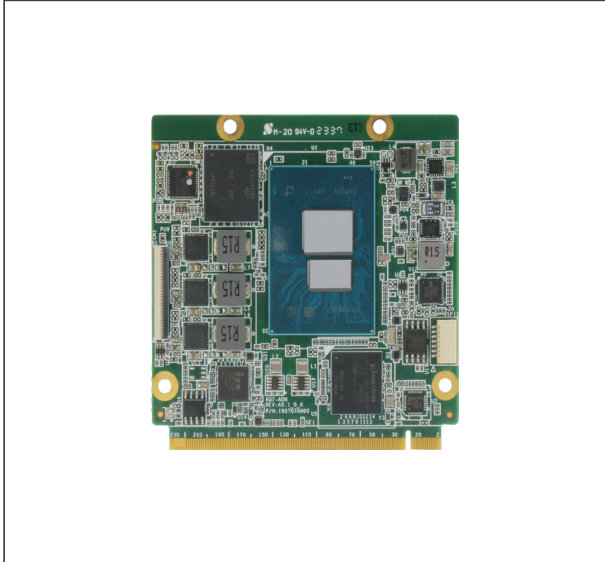


# AQ7-ADN

Qseven CPU Module with Intel Atom® X Series/N-series/Core™ i3-N305 processor

COM Express CPU Modules



## Features

- Intel Atom® X Series/N-series/Core™ i3-N305, Max TDP 15W
- Onboard LPDDR5x, up to 8GB
- Realtek RTL8111H-CG 1GbE x 1
- SATA 6Gb/s x 1
- USB 2.0 x 6, USB 3.2 x 2
- PCIe [x1] x 4
- DC +5V
- Qseven Module Size, 70mm x 70mm



## Specifications

| System                      |   |
|-----------------------------|---|
| Form Factor                 | Qseven Module   |
| CPU                         | Intel Atom® X Series/N-series/Core™ i3-N305 CPU<br>Intel® Core™ i3-N305 (8C, up to 3.8 GHz, 15W)<br>Intel Atom® x7425E (4C, up to 3.4 GHz, 12W)<br>Intel® Processor N200 (4C, up to 3.7 GHz, 6W)<br>Intel® Processor N97 (4C, up to 3.6 GHz, 12W)<br>Intel® Processor N50 (2C, up to 3.4 GHz, 6W) |
| Chipset                     | Integrated with Intel® SoC  |
| Memory                      | LPDDR5x up to 4800MT/s, 8GB   |
| Onboard Storage             | eMMC up to 64GB   |
| BIOS                        | AMI UEFI  |
| Wake on LAN                 | Yes   |
| Watchdog Timer              | 255 Levels  |
| Dimension                   | 2.76" x 2.76" (70mm x 70mm)   |
| Security                    | TPM 2.0 (Optional)  |
| Power                       |   |
| Power Requirement           | +5V +/- 50mV, +3Vrvc  |
| Power Type                  | AT (default) / ATX, switch by BIOS  |
| Power Consumption (Typical) | Intel® Core™ i3-N305, LPDDR5x 8GB x1, 4.5A@ +5V   |
| Display                     |   |
| Graphics Controller         | Intel® UHD Graphics   |
| Video Output                | Dual Display:<br>DP x 1<br>eDP or LVDS x 1 (Change by BOM)  |
| I/O                         |   |
| Ethernet                    | Realtek RTL8111H-CG 1GbE x 1  |
| Audio                       | High Definition Audio Interface   |
| USB Port                    | USB 2.0 x 6, USB 3.2 x 2  |
| Serial Port                 | 4-Wire UART x 1 (Tx/Rx/CSR/RTS)   |
| HDD Interface               | SATA III x 1  |
| Expansion                   | PCIe [x1] x 4<br>4-lane MIPI-CSI x 1  |
| GPIO                        | 8-bit (Change by BOM)   |
| SMBus/I2C                   | I2C x 1, SMBus x 1  |
| Environment                 |   |
| Operating Temperature       | 32°F ~ 140°F (0°C ~ 60°C)   |
| Storage Temperature         | -40°F ~ 185°F (-40°C ~ 85°C)  |
| Operating Humidity          | 0% ~ 90% relative humidity, non-condensing  |

|            |  |
|------------|--|
| EMC        | CE/FCC Class A   |
| OS Support | Windows® 10 (64-bit)<br>Linux Ubuntu 22.04.x/Kernel 5.19.0 |
| Weight     | 0.26 lb. (0.12Kg)  |

## Packing List

- AQ7-ADN

## Optional Accessories

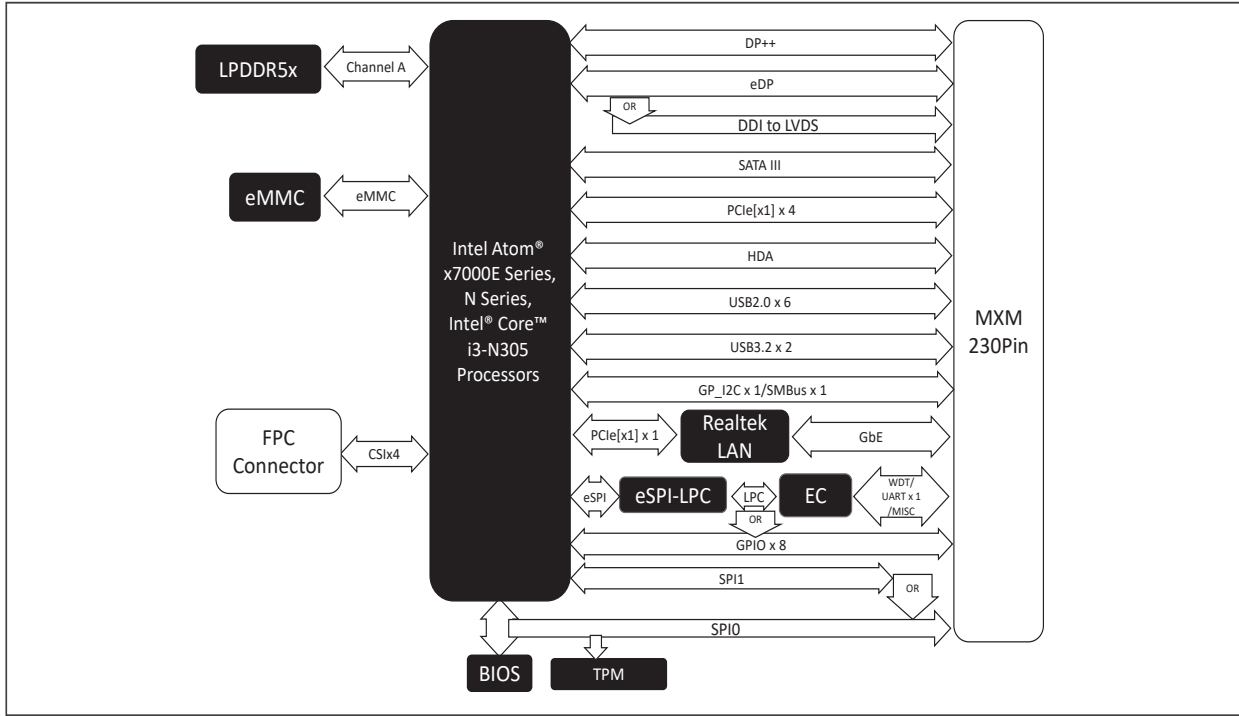
| Part Number       | Description   |
|-------------------|---|
| ECB-9706-A10-0001 | COM Qseven Carrier Board, 2USB3, 2SATA, GbE, PCIe, AT/ATX, Rev A1.0 |
| AQ7-ADN-FAN01     | Cooler.60 x 70 x 19.1mm.4pin  |

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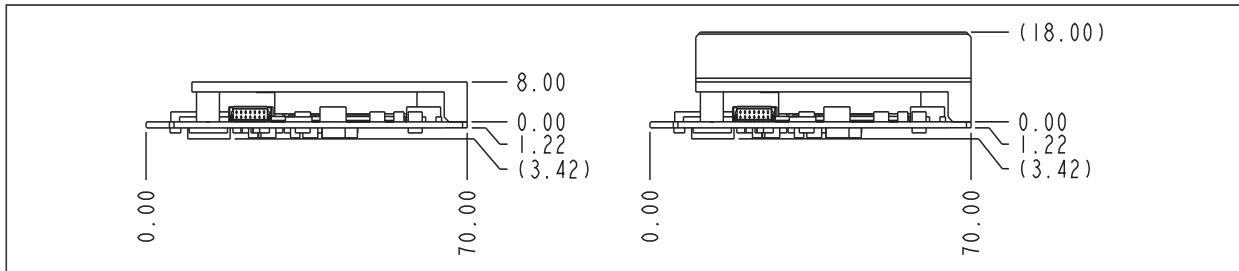
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COM Express CPU Modules

## Block Diagram Unit: mm



## Dimension Unit: mm



## Ordering Information

| Part Number      | COM Express Type | CPU                           | Memory      | ECC support | Display         | LVDS     | Storage   | LAN                  | USB                       | UART        | Expansion                          | Power | Temperature | Others                       |
|------------------|------------------|-------------------------------|-------------|-------------|-----------------|----------|-----------|----------------------|---------------------------|-------------|------------------------------------|-------|-------------|------------------------------|
| AQ7-ADN-A10-0001 | Oseven 2.1       | Intel Core™ Processor i3-N305 | LPDDR5x 8GB | —           | DP x 1          | LVDS x 1 | eMMC 64GB | RTL8111H-CG 1GbE x 1 | USB 2.0 x 6<br>USB3.2 x 2 | 4-Wire UART | PCIe [x1]x4<br>4-lane MIPI-CSI x 1 | 5V    | 0~60°C      | I2C, SMBus, LPC, SPI0        |
| AQ7-ADN-A10-0003 | Oseven 2.1       | Intel® Processor N97          | LPDDR5x 8GB | —           | DP x 1          | LVDS x 1 | eMMC 64GB | RTL8111H-CG 1GbE x 1 | USB 2.0 x 6<br>USB3.2 x 2 | 4-Wire UART | PCIe [x1]x4<br>4-lane MIPI-CSI x 1 | 5V    | 0~60°C      | I2C, SMBus, LPC, SPI0        |
| AQ7-ADN-A10-0004 | Oseven 2.1       | Intel® Processor N50          | LPDDR5x 4GB | —           | DP x 1, eDP x 1 | —        | eMMC 32GB | RTL8111H-CG 1GbE x 1 | USB 2.0 x 6<br>USB3.2 x 2 | 4-Wire UART | PCIe [x1]x4<br>4-lane MIPI-CSI x 1 | 5V    | 0~60°C      | I2C, SMBus, GPIO 8-bit, SPI1 |
| AQ7-ADN-A10-0005 | Oseven 2.1       | Intel Atom® Processor x7425E  | LPDDR5x 8GB | —           | DP x 1          | LVDS x 1 | eMMC 64GB | RTL8111H-CG 1GbE x 1 | USB 2.0 x 6<br>USB3.2 x 2 | 4-Wire UART | PCIe [x1]x4<br>4-lane MIPI-CSI x 1 | 5V    | 0~60°C      | I2C, SMBus, LPC, SPI0        |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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