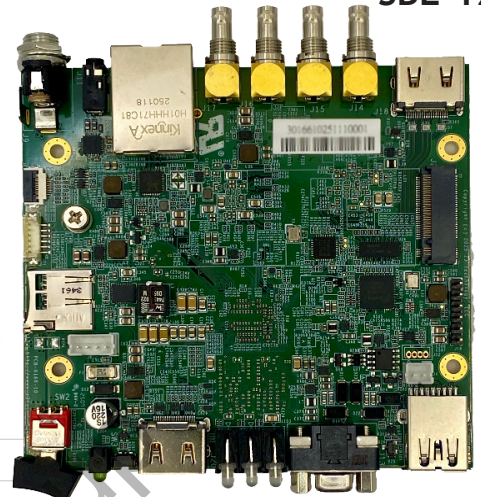


# 12G-SDI Encoder

Hardware Accelerated AI Processing

SBE-12G

- CVflow processor with convolutional neural network (CNN), deep learning and transformer network support
- High Performance ISP with low power consumption
- H.265 and H.264 Video Encoding
- HD, 4Kp30 and 4Kp60 Resolutions Support
- HDMI and 12G-SDI to 3G-SDI Inputs Supported



## Technical

### Interfaces

•Video Inputs	4x HD-BNC and HDMI
•Modes of Operation	12G-SDI + 3G-SDI + 3G-SDI OR 6G-SDI + 3G-SDI + 3G-SDI OR HDMI (4Kp60) + 3G-SDI + 3G-SDI OR 12G Quad Link (SMPTE 452)
•Additional Interfaces	Serial I/O - (RS-485, RS-422, RS-232), Micro DB9, RS-232 2.5mm, GPIO x 6, PCIe/NVMe M.2 Expansion Slot Storage/Wi-Fi/SSD, USB Type A 3.2, I2C Header
Video Codecs	H.265, H.264 and MJPEG
Encoding Resolutions	4Kp60, 4Kp30, 1080p60 and 720p60
Additional Frame Rates	60, 50, 30, 29.97, 25, 24, 23.98
Output Formats	RTP, RTSP, MPEG-2 TS, RTMP and SRT (up to 4Kp60) *AI Ready with Video Tracking Demo Available

### Features

- Low Latency, Low Power
- Cyber Secure Features Available, SNMPv2, SNMPv3 and the ability to turn off unneeded services
- User Level Authentication Settings Available
- Simultaneous encode of H.265/HEVC and H.264
- Record to USB or Network File System
- Control via HTTP/HTTPS web GUI, API, ONVIF or SSH/Serial
- SRT Modes Supported: Caller Listener, Rendezvous, SRT Encryption, AES-128, 192, 256
- Live Video Preview in the Web Gui
- Multicast and Unicast Support
- CBR and VBR Support
- Text Overlay via Web GUI or custom placement of Text or PNG via HTTP/S API
- Pelco D Support
- STANAG 4609 Compliant
- High Precision Timestamps Across Multiple Streams, MISB 0604 Compliant
- Pass VISCA Camera Controls over IP or serial
- AI Ready for on the edge analytics or custom library implementation
- Human Detection and Tracking Demo Available

## Specifications

Encoder Board Size	101.6 x 93.98 mm (4 x 3.7 in)
Encoder Board Weight	104g
Power Consumption	4.5W
Power Supply	12V DC

## ORDERING OPTIONS

### SBE-12G

OEM Production Set

- SBE-12G Encoder

### SBE-12G-RPS

OEM Starter Kit

- SBE-12G Encoder
- Power Supply
- Software SDK
- Documentation
- (2) SDI Cables

Note: Camera sold separately

## APPLICATIONS

Military

Medical

Robotic Applications

Surveillance



Made in the USA

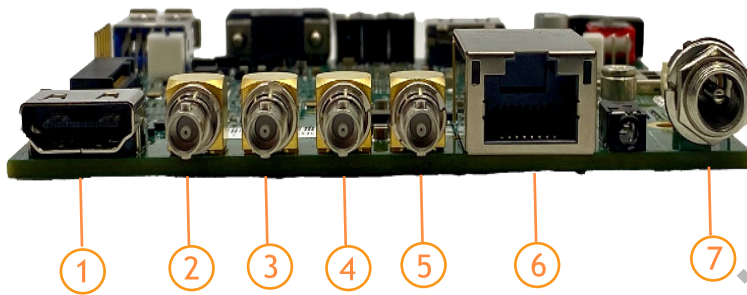
NDAA

TAA



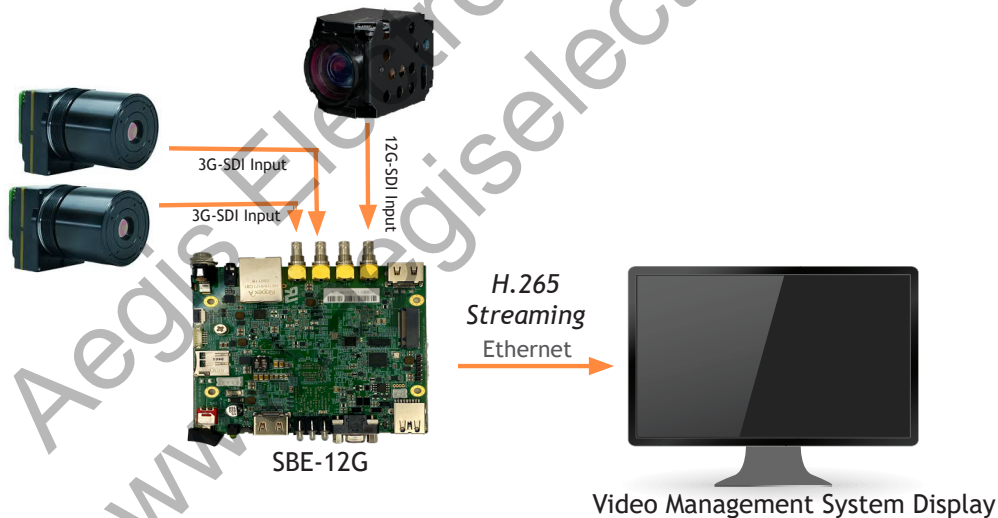
CE FC

- An embedded dual-core Arm® Cortex® -A76
- Clock frequency 1.6 GHz
- CVflow processor with convolutional neural network (CNN), deep learning and transformer network support
- Supports hardware acceleration for transformer networks
- CNN toolkit for easy porting of neural networks implemented in Caffe, TensorFlow, PyTorch, or ONNX frameworks
- Image Signal Processor and Encoding supporting up to 4Kp60
- ISP with HDR processing, dewarping and 3D motion-compensated Temporal Filtering
- RAM: 8 GB of LPDDR5 (GBytes)



- ① HDMI up to 4Kp60
- ② 12G/6G/3G-SDI
- ③ 3G-SDI (Quad Link mode only)
- ④ 3G-SDI Camera
- ⑤ 3G-SDI
- ⑥ Gigabit Ethernet
- ⑦ 12V DC

## USE CASE



\*See other modes of operation on page 1

Z<sup>3</sup> 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 multimedia product requirements. With the assistance of our robust worldwide distribution and sales networks, we can provide a simple solution for your multimedia needs.