



CPU

Intel® Atom E3950, 4 cores, 1.6GHz/2.0 GHz, 12W TDP
Intel® Atom E3940, 4 cores, 1.6GHz/1.8 GHz, 9.5W TDP
Intel® Atom E3930, 2 cores, 1.3GHz/1.8 GHz, 6.5W TDP
Intel® Pentium N4200, 4 cores, 1.1GHz/2.5 GHz, 6W TDP
Intel® Celeron N3350, 2 cores, 1.1GHz/2.4 GHz, 6W TDP

Cache

2 MB L2 cache

Memory

Up to 8 GB LPDDR4 at 2133/2400 MTps
Dual/quad channel, 64bit, non-ECC

Storage

eMMC 5.0 onboard flash up to 64 GB

DisplayPort Interface

DDI1

24-bit Dual Channel LVDS up to 1920x1200@60Hz

DDIO

DisplayPort 1.2 up to 4096x2160@60Hz
Or HDMI 1.4b up to 3840x2160@30Hz

Audio

Intel® HD Audio integrated in SoC

Ethernet

1x Intel® i210

I/O Interfaces

PCIe

4x PCIe x1 Gen2

USB

8x USB2.0 or 3x USB 3.0 (opt.)

SATA

2x SATA 3.0 (6 Gbit/s)

Other I/O Interfaces

1x SDIO, 2x SPI, 1x I²C, 1x HDA, 1x SMBus, 1x LPC, 1x UART, WDT, 1x JTAG

FEATURES

- Intel® Atom™ / Pentium® / Celeron® processors
- On Board LPDDR4 SDRAM up to 8GB
- 24-bit LVDS, HDMI/DP output
- Four PCI Express lanes
- Support eight USB 2.0 / three USB 3.0 (optional)
- On Board eMMC 5.0 (Optional)

Specifications

Video

GPU Feature Support

Intel® Gen 9 LP Graphics supporting DirectX 12 | OpenGL 4.3 OpenCL 2.0 |
OpenGL ES 3.0 | HW accelerated video decoding |
HEVC/H.264/MVC/MPEG2/VP9/VC1/WMV9/MJPEG and encoding |
HEVC/H.264/MVC/VP8/MJPEG |
Content protection using PAVP 2.0 and HDCP 1.4/2.2

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

Qseven® 2.1

Dimension

Qseven module, 70 mm x 70 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 | Smart Battery Management on carrier

Power Consumption

6W~12W (CPU)

Operation System

Windows 10 IOT Enterprise, Windows 10 IOT Core

PQ7-M108

Functional Diagram

PQ7-M108 (ZR2) Block Diagram

PQ7-M108

Block Diagram

