4.5W typical (not including camera)

Ordering Options

FV4K-DCK-1x
OEM Production Set
- FV4K-DCK-1x Encoder Boards and Documentation

FV4K-DCK-RPS
OEM Starter Kit
- FV4K-DCK-1x Encoder Boards, KEL Ribbon Cable, Power Supply, Software SDK, Serial Cable and Documentation

1KEL ribbon cable sold separately

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**FV2K-DCK-1x**

Dual Camera Full HD Video Encoder

- H.265/H.264 Dual Camera Video Streaming
- Interfaces with Sony FCB-EV7520(A) and Thermal Cameras
- Supports Two HD Visible Cameras or HD Visible and Thermal Camera Combination
- High Quality Low Latency Encoding Pass Camera Control Commands over IP

### Technical Interfaces

**Visible Camera Formats**
- Sony FCB-EV7520(A) via KEL ribbon cable, LVDS, Composite

**Thermal Camera Formats**
- FLIR® Tau®2 (digital), DRS Tamarisk (digital), LVDS, Composite

**Recording**
- USB or Micro SD

**Additional Interfaces**
- GigE, Audio Input, RS-485, Micro-HDMI
- Output, Composite Output, Serial

**Video Codecs**
- H.265, H.264 and MJPEG

**Encoding Resolutions**
- 1080p (up to 60fps), 720p, NTSC/PAL, VGA, CIF and QVGA

**Output Formats**
- RTP, RTSP, MPEG-2 TS, RTMP and TS File

**Features**
- Low Latency, Low Power
- Ability to Resize HD Camera Input
- Output two independent encoded streams or Picture-in-Picture stream
- Pass Camera Control Commands over IP
- PoE
- Easy-to-Use HTTP/HTTPS web server
- ONVIF® Profile S
- Compatible with ZEUS® decoders

### Specifications

- **Encoder Board Size**: 58 x 58 x 13mm (2.28 x 2.28 x 0.51in)
- **Weight**: 89 g (3.14 oz)
- **Temperature**: -5ºC to 70ºC
- **Power Consumption**: 4.5W typical (not including camera)

### Ordering Options

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1. KEL ribbon cable sold separately

*Assumes proper thermal design is implemented to dissipate heat adequately to support the temperature rating*
FSDI-DCK-1x
Full HD Dual Camera SDI Encoder

- H.265/H.264 Dual Camera Video Streaming
- Interfaces with Sony EV7520(A), SDI and Thermal Cameras
- Supports Two Visible/Thermal Cameras or HD Visible and Thermal Camera Combination
- High Quality Low Latency Encoding Pass Camera Control Commands over IP

Technical Interfaces

Visible Camera Formats
- 3G-SDI, Sony FCB-EV7520(A) via KEL ribbon cable\(^1\), LVDS, Composite (x2)

Thermal Camera Formats
- FLIR® Tau®2 (digital), DRS Tamarisk (digital), LVDS, Composite

Recording
- USB or Micro SD

Additional Interfaces
- GigE, Audio Input, RS-485, Composite Output, 3G-SDI Passthrough, Serial

Video Codecs
- H.265, H.264 and MJPEG

Encoding Resolutions
- 1080p (up to 60fps), 1080i, 720p, NTSC/PAL, VGA, CIF and QVGA

Output Formats
- RTP, RTSP, MPEG-2 TS and RTMP

Features
- Low Latency, Low Power
- SDI camera input with simultaneous stream and real-time passthrough of SDI output
- Output two independent encoded streams or Picture-in-Picture stream
- Pass Camera Control Commands over IP
- PoE
- Easy-to-Use HTTP/HTTPS web server
- ONVIF® Profile S
- Compatible with ZEUS® decoders

Specifications

Encoder Board Size
- 58 x 58 x 13mm (2.28 x 2.28 x 0.51in)

Weight
- 87.9 g (3.10 oz)

Temperature
- -5ºC to 70ºC*

Power Consumption
- 4.5W typical (not including camera)

Ordering Options

FSDI-DCK-1x
OEM Production Set
FSDI-DCK-1x Encoder Boards and Documentation

FSDI-DCK-1x-RPS
OEM Starter Kit
FSDI-DCK-1x Encoder Boards, Power Supply, Software SDK, Documentation, Serial Cable, MMCX to BNC Cable

\(^1\)KEL ribbon cable sold separately

*Assumes proper thermal design is implemented to dissipate heat adequately to support the temperature rating
CIB-FT2-02
FLIR® Tau®2 Digital LVDS Output Board

- Attaches to the FLIR® Tau2® Camera Body
- LVDS Digital Video Output
- NTSC/PAL Analog Video Output
- Direct Connection to Z3 Technology’s FV2K, FV4K, FSDI Dual Camera Encoder Family

Technical

Camera Supported
FLIR® Tau®2

Video Output
• LVDS Digital
• NTSC/PAL Analog

Interfaces
• FlexIO™ connector with video, power and serial control
• MCX jack with composite video output
• USB 2.0 for Power and configuration

Output Formats
• LVDS and analog NTSC/PAL via 30pin FlexIO™
• Analog NTSC/PAL Video via MCX

Features
• Attaches directly to the FLIR® Tau®2 camera
• Digital LVDS and Composite Video Output
• FlexIO™ connector with power, video and control for direct connection to Z3’s FV2K, FV4K, FSDI dual camera encoders

Specifications

Encoder Board Size
38 x 38 mm (1.50 x 1.50 in)

Weight
8 g (0.28 oz)

Ordering Options

CIB-FT2-02
Camera interface board for the FLIR® Tau®2

*FLIR® Tau®2 sold separately
USE CASE

The diagram below demonstrates an example of our cameras in action. Video is being supplied by the Sony FCB-ER8300 4K visible camera and a FLIR® Tau®2 Camera connected to our CIB-FT2-02 Interface board. The FV4K-DCK-1x is encoding the video and sending it over IP to be decoded and displayed on a TV.
## Camera Solutions Matrix

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<th>FV2K-DCK-1x</th>
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<td>Dual Camera HD Encoder</td>
<td>Dual Camera Full 4K Encoder</td>
<td>Dual Camera SDI Encoder</td>
<td></td>
</tr>
</tbody>
</table>

| **Sony EV7520(A)**       | 1 | 2 | 1 |
| **Sony ER8300/85xx**     | Yes | Yes | Yes |
| **Analog NTSC/PAL**      | Yes | Yes | Yes |
| **FLIR Tau 2 Analog**    | Yes | Yes | Yes |
| **FLIR Tau 2 Digital**   | Yes with additional interface board option | Yes with additional interface board option | Yes with additional interface board option |
| **DRS Tamerisk Digital** | Yes | Yes | Yes |
| **Thermal Analog Video** | Yes | Yes | Yes |
| **Thermal Digital Video**| Yes, multiple formats supported with additional interface board option | Yes, multiple formats supported with additional interface board option | Yes, multiple formats supported with additional interface board option |
| **HDMI Input**           | 1 | 1 | |
| **3G-SDI Input**         | | | Yes |
| **SDI Loop Out**         | | | Yes |
| **HDMI Output**          | Yes | Yes | |
DISTRIBUTORS

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ABOUT Z3

Z³ Technology is an industry-leading, USA-based manufacturer of production-ready embedded multimedia solutions and IP camera systems. From our founders to our world-class engineers to our sales and customer service team, we understand your requirements and speak your language. Our experience allows us to provide cost-effective solutions to meet your product requirements. With the assistance of our robust worldwide distribution and sales networks, we can provide a simple solution for your multimedia needs.

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