

# VCoderH264-HD-RGB/STANAG

RGB H.264 Video Encoder for PCIe/104



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The VCoderH264-HD-RGB/STANAG is a High Definition H.264 video encoder on a single PCIe/104 expansion module. The VCoderH264-HD-RGB/STANAG captures a HD analog RGB input at up to 1080p60 and encodes it using the H.264 video compression standard. The single board solution is ideal for demanding applications in Military, Communications, Transportation, mining and Energy industries.



The VCoderH264-HD-RGB/STANAG can capture video from a wide range of analog RGB video sources. VGA, RG<sub>s</sub>B (sync-on-green) and Stanag3350 sources can all be captured, encoded and then transferred to the host system over the PCIe/104 bus.

The high performance, efficient video and audio encoding allows the VCoderH264-HD-RGB/STANAG to use only a single x1 PCI Express Link. Multiple VCoderH264-HD-RGB/STANAG can be used in a PCIe/104 system to allow multiple High Definition RGB capture channels whilst leaving the system with spare band-width for other peripherals and expansion modules.

#### Rev A.00

Subject to change without notification

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Real-time  
capture and encode  
VGA, RG<sub>s</sub>B  
and  
Stanag3350  
video sources

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The VCoderH264-HD-RGB/STANAG is supported by a set of well-documented, comprehensive SDKs that minimize development risk and shorten time-to-market for applications in video recording, video streaming, and video analysis. The SDKs are available for both Windows and Linux.



## Applications

Unmanned vehicles (UAV, ROV)  
Rugged video recorders for marine, aviation  
Situational Awareness  
Remote Video Surveillance  
Border Security  
Traffic Monitoring and Control  
Video Acquisition and Analytics  
Solid state multi-channel video and sensor recorders

H.264 encode  
at up to 1080p60

Comprehensive  
SDKs that shorten  
time-to-market

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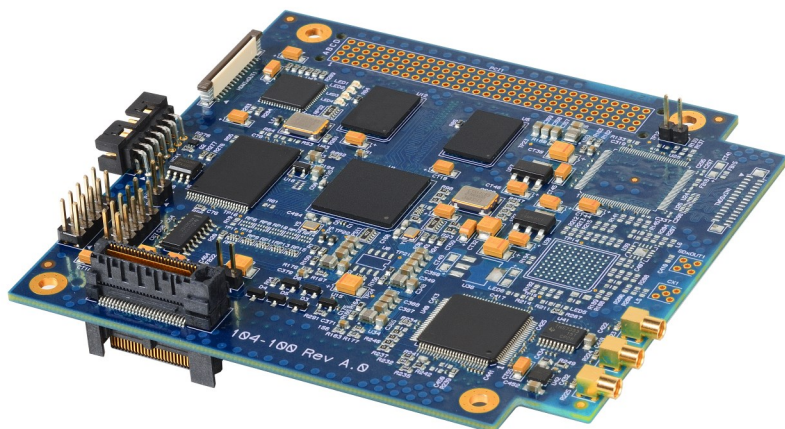
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## Features

- 1x Analog RGB input up to 1080p60
- Real-time HD H.264 encode at 1080p60
- Capture from RGB, RG<sub>B</sub>B (sync-on-green), Stanag3350
- Low power operation for long endurance
- Standard PCIe/104 form factor
- SDK and Drivers for Windows and Linux
- Power consumption less than 4W

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Ideally suited to  
the demanding  
applications, space  
requirements and  
environmental  
conditions of  
**Military,**  
**Transportation,**  
**Mining and**  
**Energy Industries**



### Analog Video Input

Analog HD from:  
 RGsB (sync-on-green)  
 Stanag3350  
 VGA (separate Hsync, Vsync)

### Video Capture resolutions

Standard resolutions supported include:  
 1080p, 1080i, 720p, 720i  
 VGA, SVGA, XGA, SXGA

### H.264 Video Encoding

ITU-T H.264 (ISO/IEC 14496-10), supported profiles:  
 Baseline profile,  
 Main profile (I,P frame coding only)  
 High profile (I, P frame coding only) at level 4.1  
 Up to 1080p60 encode  
 CAVLC and CABAC coding  
 Supports Variable Bit Rate (VBR)  
 Supports Constant Bit Rate (CBR)

### JPEG Encoding

JPEG (ISO/IEC 10918-1)  
 Baseline JPEG with JFIF support

### PCIe interface

Single x1 PCI Express Link using PCIe/104 OneBank™ connector  
 PCIe Gen 2.0

### Mechanical

Standard 3.6 x 3.8in PCIe/104 form factor  
 Operating temp 0°C to 60°C  
 Operating temp -40°C to +85°C (extended temp option)  
 PCI-104 pass-through (option)

### Power

Single +5V supply  
 Max power consumption < 4W

### Software

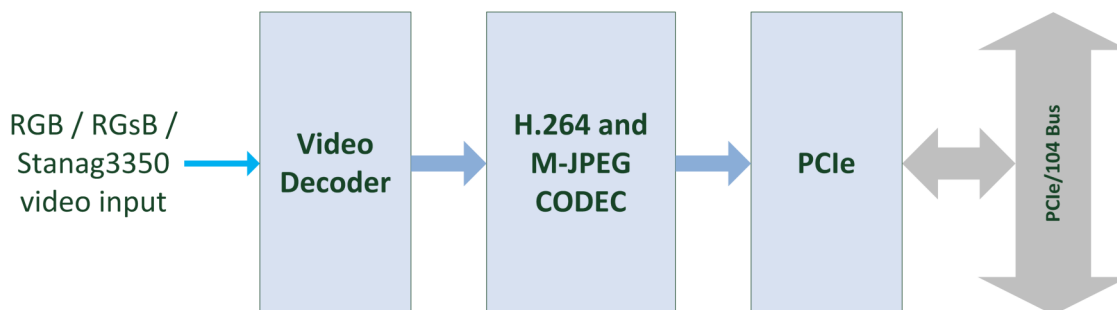
Drivers for Windows and Linux  
 Sample video recording application in C/C++ source code

### Ordering Information

**VCODERH264-HD-RGB**  
 H.264 HD RGB Video Encoder (0 to 60°C)  
**VCODERH264-HD-RGB-EXT**  
 H.264 HD RGB Video Encoder (-40°C to +85°C)

### Related Products

**VCODERH264-VSTREAM**  
 RTSP Video Streaming SDK  
**TINYATOM-DC/8G**  
 PCI/104-Express Intel ATOM SBC (0 to 60°C)



**VCoderH264-HD-RGB/STANAG Functional Diagram**