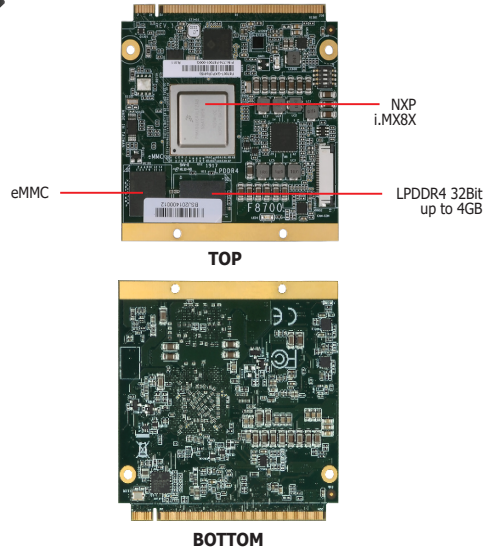




**NXP i.MX8X Series  
Qseven**

## F8700

ARM

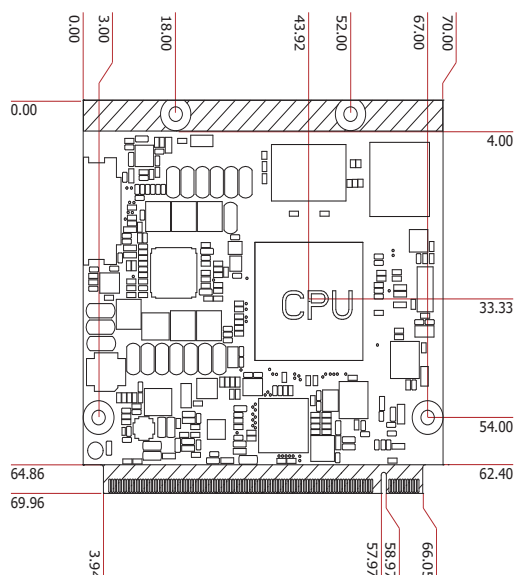


### Features

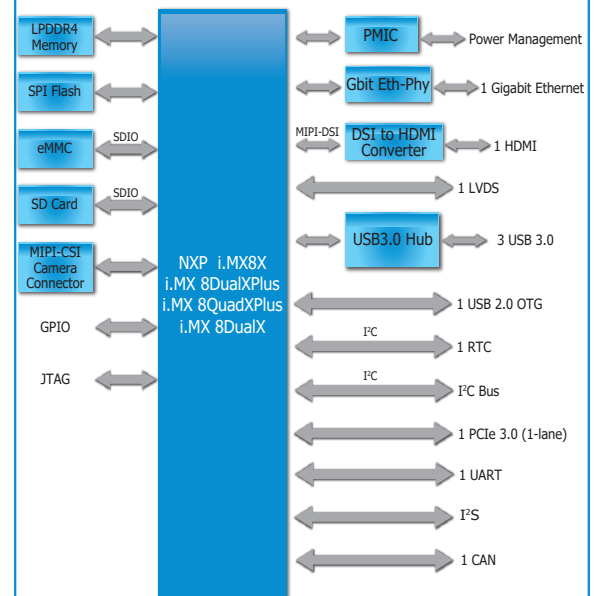
- 4GB LPDDR4 Memory Down
- Supports dual displays: 1 HDMI, 1 LVDS
- Multiple expansions: 1 PCIe x1, 1 SDIO x4 bit
- Rich I/O: 1 GbE, 3 USB 3.0, 1 USB 2.0 OTG



### Mechanical Drawing



### Block Diagram





## Specifications

|                |                   |                                                                                                                                                              |                                                                                                            |
|----------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| SYSTEM         | Processor         | NXP i.MX8X series processors<br>i.MX 8DualXPlus: 2 X Cortex-A35 (1.2GHz)<br>i.MX 8QuadXPlus: 4 X Cortex-A35 (1.2GHz)<br>i.MX 8DualX: 2 X Cortex-A35 (1.2GHz) |                                                                                                            |
|                | Memory            | LPDDR4 32Bit up to 4GB                                                                                                                                       | Single Channel LPDDR4 3200MHz                                                                              |
| GRAPHICS       | Controller        | GPU (graphics processing): 1 x GC7000Lite with 4x Vec4 shader cores (16 execution units)                                                                     |                                                                                                            |
|                | Display           | 1 x HDMI<br>1 x LVDS                                                                                                                                         | HDMI: HDMI v1.4, resolution up to 1920x1200 @ 60Hz<br>LVDS: 1 Single Channel 18/24 bit up to 85 Mpixel/sec |
|                | Dual Display      | HDMI + LVDS (Extended desktop)                                                                                                                               |                                                                                                            |
| STORAGE        | eMMC              | 1 x 4GB/8GB/16GB eMMC                                                                                                                                        |                                                                                                            |
| EXPANSION      | Interface         | 1 x PCIe x1<br>1 x 4-bit SDIO<br>2 x I <sup>2</sup> C<br>1 x UART (TX/RX)                                                                                    |                                                                                                            |
| AUDIO          | Interface         | 1 x SAI                                                                                                                                                      |                                                                                                            |
| ETHERNET       | Controller        | 1 x Ethernet PHY (10/100/1000Mbps)                                                                                                                           |                                                                                                            |
| I/O            | USB               | 3 x USB 3.0<br>1 x USB 2.0 OTG                                                                                                                               |                                                                                                            |
|                | CAN Bus           | 1 x CAN Bus                                                                                                                                                  |                                                                                                            |
| WATCHDOG TIMER | Output & Interval | Software programmable                                                                                                                                        |                                                                                                            |
| POWER          | Type              | 5V                                                                                                                                                           |                                                                                                            |
|                | Consumption       | Under 5W @ 5V                                                                                                                                                |                                                                                                            |
| OS SUPPORT     |                   | Yocto 2.5 - Kernel 4.14.78                                                                                                                                   |                                                                                                            |
| ENVIRONMENT    | Temperature       | Operating: -40 to 85°C                                                                                                                                       | Storage: -40 to 85°C                                                                                       |
|                | Humidity          | Operating: 5 to 90% RH                                                                                                                                       | Storage: 5 to 90% RH                                                                                       |
|                | MTBF              | TBD                                                                                                                                                          |                                                                                                            |
| MECHANICAL     | Dimensions        | Qseven form factor                                                                                                                                           | 70mm (2.76") x 70mm (2.76")                                                                                |
|                | Compliance        | Qseven specification revision 2.1                                                                                                                            |                                                                                                            |

## 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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