BOARDS & MODULES – SMARC™

Low-power embedded architecture platform for Computer-on-Modules based on ARM and X86 technology. Perfect fit for mobile, embedded, connected solutions with scalable building blocks. Optimized pin-out definition for versatile architectures. Constructed to withstand harsh industrial environments.

SMARC 2.0 COMPUTER-ON-MODULE SOLUTIONS

The SMARC™ (Smart Mobility Architecture) standard has in a matter of a few years become a major driving force behind the enablement of innovative ultra-low-power embedded computing technology solutions. Market demand and the disruptive influence of the Internet of Things (IoT) have already hastened the arrival of a new specification, SMARC 2.0.

About Kontron | Member of the S&T Group

Kontron is a global leader in IoT/embedded computing technology (ECT). As a part of technology group S&T, Kontron offers a combined portfolio of secure hardware, middleware and services for Internet of Things (IoT) and Industry 4.0 applications. With its standard products and tailor-made solutions based on highly reliable state-of-the-art embedded technologies, Kontron provides secure and innovative applications for a variety of industries. As a result, customers benefit from accelerated time-to-market, reduced total cost of ownership, product longevity and the best fully integrated applications overall.

About the Intel® Internet of Things Solutions Alliance

From modular components to market-ready systems, Intel and the 400+ global member companies of the Intel® Internet of Things Solutions Alliance provide scalable, interoperable solutions that accelerate deployment of intelligent devices and end-to-end analytics. Close collaboration with Intel and each other enables Alliance members to innovate with the latest IoT technologies, helping developers deliver first-in-market solutions.

COMPUTER-ON-MODULES FORM FACTOR SMARC™

MODULE STANDARD FOR X86 AND ARM
Optimized pin-out definition for versatile architectures

CREATING MOBILE, EMBEDDED, CONNECTED SOLUTIONS
Ultra low-power, low profile

PERFECT FIT FOR IOT APPLICATIONS
High connectivity with USB, PCIe, up to 2 x LAN and 2x CAN

Global Headquarters

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<table>
<thead>
<tr>
<th>COMPLIANCE</th>
<th>SMARC 1.1</th>
<th>SMARC 2.0</th>
<th>SMARC-sAMX6i</th>
<th>SMARC-sAMX7</th>
<th>SMARC-sAMX8X</th>
<th>SMARC-sAL28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>82 mm × 50 mm</td>
<td>82 × 50 mm</td>
<td>82 mm × 52 mm</td>
<td>82 × 50 mm</td>
<td>82 × 50 mm</td>
<td>82 × 50 mm</td>
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| CPU | Intel® Atom™ E3800, 4C: 1.95 GHz 10 W TDP | Intel® Atom™ E3900, 4C: 1.4 / 2.0 GHz, 12 W TDP | Intel® Atom™ x7E3000, 4C: 1.4 / 1.8 GHz, 5.5 W TDP | Intel® Atom™ x5E3900, 2C / 3.3 GHz, 2.5 / 3.6 W TDP | Intel® Pentium® N4200, 4C / 2.5 GHz, 4.0 W TDP | Intel® Atom™ x5E3900, 2C: 1.9 / 2.4 GHz, 5 W TDP |
| | Intel® Atom™ E3802, 2C: 1.6 / 2.4 GHz, 6 W TDP | Intel® Atom™ x5E3900, 2C: 1.9 / 2.5 GHz, 5.5 W TDP |
| MAIN MEMORY | Up to 8 × 8 Gb DDR3-2133 memory | Up to 8 × 8 Gb DDR3-1866-1600 memory | Up to 8 × 8 Gb DDR3-2133 memory (EC) (only for Atom versions) |

| GRAPHICS CONTROLLER | Intel® HD Graphics (Gen7) | Intel® HD Graphics (Gen7) |
| ETHERNET CONTROLLER | Intel® i219V | Intel® i219V |
| ETHERNET | 1x 10 Gb Ethernet | 1x 10 Gb Ethernet |
| SATA | 1x SATA 3Gb/s x1 | 1x SATA 3Gb/s x1 |
| USB | 3x USB 2.0 | 1x USB 2.0, 1x USB 3.0 (via M.2) |
| ADDITIONAL INTERFACES | HD Audio and USB, 5x I²C, 2x SPI, Camera Interface (MIPI CSI) | HD Audio and USB, 5x I²C, 2x SPI, Camera Interface (MIPI CSI) |
| OPERATING SYSTEM | Windows® 8, Windows® 10 Wandes, WEST, LEDVOLinux, xWVOLs | Windows® 8, Windows® 10 Wandes, WEST, LEDVOLinux, xWVOLs |
| POWER SUPPLY | 5 V – 5.25 V Operates directly from single level Lithium ion cells or fixed 3.3 V or 5 V power supplies | 5 V – 5.25 V Operates directly from single level Lithium ion cells or fixed 3.3 V or 5 V power supplies |
| TEMPERATURE | -40 °C to 60 °C | -40 °C to 85 °C |
| EXPERIEL FEATURES | Industrial temperature version, ECC, Windows® 8 | Industrial temperature version, ECC, Windows® 8 |

**SMARC 2.0 Carrier plus SMARC Evaluation Carrier**

- 2x USB 3.0
- 2x PCIe x4
- 1x 4x Serial (CAN)
- 1x HDMI/DP++
- 1x USB 2.0
- 4x USB 2.0
- Security Solution (APPROTECT) on request
- Ultra low-power, 2×CAN Interfaces

**SMARC 2.0 Modules**

- MAXXI 3.0 connector
- HDMI/DP++
- USB 3.0
- 2x PCIe x4

**BOARDS & MODULES**

- SMARC-sXBTi
- SMARC-sXAL (E2)
- SMARC-sAMX6i
- SMARC-sAMX7
- SMARC-sAMX8X
- SMARC-sAL28

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