

## SMARC™ Module with Intel Atom® x6000E/ Pentium® / Celeron® processor series

# PSMC-M1014

- Intel Atom® x6000E/ Pentium® / Celeron® processors (formerly Elkhart Lake)
- On Board LPDDR4 SDRAM up to 8GB
- Multiple display support (24-bit LVDS, HDMI/DP)
- Dual GbE (option), four PCIe lanes, two USB 3.0 and up to six USB 2.0
- One SATA 3.0, onboard eMMC 5.0, onboard TPM (option)

## Specifications

### CPU

Intel Atom® x6425E, 4 cores, 2.0 GHz, 12W TDP

Intel Atom® x6413E, 4 cores, 1.5 GHz, 9W TDP

Intel Atom® x6211E, 2 cores, 1.3 GHz, 6W TDP

Intel® Celeron® J6412, 4 cores, 2.0 GHz, 10W TDP

Intel® Celeron® N6210, 2 cores, 1.2 GHz, 6.5W TDP

### Cache

4 MB L3 cache

### Memory

Onboard 2G/ 4G/8G LPDDR4 with 3200 MT/s

Dual memory channel, 64bit

In-band ECC (Intel Atom® CPU)

### Storage

eMMC 5.1 onboard flash up to 256 GB

### DisplayPort Interface

#### LVDS

24-bit dual-channel LVDS up to 1920x1200@60Hz

Or eDP 1.3 (4096 x 2160p @ 60Hz) (signal shared with LVDS via BOM selection)

#### DDI2

DisplayPort 1.4 up to 8K (7680x4320)@30Hz/ 4K(4096x2160) @60Hz

Or HDMI 2.0b up to 4K (4096x2160) @60Hz

### Ethernet

Up to 2x Intel® i226

### Audio

Intel® High Definition Audio

### I/O Interfaces

#### PCIe

4x PCIe x1 or 1x PCIe x4 Gen3

#### USB

4x USB 2.0, 2x USB 3.1/2.0

#### SATA

1x SATA 3.0 (6 Gbit/s)

### Other I/O Interfaces

1x SDIO, 1x SATA 3.0, 4x I<sup>2</sup>C from SoC, 1x I<sup>2</sup>C (EC optional), 1x SMBus (EC optional), 2x HSUART, 2x UART, 12x GPIO



### Video

#### GPU Feature Support

Intel® Gen 11 Graphics supporting DirectX 12 |

OpenGL 4.5 OpenCL 1.2 | OpenGL ES 3.1 | HW accelerated video decoding HEVC/H.264/MPEG2/VP9/VC-1/WMV9/MJPEG |

Encoding HEVC/H.264/VP9/MJPEG HDCP 1.4/2.3

for 4K premium content protection

#### Embedded BIOS

AMI UEFI with Fast Boot support | Display Auto Detection |

Flash Update | Password Lock | OEM Logo for startup screen

#### Mechanical and Environmental

##### Form Factor

SMARC 2.1

##### Dimension

SMARC module, 82 mm x 50 mm

##### Operating Temperature

Commercial: 0°C to +60°C

Industrial: -40°C to +85°C

##### Humidity

10-90% RH operating, non-condensing

5-95% RH storage (and operating with conformal coating)

##### Power

##### Standard Input

5V DC ±5%

##### Power Management

ACPI 5.0 compliant with battery support

##### Power Consumption

6W~12W (CPU)

##### Operation System

Windows 10 Enterprise, Windows 10 IoT, Linux

## Functional Diagram

### PSMC-M1014 Block Diagram

