AVerMedia

Embedded Vision Solutions

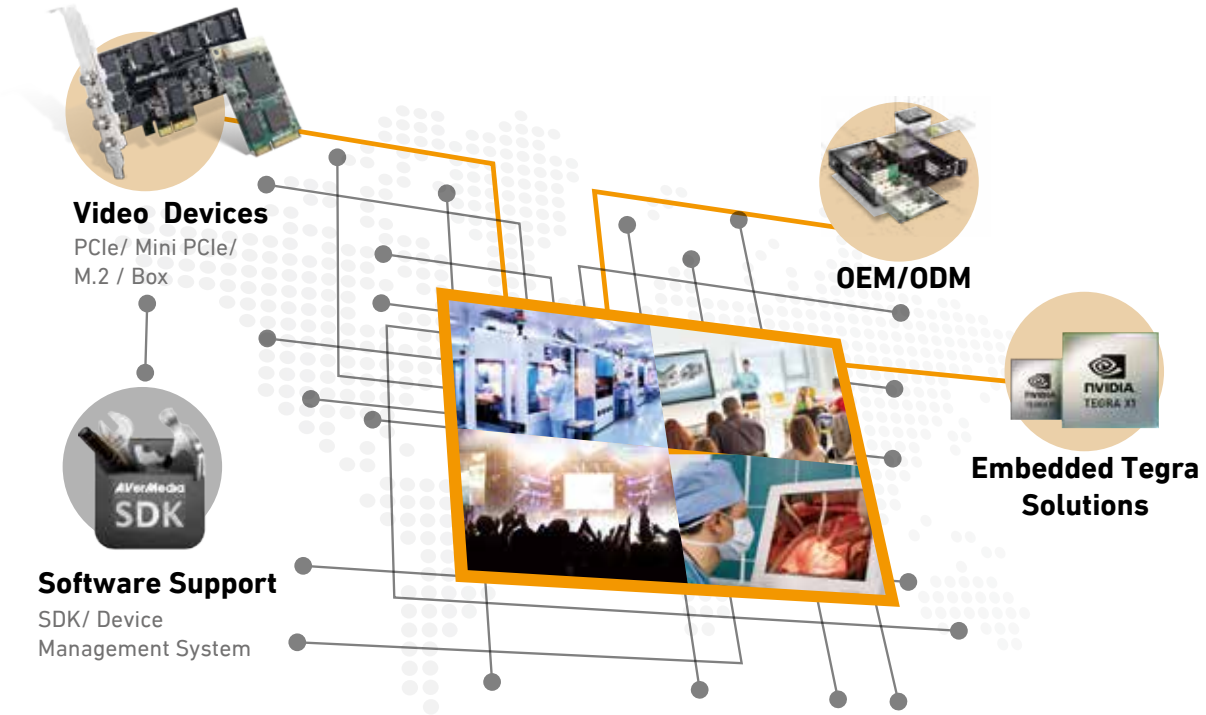
Contents

About AVerMedia

Established in 1990, AVerMedia is a multinational company specializing in hardware and software for image capturing and video transmission solutions, aiming to enrich entertainment experiences and provide effective communication between people in a wide range of professional fields.

What We Do

With experienced **video image capturing and video transmission** technologies, we not only offer frame grabbers hardware development, but also devote to specifically designed video processing software to offer a total solution that is tailored-made to meet your needs.



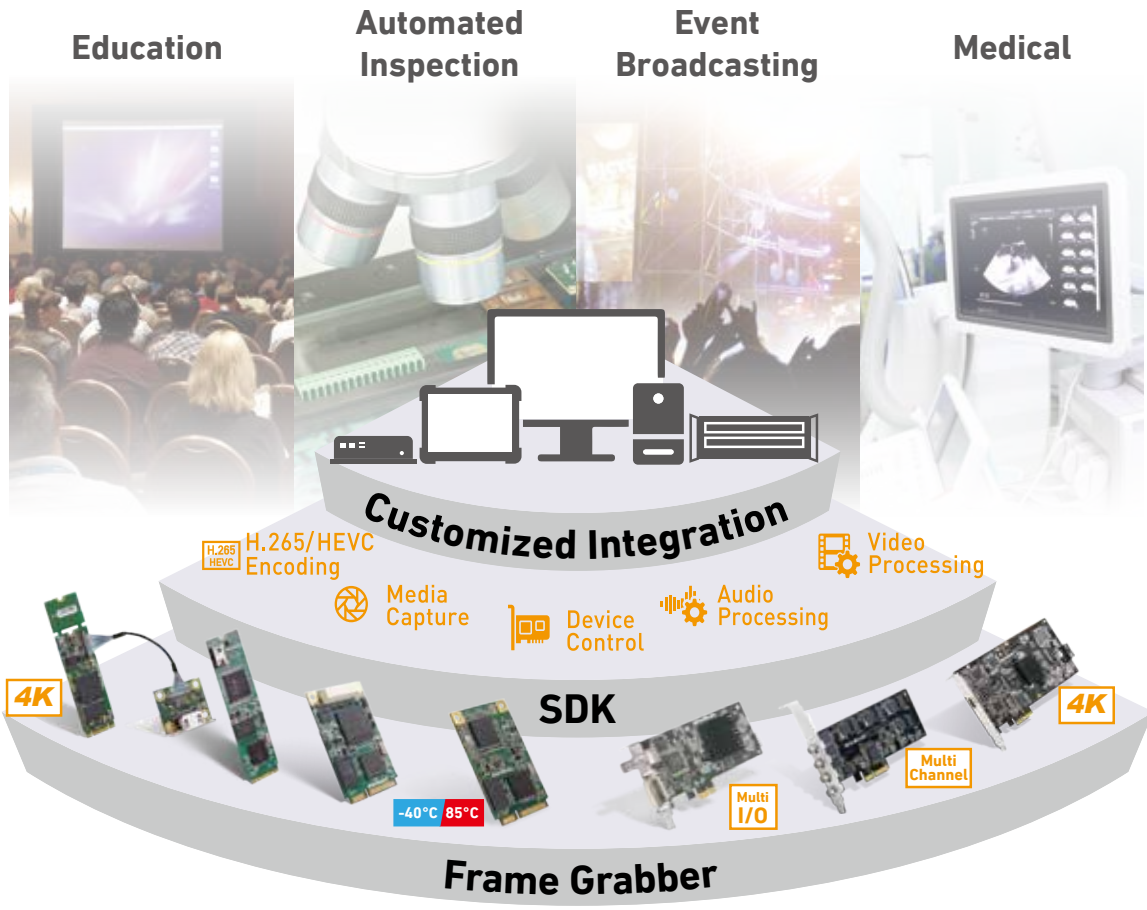
R&D and Manufacturing Excellence

In 28 years of experience in the field of capture technology, AVerMedia has accumulated over 200 patents on their innovative technologies and solutions. These accurate, stable and flexible solutions are tailored to suit a range of clients and their differing business objectives.

Customized Integration

With experience in video capturing technologies, including hardware design and software integration, AVerMedia strives to meet customer expectations in video capturing solutions. AVerMedia also provides various frame grabbers to seamless integrate into Industrial PCs, embedded systems, and panel PCs, and supports the range from high resolution (4K, FHD), compact size (Mini PCIe, M.2) and rich input sources.

With solid video processing abilities, AVerMedia's capture solutions provide various third party application integrations in order to tailor to specific needs in the medicine, education, inspection and event broadcasting industries.



Why Work with Us

Leading Video Technology

AVerMedia owns over 200 patents on the latest video capturing and streaming solutions.

Customization

SDK and driver customization services ensure AVerMedia's industrial video solutions can be seamlessly integrated.

Promptness

Time is of the essence, AVerMedia technical support guarantees a response within 24 hours.

Software Support

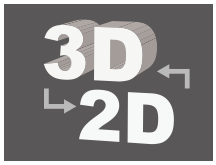
Knowledgeable in Windows & Linux platform audio and video architectures, AVerMedia is devoted to resolve any issue you may be experiencing and relay the solution in a prompt, effective and efficient manner.

Video Application Development SDK

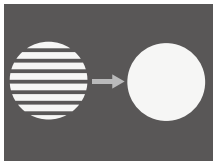
AVerMedia SDK (Software Development Kit) is a software development tool that allows users to specifically design their own applications for software/ hardware platforms. AVerMedia SDK also includes sample codes, reference AP and technical notes or supporting documentation to help clarity primary references material.

Faster Rendering

Multi Streaming Protocol



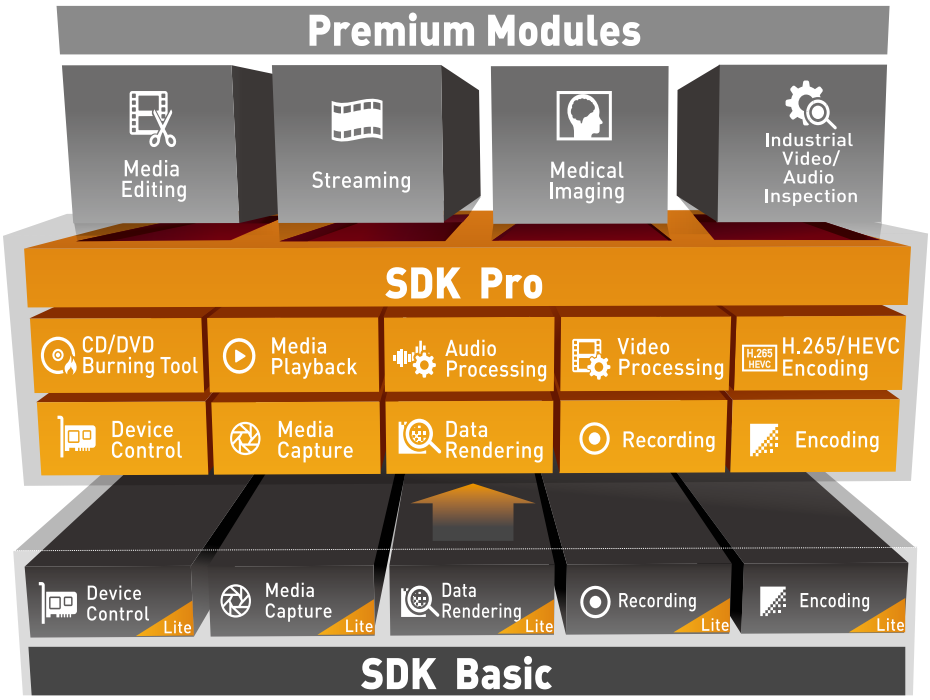
3D & 2D Conversion



De-interlacing

NewTek™ NDI Integration

NDI (Network Device Interface) can help build an efficient live video production IP workflow infrastructure over an Ethernet network. With AVerMedia Streaming SDK and NDI protocol, users can produce, integrate, and manage multiple 4K streams on-the-fly.



AVerMedia SDK Service from Basic to Pro

SDK Basic		SDK Pro			
Device Control **Lite**	• Signal Lock Detection • Select Video Source, Format Resolution, Framerate • Color Adjustment	**Device Control**	• Device Control Lite • Get HDMI Info • Resolution Adjustment Tool	**Video Processing**	• Overlay Text/Time/Image • De-Interlace • Upscale/Downscale Video Size • Video Overlay • Noise Reduction • Video Mirror Mode • Video Enhancement • Motion Detection
Media Capture **Lite**	• Single Image Capturing • Callback Stream	**Media Capture**	• Media Capture Lite • User-Defined Area/FPS Capturing • Sequential Image Capturing • Callback Image File Name	**Audio Processing**	• Set Audio Format • Volume Control
Data Rendering **Lite**	• Select Video Renderer • HDCP Preview	**Data Rendering**	• Data Rendering Lite • Multi-window Preview • Set Window Position	**CD/DVD Burning Tool**	• Data Burning Utilities
Encoding **Lite**	• SW A/V Encode	**Encoding**	• Encoding Lite • HW A/V Encode	**Media Playback**	• SW Video Decoder • GPU H.264 Decoder • Media Encapsulation Format
Recording **Lite**	• MP4/MPEG/AVI Format	**Recording**	• Recording Lite • File Control • Pause Recording	**H.265/HEVC Encoding**	• H.265 SW/GPU Encoding and Rendering Engine

Frame Grabber Device Management System (DMS)

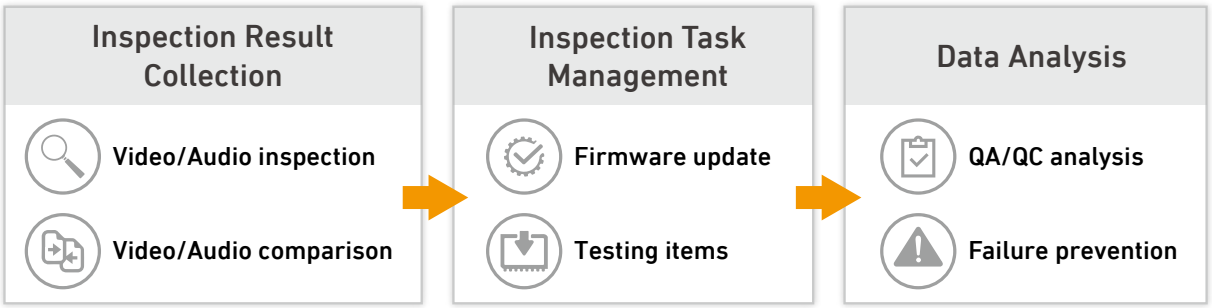
DMS is a centralized device management system designed for AVerMedia frame grabbers to be integrated in inspection equipment. The DMS is able to monitor the equipment and the status of frame grabbers within the equipment, such as the testing item of frame grabber, model name, firmware and items pending testing, etc.

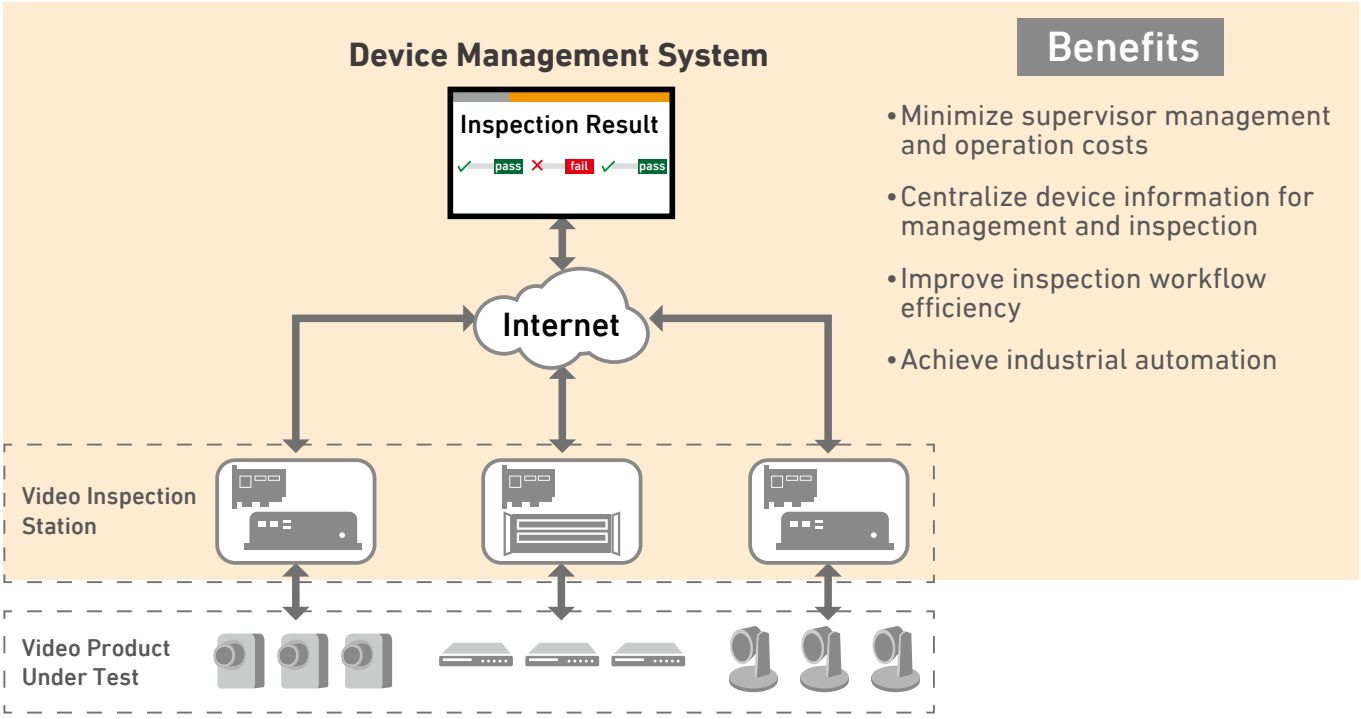
Monitor and Collect Inspection Data Automatically

With features such as 24-hour monitoring and the collection of production line detection data, the DMS can effectively lower the rate of error resulting from manual recording of test results. Now the system can automatically determine and report any abnormal status, thereby reducing the burden of the factory production line manager.

Improve Automation Inspection Efficiency

In future, DMS is expected to assist in integrating and updating firmware and test project parameters. This will allow a factory to quickly adjust a test project and improve the production line detection significantly. The information acquired using DMS's analysis of various parameters of the testing equipment, can be used to predict maintenance schedule. This would prevent failures of the production line and ensure a smooth operation of the same.





PCIe Frame Grabbers

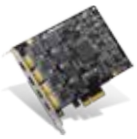
Multi I/O



		CL311-M1	CL311-MN	CD530	CD311
Model Name		CL311-M1	CL311-MN	CD530	CD311
Host Interface		PCIe Gen2 x 4	PCIe Gen2 x1	PCIe Gen2 x1	PCIe Gen2 x1
Max Input Resolution		3840x2160 30fps	1920x1080 60fps	1920x1200 60fps	1920x1080 60fps
Max Record Resolution		1920x1080 60fps	1920x1080 60fps	1920x1200 60fps	1920x1080 60fps
Channel No.		1	1	1	1
H/W Encode					
Audio Interface		HDMI embedded PCM	SDI embedded HDMI embedded RL (RCA)	HDMI embedded RL (RCA)	HDMI embedded
Video Interface	SDI		●		
	HDMI	●	●	●	●
	DVI	●	●	●	
	VGA	●	●	●	●
	Component	●			
	Composite	●			
	S-Video	●			
HDMI Color Depth		8 bit	8 / 10 bit	8 bit	8 bit
Color Format		YUY2, YVYU, UYVY	IYU2, YUY2, YUYV, UYVY RGB565, RGB555, RGB24	YUY2	YUY2
Operating Temperature		0°C~50°C	0°C~50°C	0°C~65°C	0°C~65°C
Dimensions (LxW) mm		138x68.8	138x64.3	124x110	124.8x68.8

Multi Channel






		CE314-SN	CL334-SN	CE314-HN	CL332-HN
Model Name		CE314-SN	CL334-SN	CE314-HN	CL332-HN
Host Interface		PCIe Gen1 x4	PCIe Gen1 x4	PCIe Gen1 x4	PCIe Gen2 x1
Max Input Resolution		1920x1080 60fps	1920x1080 60fps	1920x1080 60fps	1920x1080 60fps
Max Record Resolution		1920x1080 60fps (2ch) 1920x1080 30fps (4ch)	1920x1080 30fps	1920x1080 60fps (2ch) 1920x1080 30fps (4ch)	1920x1080 30fps
Channel No.		4	4	4	2
H/W Encode			●		●
Audio Interface		SDI embedded	SDI embedded	HDMI embedded	HDMI embedded
Video Interface	SDI	●	●		
	HDMI			●	●
	DVI				
	VGA				
	Component				
	Composite				
	S-Video				
HDMI Color Depth				8 bit	8 bit
Color Format		YUY2	YUY2,YV12 RGB24	YUY2	YUY2,YV12 RGB24
Operating Temperature		0°C~40°C	0°C~65°C	0°C~60°C	0°C~65°C
Dimensions (LxW) mm		137.8x110	145x68.8	138x105	135x68.8

Supported OS: Windows 7 or above, Linux. For availability on Linux driver versions, please contact us.

PCIe Frame Grabbers

Single I/O

PCIe SD



Model Name		CE511-HN	CE330B	CD110	C968	CE310B
Host Interface		PCIe Gen2 x4	PCIe Gen1 x1	PCIe Gen1 x1	PCIe Gen2 x1	PCIe Gen1 x1
Max Input Resolution		3840x2160 60fps	1920x1080 60fps	1920x1080 30fps	NTSC/PAL	NTSC/PAL
Max Record Resolution		3840x2160 60fps	1920x1080 30fps	1920x1080 30fps	NTSC/PAL	NTSC/PAL
Channel No.		1	1	1	4 or 8	1
H/W Encode			●			
Audio Interface		HDMI embedded	HDMI embedded 3.5 mm phone jack	SDI embedded	RL (RCA)	RL (RCA)
Video Interface	SDI			●		
	HDMI	●	●			
	DVI					
	VGA					
	Component					
	Composite				●	●
	S-Video					●
HDMI Color Depth		8 bit	8 bit			
Color Format		YUY2	YUY2,YV12 RGB24	YVYU, YUY2	YUY2	YUY2
Operating Temperature		0°C~50°C	0°C~65°C	0°C~65°C	0°C~65°C	0°C~65°C
Dimensions (LxW) mm		200x110	90.3x106.5	70x68.8	90.3x106.5	93.5x68.78

Mini PCIe Frame Grabbers


Model Name		CM311-H	C353	C353W	CM313B	CM313BW	C351	C351W
Host Interface		PCIe Gen2 x1	PCIe Gen1 x1		PCIe Gen1 x1		PCIe Gen1 x1	
Max Input Resolution		1920x1080 60fps	1920x1080 60fps		1920x1080 60fps		NTSC/PAL	
Max Record Resolution		1920x1080 60fps	1920x1080 30fps		1920x1080 30fps		NTSC/PAL	
Channel No.		1	1		1		4	
H/W Encode			●		●			
Audio Interface		HDMI embedded	HDMI embedded		SDI embedded		RL (RCA)	
Video Interface	SDI				●			
	HDMI	●	●					
	DVI		●					
	VGA		●					
	Component							
	Composite						●	
	S-Video							
HDMI Color Depth		8 / 10 bit	8 bit					
Color Format		IYU2, YUY2, YUYV, UYVY RGB565, RGB555, RGB24	YUY2,YV12 RGB24		YUY2,YV12 RGB24		YUY2	
Operating Temperature		0°C~50°C	0°C~55°C	-40°C~85°C	0°C~55°C	-40°C~85°C	0°C~55°C	-40°C~85°C
Dimensions (LxW) mm		50.95x30	50.95x30		50.95x30		50.95x30	

M.2 Frame Grabbers

NEW

4K
NEW

		CN331-H	CN311-H	CN311-S
Model Name		CN331-H	CN311-H	CN311-S
Host Interface		PCIe Gen1 x1	PCIe Gen2 x2	PCIe Gen2 x1
Max Input Resolution		1920x1080 60fps	4096x2160 30fps	1920x1080 60fps
Max Record Resolution		1920x1080 30fps	4096x2160 30fps	1920x1080 60fps
Channel No.		1	1	1
H/W Encode		●		
Audio Interface		HDMI embedded	HDMI embedded	SDI embedded
Video Interface	SDI			●
	HDMI	●	●	
	DVI			
	VGA			
	Component			
HDMI Color Depth		8 bit	8 / 10 bit	8 bit
Color Format		YV12, YUY2, RGB24	I420, NV12, YV12, IYU2, YUY2, YUYV, UYVY, AYUV, RGB565, RGB555, RGB24, RGB32, ARGB32, XRGB, V210,Y210, V410, Y410	IYU2, YUY2, YUYV, UYVY RGB565, RGB555, RGB24
Operating Temperature		0°C~55°C	0°C~40°C	0°C~40°C
Dimensions (WxL) mm		22x60 or 22x80	22x60 or 22x80	22x60, 22x80

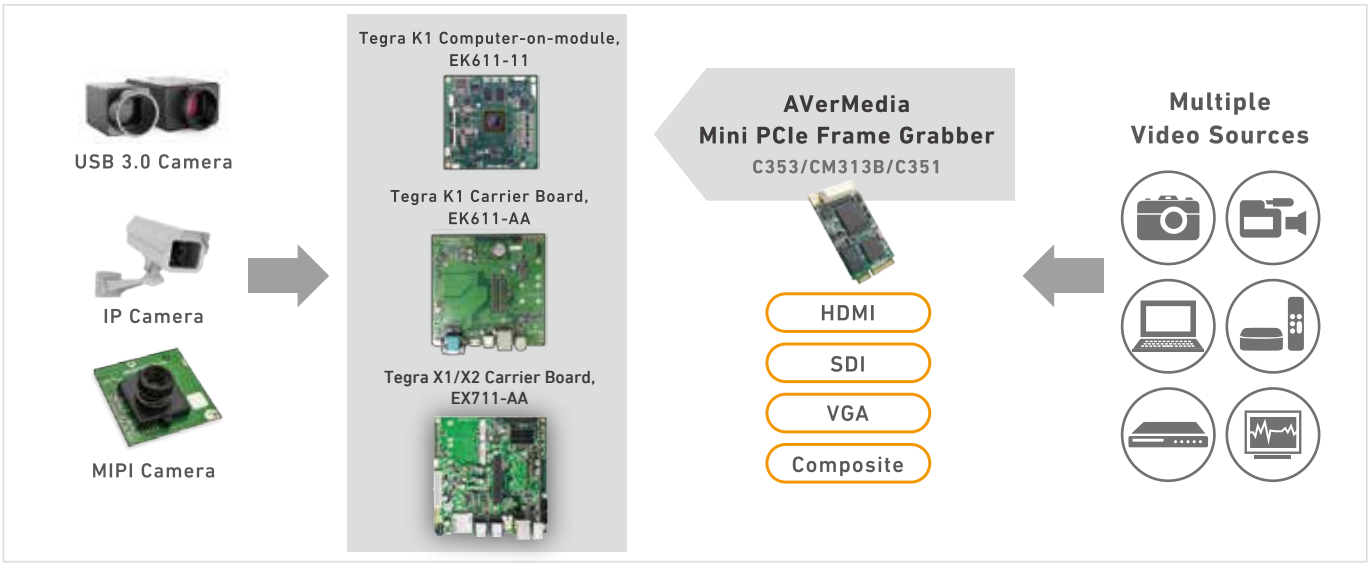
USB Capture Devices

		CU511B	CD750	CU331-HN	C039P	BU110	BU111
Model Name		CU511B	CD750	CU331-HN	C039P	BU110	BU111
Host Interface		USB 3.0	USB 3.0	USB 2.0	USB 2.0	USB 3.0 type C	USB 3.0 type C
Max Input Resolution		1920x1200 60fps	1920x1080 60fps	1920x1080 60fps	NTSC/PAL	1920x1080 60fps	1920x1080 60fps
Max Record Resolution		1920x1200 60fps	1920x1080 60fps	1920x1080 30fps	NTSC/PAL	1920x1080 60fps	1920x1080 60fps
Channel No.		1	1	1	1	1	1
H/W Encode				●			
Audio Interface		SDI embedded HDMI embedded RL (RCA)	HDMI embedded RL (RCA)	HDMI embedded 3.5 mm phone jack	RL (RCA)	HDMI embedded	SDI embedded
Video Interface	SDI	●					●
	HDMI	●	●	●		●	
	DVI	●					
	VGA	●					
	Component		●				
	Composite	●			●		
	S-Video	●			●		
HDMI Color Depth		8 bit	8 bit	8 bit		8 bit	8 bit
Color Format		YUY2	YUY2	YUV	YUY2	YUY2	YUY2
Operating Temperature		0°C~65°C	0°C~50°C	0°C~50°C	0°C~45°C	0°C~50°C	0°C~50°C
Dimensions (LxW) mm		218x132	137.2x84.8	131.4x69.3	82x28.49	85x43	85x43

Supported OS: Windows 7 or above, Linux. For availability on Linux driver versions, please contact us.

Enrich NVIDIA® TEGRA® Applications with Multiple Video Sources

- Standard and customized Tegra TK1 modules
- Standard and customized Tegra TK1, TX1, and TX2 carrier boards
- Standard and customized Tegra TK1 single boards
- Standard and customized Tegra TK1, TX1, and TX2 application-ready embedded systems
- Software design service of Linux BSP, driver, OpenCV, and VisionWorks
- Warranty: 1-year warranty, up to 5-year optional extension and technical support by developers
- Longevity: 5-year product life cycle and up to 10-year optional extension
- Best design for video-enabled deep learning client applications of in-vehicle, robotics, UAV/UGV, surveillance, inspection and measurement, IVA, and medical imaging.



Software Feature, Advantage, and Benefit

BSP

- Pinmux modification
- ISP capability
- U-Boot and Linux boot time optimization

Multiple Video Sources

- AVerMedia frame grabbers C353 (HDMI/VGA), CM313B (3G-SDI), and C351 (Composite)
- (HDMI to MIPI converter)

Wireless

- WiFi+BT module

RTC and MCU

- Pinmux modification
- ISP capability
- U-Boot and Linux boot time optimization

SDK

- Video rendering performance improvement
- (H.264 hardware codec)
- (H.265 hardware codec)

Battery Power

- Power management

OpenCV and VisionWorks

- Pinmux modification
- ISP capability
- U-Boot and Linux boot time optimization

Customization

- Additional and/or customization driver per client request

Technical Support

- Respond in less than 24 hours
- Directly by our developers

Product Offerings

Specifications	EK611-11	EK611-AA	EX711-AA	EK313
Product Description	NVIDIA® TEGRA® K1 COM ExpressType-6 Module	NVIDIA® TEGRA® K1 Type-6 Carrier Board with Two Mini PCIe Slots	NVIDIA® TEGRA® X1/X2 Carrier Board with Multiple Video Sources Support	NVIDIA® TEGRA® K1 Single Board
Processor	NVIDIA® TEGRA® K14-Plus-1 ARM Cortex-A15 r3	-	-	NVIDIA® TEGRA®a K14- Plus-1 ARM Cortex-A15 r3
Graphics	NVIDIA® Kelper GPU with 192 CUDA cores 325 GFLOPS	-	-	NVIDIA® Kelper GPU with 192 CUDA cores 325 GFLOPS
Memory	2GB DDR3L	-	-	2GB DDR3L
Storage	16GB eMMC4.51 Flash 1 x serial ATA interface (3Gb/s) 1 x micro SD slot"	1 x SATA 3Gb/s and SATA Power	1 x SATA 3Gb/s and SATA Power, 1 x SD card	16GB eMMC4.51 Flash 1 x micro SD slot
Video Interface	Single Channel 18/24 bit LVDS or eDP HDMI 2 x MIPI CSI	1 x HDMI Type A 1 x eDP or LVDS via 50-pin header	2 x HDMI Type A	1 x HDMI Type A
Audio Interface	1 x HD Audio 1 x Mic-in (pin header) 1 x Line-out (pin header) or 1 x I2S"	1 x MIC-in and Speaker-out (Realtek ALC5639)	-	1 x MIC-in and Speaker-out (Realtek ALC5639)"
LAN Port	1 x Gigabit Ethernet	1 x RJ-45 for Gigabit Ethernet	1 x RJ-45 for Gigabit Ethernet	1x RJ-45 for Gigabit Ethernet WiFi/BT M.2"
USB	5 x USB 2.0 Host Ports (1 for OTG) 1 x USB 3.0 Host Port	3 x USB 2.0 Type A 1 x USB 3.0 Type A	1 x USB 2.0 Type AB 2 x USB 3.0 Type A	1 x USB 2.0 Host Port (1 for OTG) 1 x USB 3.0 Host Port
PCI Express	1 x Half Mini-PCIe Slot	1 x Full-height Mini-PCI Express (PCI Express x1 only) 1 x Half-height Mini-PCI Exp ress	2 x Full-height Mini-PCI Express	1 x M.2 Slot (2230 KEY E) 1 x Full-height Mini-PCI Express
Serial Port	4 x UARTs (1 x 1.8V and 3 x 3.3V)	-	-	1 x UARTs (3.3V)
Other Interface	1 x I2C Bus 1 x SM Bus 4 x GPI, 4 x GPO SPI Interface Watch Dog Timer Real Time Clock Power Management Signals Thermal/FAN Management Onboard FAN connector	2 x RS-232 1 x Front pannel 1 x 4-pin FAN connector 1 x JTAG connector via 20-pin header	UART 0 (3.3V TTL) - debug port 6 pin (with RTS and CTS) UART 2 (3.3V TTL) - 4 pin 2 x SPI (3.3V) - 9 pin (one SPI bus plus two select lines) 1 x I2C (3.3V) - 4 pin 1 x 4-pin FAN connector JTAG header - 9 pin extra 40 pin connector 3 x I^2S	40 GPIO Real Time Clock Thermal/FAN management Onboard FAN connector
Power Supply	+12VDC	+12VDC	+12VDC	5V/2A
Operating Temperature	0°C ~ +55°C (standard version) -20°C ~ +70°C (optional)	0°C ~ +55°C (standard version)	0°C ~ +55°C (standard version)	0°C ~ +55°C (standard version) -20°C ~ +70°C (optional)
Operating Humidity	10% ~ 90%	10% ~ 90% (RH)	10% ~ 90% (RH)	10% ~ 90%
Storage Temperature	-40°C ~ +125°C	-40°C ~ +125°C	-25°C ~ +105°C	-40°C ~ +125°C
Dimensions	95 x 95 mm	170 x 170 mm	170 x 170 mm	145 x 70 mm
Support Module	-	COM Express Compact Type 6	NVIDIA® TEGRA® X1 Module	-
Buttons	-	Power on/off Reset Force Recovery	Power on/off Reset Force Recovery	Power on/off Reset Force Recovery
Camera Connection Supported by AVerMedia Frame Grabber	-	-	HDMI, VGA, 3G-SDI, and Composite	HDMI, VGA, 3G-SDI, and Composite
Raspberry Pi	-	-	Support through breakout board	-
Arduino	-	-	Support through breakout board	-
Battery Power	-	-	Support with power management	Support with power management
Sample Availability	Now	Now	Now	Coming Soon

AVerMedia

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Asia-Pacific	China • Japan

AVerMedia

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