AVS SERIES

Specification

Model	AVS-500	AVS-502	AVS-504
System			
Processor	6th/7th Gen. Intel Core i7/i5/i3 Processor		
System Chipset	H170		
System Memory	2 x 260-pin DDR4 SO-DIMM memory, up to 32GB		
I/O Port			
USB	4 x USB 3.0 type A 2 x USB 2.0 type A via TB-577		
Serial/Parallel	1 x RS-232/422/485 DB-9 (COM1, default RS-232) 1 x RS-232 DB-9 (COM2) 1 x RS-422/485 DB-9 (COM3, default RS-485, optional) 1 x RS-232 DB-9 (COM4, optional)		
Audio	1 x line-out, 1 x Mic-in		
Graph	1 x HDMI up to 4096 x 2304@24Hz 1 x VGA		
LAN	2 x GbE LAN RJ-45		
Digitl I/O	1 x 8-bit GPIO (4 x DI, 4 x DO, via TB-577)		
Power	1 x 3-pin DC power input terminal block 1 x 2-pin power switch 1 x power button with light via TB-577		
Storage Space			
HDD	2 x 2.5" SATA3 HDD/SSD, easy-swappable HDD tray		
Expansion			
On Board Expansion Bus	2 x full size Mini-PCIe slot		
Expansion Slot	–	PCIe x4, PCIe x16 slot default (Gen. 2) options: PCI, PCIe x16 slot	PCIe x4, PCIe x16, PCIe x1 slot default(Gen. 2) options: 4 x PCI slot
Power			
Power Input	DC 9~36V		
Support Expansion	Max: 75W@12V		
Mechanical			
Construction	Plating titanium gray aluminum heatsink and black steel chassis		
Mounting	Din rail back side (default) & Wall mount (option)		
Thermal	–	Support 1 x 4cm 4pin PWM Fan (optional) Support 2 pcs Fan Filter (8cm x 8cm, optional)	Support 1 x 8cm 4pin PWM Fan (optional) Support 2 pcs Fan Filter (8cm x 8cm, optional)
Dimension(mm)	230 x 195 x 125.7		
Net Weight (kgs)	4.3		
Enviroment			
Operating Temperature (°C)	-20˚C to 60˚C (for i3/i5 model) / -20˚C to 50˚C (for i7 model)		
Storage Temperature (°C)	-40˚C to 85˚C		
Storage Humidity	10 to 90%@ 40˚C, non-condensing		
Vibration	1G / 5 ~ 500Hz (Random)		
Shock	15G peak acceleration (11 msec. duration)		
Drop	92cm (1 Corner, 3 Edge, 6 Surface)		
Certificate	Meet CE/FCC Class A		
Operating System Support			
Operating System Support	Microsoft Win10 IoT, Windows 7, Linux Kernel 4.15 (Ubuntu 16.04.4)		

APLEX AT A GLANCE **Founded in 2004**

APLEX has committed to providing and developing innovative technologies that enable to benefit our partners. By offering a full spectrum of quality products ranging from industrial panel PCs, HMI, industrial displays, embedded box PC.

APLEX is proud that we fulfill the requirements of our customers in a wide range of industrial applications fields, including factory automation, surveillance, control and communication, medical, healthcare, logistic.

AVS SERIES

Intelligent Modular Design
Machine Vision Application

APLEX Technology

Why APLEX Machine Vision Dedicated Systems Become a Vital Member in the Smart Factory?

Widely implemented in industrial field as the request of precision control and quality assurance in mass-production process, this leads to the development of AVS series; its performance and reliability will get your systems to the next level of Smart Factory and Industry 4.0.

Material → → Finished Products

AVS SERIES

AVS series, a compact system family from APLEX, the latest development with high expandability and outstanding performance, is best suited for applications like machine vision or automation. Its flexible expansion capability allows install of add-on cards and peripherals like camera, POE, USB device, I/O device, and GPU card to meet with most demands in various industrial applications, especially in the smart manufacturing industry for instance; it is capable of meeting the needs of most Industrial IoT applications.

Furthermore, AVS series provides from entry-level to high-end advanced platform in full-fill of field application needs such as machine vision, AOI, automation control, measurement, robotic monitoring / control, IIoT, and edge computing; it will help your business to reach the next generation IIoT and Industry 4.0 standard.

As mostly be focus in vison application field, and targeting to run in industrial 24/7 harsh environment, AVS series' performance and reliability improve your production quality and efficiency; with an increasing productivity, it helps to drive the manufacturing cost down eventually.

Barcode Reading   PCB Inspection   Fault Detection   Object Positioning   Measurement
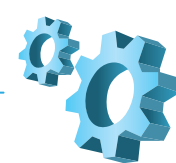
Highlights

Functionalities
· Support mainstream Camera
· Light source control
· High expandability
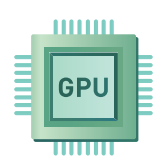· Engage in wide range of machine vision applications

AVS-300 Series
· Compact size
· Small size for occupying less space

AVS-500 Series
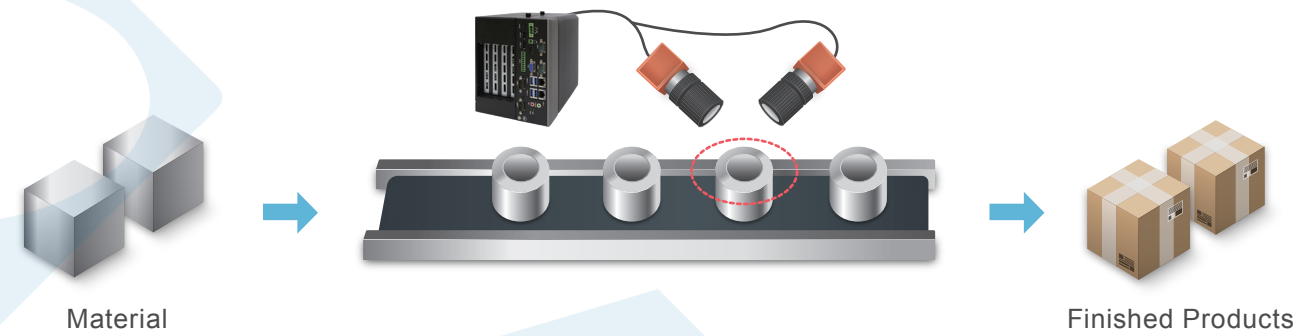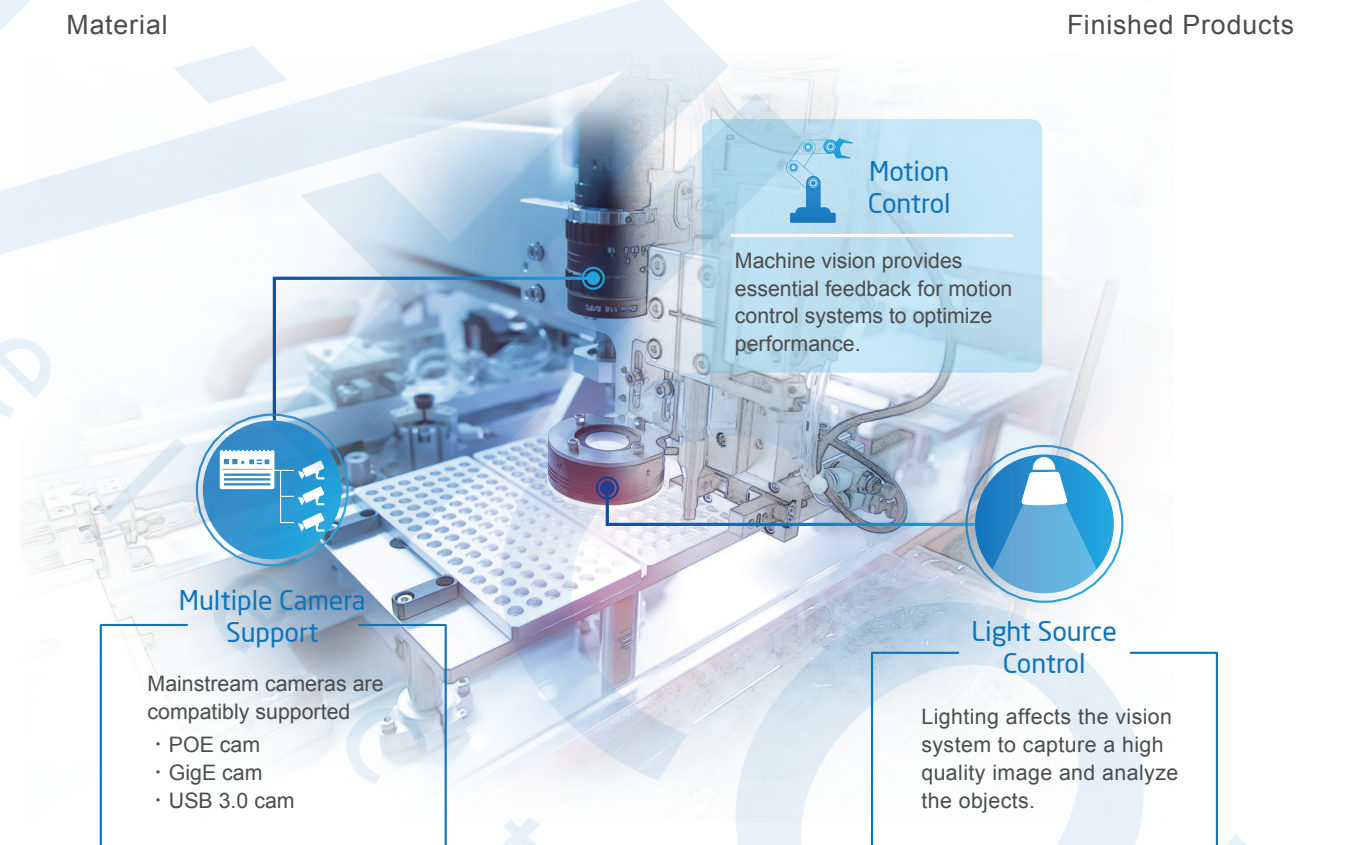· Powerful graphic computing performance
· Support up to 4 expansion slots

AVS-300 Series
CPU: Onboard Intel Celeron J1900
RAM: 1 x 204-pin SO-DIMM DDR3L 1333MHz, up to 8GB

AVS-500 Series
CPU: 6th//7th Gen. Intel Core i7/i5/i3
RAM: 2 x 260-pin DDR4 SO-DIMM memory, up to 32GB

Expendabilities & Modularization
· High speed PCIe interface
· Modular design easy for customization
· Increase the capacity and scalability
· Simplify installation process and save time

Comprehensive Product Line
· Entry to advanced platforms for different requirements
· Meet all demands in performance

Rugged   -20~60°C   9~36V DC Power   PCI/PCIe expansion   Din Rail   Fanless

Motion Control
Machine vision provides essential feedback for motion control systems to optimize performance.
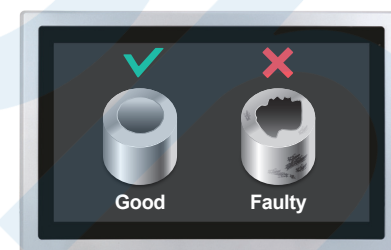
Multiple Camera Support
Mainstream cameras are compatibly supported
· POE cam
· GigE cam
· USB 3.0 cam

Light Source Control
Lighting affects the vision system to capture a high quality image and analyze the objects.

Quality Assurance

Intelligent Vision Inspection systems can help finding tiny, negligible defects within the manufacturing process, thus helping products been made with better accuracy and stability; this improves total production quality or, yield rate for a better cost of manufacturing.

Good   Faulty

Product Selection

Compact	Lighting Control	Motion Control	Expandable
AVS-300 AVS-310	AVS-311 AVS-313	AVS-312	AVS-500 AVS-502 AVS-504

TB-558
TB-562

AVS SERIES

Specification

Model	AVS-300	AVS-310	AVS-311	AVS-312	AVS-313
System					
Processor	Onboard Intel Celeron J1900 Pocessor				
System Chipset	SoC				
System Memory	1 x 204-pin SO-DIMM DDR3L 1333MHz, up to 8GB				
I/O Port					
Super I/O	Nuvoton NCT6106D				
USB	2 x USB 3.0 (type A) 2 x USB 2.0 (type A)	1 x USB 3.0 (type A) 1 x USB 2.0 (type A)	1 x USB 3.0 (type A) 3 x USB 2.0 (type A) 2 x USB 2.0 (type A, Internal)		
Serial/Parallel	1 x RS232/422/485, DB9 (COM1) 1 x RS232, DB9 (COM2) 1 x RS485, DB9 (COM3/4) 1 x RS232, DB9 (COM5/GPIO, optional) 1 x RS232, DB9 (COM6)	1 x RS485/RS232/ RS422, DB9 (COM1) 1 x RS232, DB9 (COM2)	1 x RS232, DB9 (COM3)		
Audio	1 x line-out			–	
Graph	1 x VGA up to 1920 x 1200 1 x HDMI up to 1920 x 1200		1 x HDMI up to 1920 x 1200		
LAN	2 x GbE LAN RJ-45	1 x GbE LAN RJ-45		2 x GbE LAN RJ-45 1 x EtherCat LAN RJ-45	1 x GbE LAN RJ-45
Digitl I/O	1 x 8-bit GPIO (4 x DI, 4 x DO)	4 x DI, 4 x DO (optional)	4 x DI, 4 x DO, 1 x 10 pin phoenix connector, isolation 8 x GPIO LED status 8 x DI, 8 x DO, 2 x 8 pin phoenix connector, isolation	4 x DI, 4 x DO, 1 x 10 pin phoenix connector, isolation 8 x GPIO LED status 6 x DI, 6 x DO, 2 x 8 pin phoenix connector, isolation 8 x DI, 8 x DO, 2 x 10 pin phoenix connector, isolation	8 x DI, 8 x DO, 2 x 10 pin phoenix connector, isolation (GPIO1) 8 x DI, 8 x DO, 2 x 10 pin phoenix connector, isolation (GPIO2)
Lighting Control	–		4 x lighting control, CH0/CH1/CH2/CH3	–	4 x lighting control, 1 x 8 Pin Phoenix Connector, CH0/ CH1/ CH2/ CH3
Trigger	–		4 x trigger input, 1 x 8 pin phoenix connector, isolation 4 x trigger output, 1 x 8 pin p hoenix connector, isolation	–	4 x trigger input, 1 x 8 pin phoenix connector, isolation
Storage Space					
HDD	1 x 2.5" SATA2 HDD/SSD bay (easy accessible) 1 x mSATA 1 x SIM slot	1 x 2.5" SATA2 HDD/SSD bay (easy accessible) 1 x mSATA			
Expansion					
Expansion Slot	1 x Mini-PCIe slot		1 x Mini PCIe (optional) 1 x SIM, 1 x 6 pin wafer (optional)		
Power					
Power Input	DC 9~36V	DC 9~36V (DC 24V input only for PoE, default)	DC 24V IN1(DC 24V input only for PoE, default) DC 24V IN2(DC 24V input only for TB-579 Lighting, default)	DC 9~36V	DC 9~36V (DC 24V input for PoE, default)
Mechanical					
Dimension(mm)	207 x 130 x 35.5 mm	180 x 130 x 39.5 mm	180 x 130 x 67.5 mm		
Gross Weight (kgs)	1.05	1.85	2.15	2.10	2.15
Enviroment					
Operatiing Temperature (°C)	-20°C to 70°C				
Storage Temperature (°C)	-40°C to 85°C				
Storage Humidity	10 to 90%@ 40°C, non-condensing, operating				
Certificate	Meet CE/FCC Class A				
Operating System Support	Windows 7 32/64bit, Windows 10				