TRS-STAR

electronics4U

avalue Technology Inc.

Industrial Computing Solutions

Product Overview

Empowering a SMART FUTURE – Avalue IoT Ready

Avalue Technology is a professional industrial computer manufacturing company with complete product lines in embedded computers, single board computers, Computer-on-Modules, industrial motherboards, high-performance multi-touch Panel PCs, and barebone products, mobile solutions, Industry 4.0 solutions and various IoT ready products.

Having expanded, Avalue offers its expertise on PCB / Assembly / BIOS version control and after-sales services. Avalue is an ISO 9001:2008, ISO 13485:2003, ISO 14001:2004 and OHSAS 18001:2007 certified company and offers assurance to customers in every aspect of business. With its headquarter located in Taiwan, Avalue has global branch offices. In addition, Avalue Technology operates a distribution network to accommodate and serve customers all over the world.

Certification

Information Technology Equipment
EMI EN55022
EMS EN55024
Safety EN 60950-1
FCC Part 15

Industrial Environments
EMI IEC 61000-6-2
EMS IEC 61000-6-4
Safety EN 60950-1
FCC Part 15

Medical
EMI EN 60601-1-2 EMS
EN 60601-1-2 Safety
EN 60601-1 FCC Part 18
FCC Part 18

Light-industrial Environments
EMI IEC 61000-6-1
EMS IEC 61000-6-3
Safety EN 60950-1
FCC Part 15

Vehicle
e Mark
ISO 7637

Marine
IEC 60945
DNV 2.4

Applications


Healthcare


Transportation

Retail


Industry 4.0


Gaming

Digital Signage


In-Vehicle


Automation


Surveillance


Communication

Embedded PC

Avalue offers a comprehensive range of affordable embedded board / embedded PC solutions which are designed to meet the requirements of industrial applications, such as industrial automation, POS, POI, Gaming and Medical, with a small form factor footprint, low power consumption and even with rugged fanless design.

Single Board Computer

Avalue SBCs are available in the following form factors, various CPUs, interfaces and display options:

SBC 3.5"

- Intel Atom
- Intel Celeron/Pentium
- Intel Core i3/5/7
- Up to 16 GB DDR4
- Triple Display
- Rich I/O

SBC EPIC

- Intel Core i3/5/7
- AMD Geode
- Up to 8 GB DDR4
- Triple Display
- Rich I/O

SBC 5.25"

- Intel Atom
- Intel Celeron/Pentium
- Intel Core i3/5/7
- AMD Geode
- Up to 16 GB DDR4
- Triple Display
- Rich I/O

Embedded PC

Fanless Industrial Systems and Fanless Rugged Systems

Tiny fanless systems and fanless rugged systems featuring low power consumption and outstanding multimedia performance. Extensive I/O support and even 4K capable dual display support makes them flexible IoT-ready solutions which are ideal for space-limited and silent applications even in demanding environments.

- Intel Celeron/Pentium
- Intel Core i3/5/7
- AMD G-Series
- Up to 16 GB DDR4
- Dual HDMI Display up to 4K
- TPM 2.0 Support
- Ultra-Slim
- Rich I/O
- Swappable Drive Bay
- Dual Expansion Slots for IET modules
- IP rating
- Vibration, shock, drop tested
- Fanless Operating from -10 to +60°c
- WIN, Linux

Sophisticated Design IET Modules

intel IoT Solutions Alliance

Peripherals & Accessories


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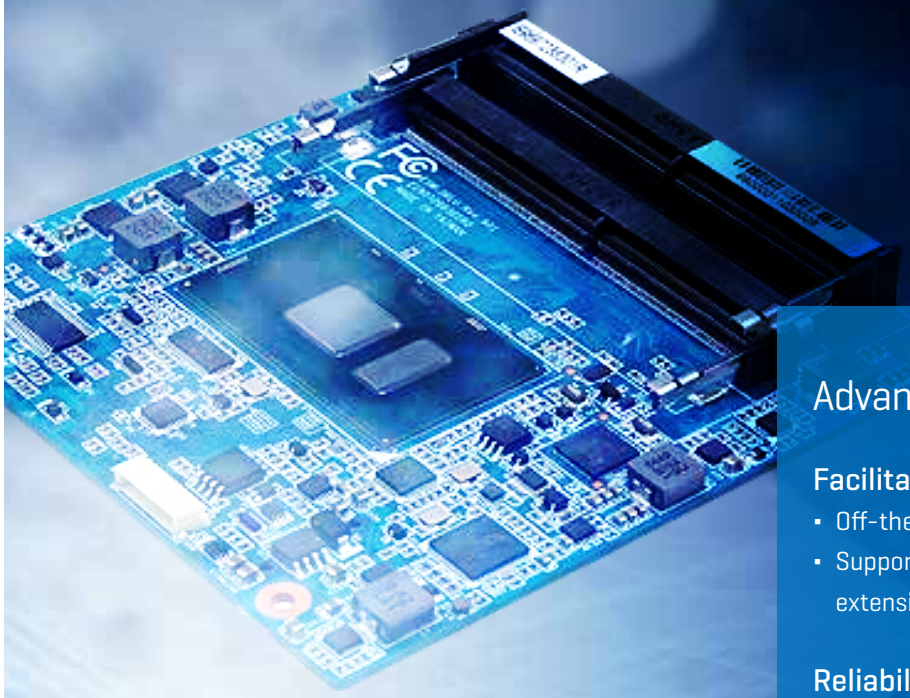
	Embedded Peripherals	Description
1	Power Board	EPM-1718 60W DC to DC Marine Power Module
		EPM-1715 Super Cap Power Module
2	Display Board	EPM-1525 VGA/DVI to TTL/LVDS Scalar Module
		EPM-1530 18/24 bit LVDS Receiver Module
	Accessories	
3	Industrial Flash Storage	Flash Disk: HDD/SSD, Flash Card: CF/CFAST, Flash Module: mSATA/SATA DOM
4	Industrial DRAM Module	Type: DDR2~DDR4, Capacity: 1GB~16GB, Wide temperature
5	CANBus Module	Form Factor: mPCIe, Dual Channel CAN 2.0B, Wide temperature: -40° to 85°C
6	Wi-Fi Module	Form Factor: mPCIe/ M.2, Bluetooth supported
7	3G/4G Module	3G/ 4G Wireless Ublox Mini PCIe module (3G Plus GPS)
8	Capture Card	Mini SDI/HDV capture card w/H.264, High Profile encoding
9	Mini LAN Port	2-port 10/100/1000 Ethernet board
10	Power Adapter	AC DC Adapter 60W/84W/120W
11	Microsoft Windows Embedded OS	Avalue provides Embedded Software to customers who integrated Avalue's hardware products. Windows Embedded Stardard 7/8 Window 10 IoT Enterprise

Computer-on-Module

Computer-on-Module is a series of Q7, COM Express, ETX/XTX and SMARC modules that mount onto easily designed application-specific solution boards. Avalue offers various solution boards and with their modular design, Avalue is able to streamline the entire design process.



Advantages of Boards and Modules

Facilitation

- Off-the-shelf computer board
- Support the future bus architecture extension interfaces

Reliability

- Expertise of ruggedized design
- Serving medical, transportation and harsh environment

Compliance

- Compliant to industry standards
- Compliant to safety regulations
- In-house testing and certification facilities

30-day Solution-Board Prototyping Service

This service helps customers rapidly develop their own innovations in industrial control, home automation, medical device, HMI/kiosk, robotics and transportation segments

COM Express

COM Express is a highly integrated computer module that can be used in a design application like an integrated circuit. It is commonly used in Industrial, Military/Aerospace, Gaming, Medical, Transportation, IoT, and General Computing embedded applications.

ETX / XTX

ETX boards are available with AMD Geode, Intel Atom, Celeron, Pentium and Core processors. XTX offers an upgrade with basically the same pin-out by dropping ISA bus and adding PCIe, SATA and LPC instead.

Qseven

The popular small sized and highly integrated computer module is limited to low power consuming CPUs. The maximum power consumption should be no more than 12 watt. These modules can be based either on x86 or ARM architectures.

SMARC

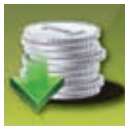
Smart Mobility ARChitecture Modules are specifically designed for the development of extremely compact and low-power and ultra-low-power systems and therefore opening up markets that could not be addressed with other modules due to their higher power consumption. SMARC modules are mainly based on ARM architectures.

RISC Platform – A Choice Beyond X86 Platform

Knowing arising demands in the market, Avalue teams up to develop new RISC products with their experience and expertise in embedded computing. RISC series feature "3 Savings"...

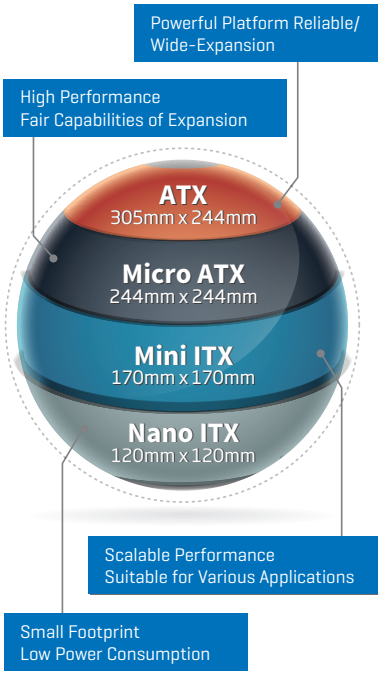
Space-Saving: Avalue's RISC platform is based on small size, 2.5" and SODIMM size

Energy-Saving: Each product is designed with low TDP and estimated power consumption is less than 1W (w/conditions)



Cost-Saving: By deducting redundant functions, execution process and hardware, total cost could be effectively controlled

Industrial PC



Industrial Motherboard

With rich experience in industrial motherboard manufacturing and design, Avalue is the expert at providing excellent solutions for industrial applications. Avalue provides full range of industrial motherboards, ATX, Micro-ATX, Mini-ITX, Nano-ITX and Pico-ITX.

Barbone and Fanless Barbone System

Mini-ITX System

- Intel Celeron, Pentium, Core
- Up to 32 GB DDR4 2133 Mhz
- Dual Display Support
- 4x USB 2.0, 4x USB 3.0, 6x COM, 2x SATA III, 2x SATA Pow.
- Up to 4096 x 2304 @60Hz
- 2x 2.5" HDD Bracket, 2x m.2 Expansion Slots

Micro-ATX System

- Intel Celeron, Pentium, Core
- Up to 32 GB DDR4 2133 Mhz
- Dual Display Support
- 4x USB 2.0, 14x USB 3.0, 6x COM, 2x LAN
- Up to 4096 x 2304 @60Hz
- 4x Low Profile Expansion Slots

Compact System

- Intel Atom, Celeron
- Palm-size, slim-design
- 2GB RAM, 32 GB eMMC
- 2x USB 2.0, 10/100 Ethernet
- Ruggedized Construction
- Win, Android, Linux

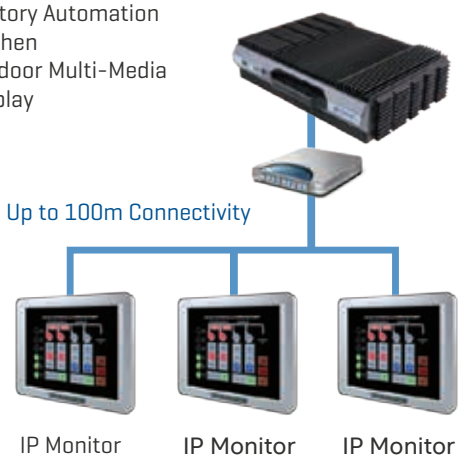
Rackmount Systems and Mini-Server

- 1U, 2U, 4U Rackmount Systems and Storage, Intel Core / Xeon CPU with Intel Express Chipset
- Up to 1TB ECC 3DS LRDIMM / 256 GB ECC RDIMM
- Up to 8 x 2.5/3.5 hot-swap HDD trays
- Rich I/O, VGA, HDMI, DP, up to 7 Expansion Slots
- 500W PS2 100-240 Vac Power Supply

Display Over Ethernet (DoE) Solution

Tx Module	– EMS-BYT-DOE
Rx Module	– IPM-15W0, IPM-1001 and IPM-1201

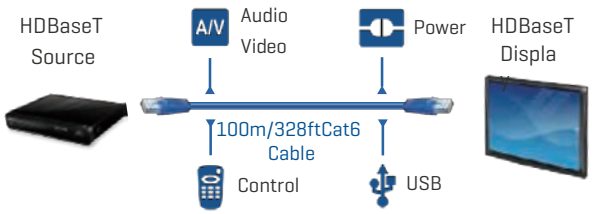
- Food Industry
- Factory Automation
- Kitchen
- Outdoor Multi-Media Display



HDBaseT™ Supports

Daisy Chain Architecture

Perfectly Suits
Digital Signage Installations



HD Video, Audio, Power and Controls on 100m LAN Cable

Expandable Embedded System

The 6th generation
Intel® Core™ processor family

Fanless & Easy Maintenance

- No Cable No Trouble
- Easy To Install Any Device

Expansion - Avalue IET Module


DVI-I
+ 2 USB


4 LAN
+ 2 USB


4 COM
+ 2 USB

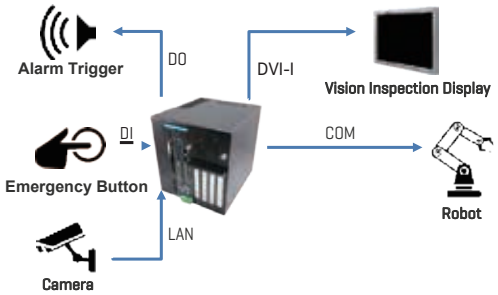

Standard
w/o Expansion


4COM isolation
+ 2 USB


8 COM
+ 2 USB


HDMI + 2 USB
+ 2 LAN + 2 COM

Basic Application



Panel PC and Open Frame Tablets

Avalue's wide range of Panel PCs and Open Frame Tablets is designed to meet the special requirements of applications like Healthcare, Aquaculture, Biotechnology, Gaming, Self-Service Terminals, Smart Retail Solutions, PoS-Terminals as well as Industry 4.0 and Automation.

- Intel Celeron/Pentium/Atom
- Intel Core i3/5/7
- AMD G-Series
- Up to 16 GB DDR4
- Dual HDMI Display up to 4K
- TPM 2.0 Support
- Ultra-Slim
- Multi-Touch
- Speaker/Mic/Camera
- NFC
- Programmable LED indicator light
- Rich I/O
- Swappable Drive Bay
- Dual Expansion Slots for IET modules
- IP rating
- Vibration, shock, drop tested
- Fanless Operating from -10 to +60°c
- WIN, Linux, Android

Intelligent Systems

In this IoT era, industries have embarked on a journey of digital transformation through the deployment of “things” and the use of Big Data. Digitalization helps industries to have more interaction with the end users and thus based on the information collected, owners can advance operation process, improve sales and marketing strategies and enhance customer experience. Avalue has been working with IoT alliance partners to provide Smart Retail Solutions, Smart Healthcare Solutions, Intelligent Transportation Systems and Smart Factory Solutions.

PoS-Terminals

- 50000 hrs LED TFT
- Fanless Operating
- IP65 Front Panel
- 1024 x 768 XGA
- Intel Atom
- Win, Linux, Android

Medical Solutions

- Medical Panel-PC
- Medical Displays
- IP65 Front
- Calibration Mode
- Anti-Microbial
- 1920 x 1080 Full HD

Mobile & Tablets

- 1280 x 800 HD TFT
- 10-Point P-CAP
- Intel Atom
- IP54
- Drop & Shock resistant

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