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 headquarters 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.

<table>
<thead>
<tr>
<th>Certification</th>
<th>Information Technology Equipment</th>
<th>Medical</th>
<th>Vehicle</th>
<th>Marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMI EN55022</td>
<td>EMI 60601-1-2 EMS</td>
<td>EN 60601-1-2 Safety</td>
<td>e Mark</td>
<td>IEC 60945</td>
</tr>
<tr>
<td>EMS EN55024</td>
<td>EN 60601-1-2 Safety</td>
<td>EN 60601-1 FCC Part 18</td>
<td>ISO 7637</td>
<td></td>
</tr>
<tr>
<td>Safety EN 60950-1</td>
<td>FCC Part 15</td>
<td>FCC Part 18</td>
<td></td>
<td>DNV 2.4</td>
</tr>
<tr>
<td></td>
<td>EMI IEC 61000-6-2</td>
<td>Light-industrial Environments</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EMS IEC 61000-6-4</td>
<td>EMI IEC 61000-6-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety EN 60950-1</td>
<td>EMS IEC 61000-6-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FCC Part 15</td>
<td>Safety EN 60950-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FCC Part 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Applications:
- Healthcare
- Transportation
- Retail
- Industry 4.0
- Gaming
- Automation
- Surveillance
- Communication
- Digital Signage
- In-Vehicle
- Transportation
- Retail
- Industry 4.0
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
## Peripherals & Accessories

### Embedded Peripherals

<table>
<thead>
<tr>
<th>Embedded Peripherals</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Power Board</td>
<td>EPM-1718 60W DC to DC Marine Power Module</td>
</tr>
<tr>
<td></td>
<td>EPM-1715 Super Cap Power Module</td>
</tr>
<tr>
<td>2 Display Board</td>
<td>EPM-1525 VGA/DVI to TTL/LVDS Scalar Module</td>
</tr>
<tr>
<td></td>
<td>EPM-1530 18/24 bit LVDS Receiver Module</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Industrial Flash Storage</td>
<td>Flash Disk: HDD/SSD, Flash Card: CF/CFAST, Flash Module: mSATA/SATA DOM</td>
</tr>
<tr>
<td>4 Industrial DRAM Module</td>
<td>Type: DDR2~DDR4, Capacity: 1GB-16GB, Wide temperature</td>
</tr>
<tr>
<td>5 CANBus Module</td>
<td>Form Factor: mPCIe, Dual Channel CAN 2.0B, Wide temperature: -40° to 85°C</td>
</tr>
<tr>
<td>6 Wi-Fi Module</td>
<td>Form Factor: mPCIe/ M.2, Bluetooth supported</td>
</tr>
<tr>
<td>7 3G/4G Module</td>
<td>3G/ 4G Wireless Ublox Mini PCIe module (3G Plus GPS)</td>
</tr>
<tr>
<td>8 Capture Card</td>
<td>Mini SDI/HDV capture card w/H.264, High Profile encoding</td>
</tr>
<tr>
<td>9 Mini LAN Port</td>
<td>2-port 10/100/1000 Ethernet board</td>
</tr>
<tr>
<td>10 Power Adapter</td>
<td>AC DC Adapter 60W/84W/120W</td>
</tr>
<tr>
<td>11 Microsoft Windows Embedded OS</td>
<td>Avalue provides Embedded Software to customers who integrated Avalue’s hardware products. Windows Embedded Standard 7/8 Window 10 IoT Enterprise</td>
</tr>
</tbody>
</table>
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 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 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
Expandable Embedded System

Detect Monitor

- EMS-BYT-DOE
- IPM-15W0, IPM-1001 and IPM-1201

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

Up to 100m Connectivity

IP Monitor

HDBaseT™ Supports

Daisy Chain Architecture

Perfectly Suits Digital Signage Installations

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

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

Alarm Trigger
Emergency Button
Camera

Vision Inspection Display
Robot

TRS-STAR 9
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

7” – 24” Display Size
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