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Mustang-200



# *Specifications*

***Hardware Feature***

* Dual 10Gbps network based x86 computing accelerator
* Decentralized computing architecture for independent tasks
* PCI Express x4 delivers scalable and flexible solution
* Two Intel® Core™ i7-7567U/i5-7267/Celeron® 3865U processors, up to 4.00 GHz
* Support high-end graphics engine - Intel® Iris™ Plus Graphics 650
* Pre-installed 32 GB DDR4 (max. 64 GB) and 1 TB NVMe (max. 2 TB)

***AI Solution***

|  |  |
| --- | --- |
| **Model Name** | **Mustang-200** |
| Main Chipset | Two (2) Intel Kabylake ULT CPU |
| Intel® Core™ i7-7567U (28 W) (4M Cache, up to 4.00 GHz) |
| Intel® Core™ i5-7267U (28 W) (4M Cache, up to 3.50 GHz) |
| Intel® Celeron® 3865U (15W) (2M Cache, 1.80 GHz) |
| Processor Graphics | Intel® Core™ i7-7567U & i5-7267U support Iris™ Plus Graphics 650 (GT3e)  •Graphics base frequency 300 MHz  •Graphics max dynamic frequency: 1.05 GHz  •Embedded graphics DRAM per GPU: 64 MB |
| Intel® Celeron® 3865U supports Intel® HD Graphics 610  •Graphics base frequency 300 MHz  •Graphics max dynamic frequency: 900 MHz |
| Hardware Video Decode | H.264, H.265/HEVC |
| MPEG2, M/JPEG |
| VC-1 |
| VP8(8 bit)/VP9(10 bit) |
| Hardware Video Encode | H.264, H.265/HEVC |
| MPEG2, M/JPEG |
| VC-1 |
| VP8 (8-bit) |
| Display Output | 2 x Micro HDMI for debugging |
| USB 2.0 | 4 x USB 2.0 (pin header ) for debugging |
| Memory | (2 SO-DIMMs per CPU)  4 x DDR4 8GB SO-DIMM (Core™ i7/i5 SKU)  4 x DDR4 2GB SO-DIMM (Celeron® 3865U SKU) |
| Storage | 2 x Intel® SSD 600P series (Core™ i7/i5 SKU only) (512GB M.2 80mm PCIe 3.0 x4, 3D1, TLC) |
| Dataplane Interface | PCI Express x4 |
| Compliant with PCI Express Specification V2.0 |
| Compatible with PCI Express x4, x8, and x16 slots |
| External Interfaces | Reset button |
| Power button |
| Indicator | Seven segment (indicate card number and debug code) |
| Power Input | 12V PCIe 6-pin power input |
| Power Consumption | [12V@7.41A](mailto:12V@7.41A) (Intel® Core™ i7-7567U SKU) |
| Operating Temperature | 0°C~40°C |
| Fan | Dual fan |
| Dimensions (DxWxH) | 40mm x 210mm x 111mm |
| Operating Humidity | 10% ~ 90% |



***AI Solution***

120.09

128.15

100.39

100.12

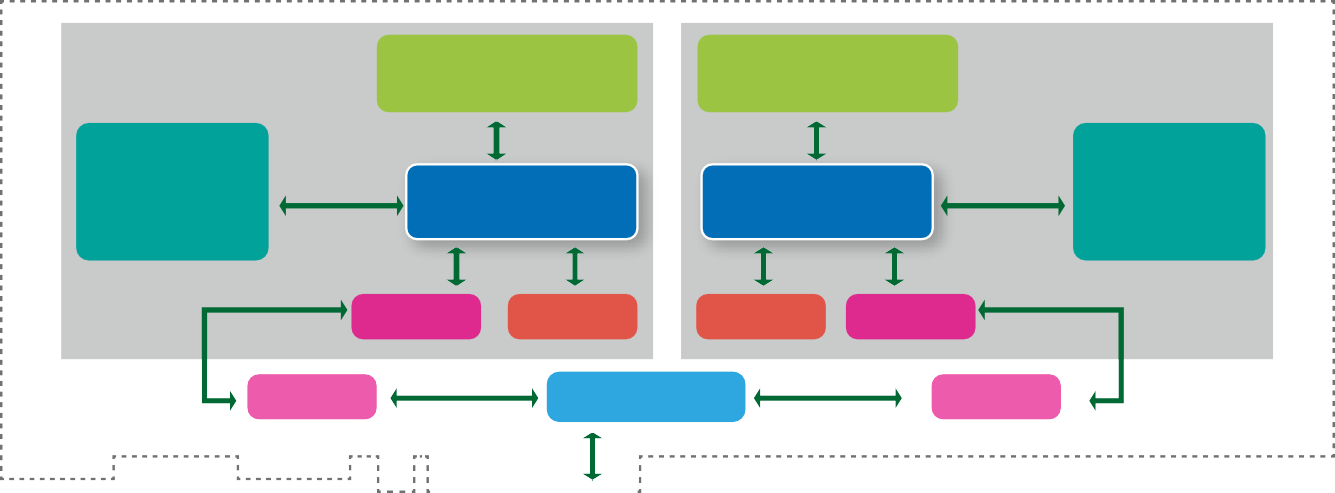
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# *Ordering Information*

|  |  |
| --- | --- |
| Part No. | Description |
| Mustang-200-i7-1T/32G-R10 | Computing Accelerator Card supports Two Intel® Core™ i7-7567U with Intel® 600P 1TB (512GB x2) SSD, 32GB (8GB x4) DDR4, PCIe x4 interface, QTS-Lite, and RoHS |
| Mustang-200-i5-1T/32G-R10 | Computing Accelerator Card supports Two Intel® Core™ i7-7267U with Intel® 600P 1TB (512GB x2) SSD, 32GB (8GB x4) DDR4, PCIe x4 interface, QTS-Lite, and RoHS |
| Mustang-200-C-8G-R10 | Computing Accelerator Card supports Two Intel® Celeron® 3865U with 8GB (2GB x4) DDR4, PCIe x4 interface, QTS-Lite, and RoHS (without NVMe storage) |
| 19B00-000396-00-RS | Mustang-200 dual-port USB cable |

***Packing List***

|  |
| --- |
| 1 x Mustang-200 |
| 1 x QIG |
| 1 x 4 pin to PCIe power cable |



**DDR4 SO-DIMMs 16GB**

**DDR4 SO-DIMMs 16GB**

**Intel® 600P PCIe x4**

**512GB NVMe**

**PCIe x4 Intel® 600P 512GB NVMe**

**PCIe x4**

**10G Mac eMMC 5.0**

**PCIe x4**

**eMMC 5.0 10G Mac**

**10G Ethernet**

**10G Mac**

**PCIe x4**

**PCIe Switch**

**PCIe x4**

**10G Mac**

**10G Ethernet**

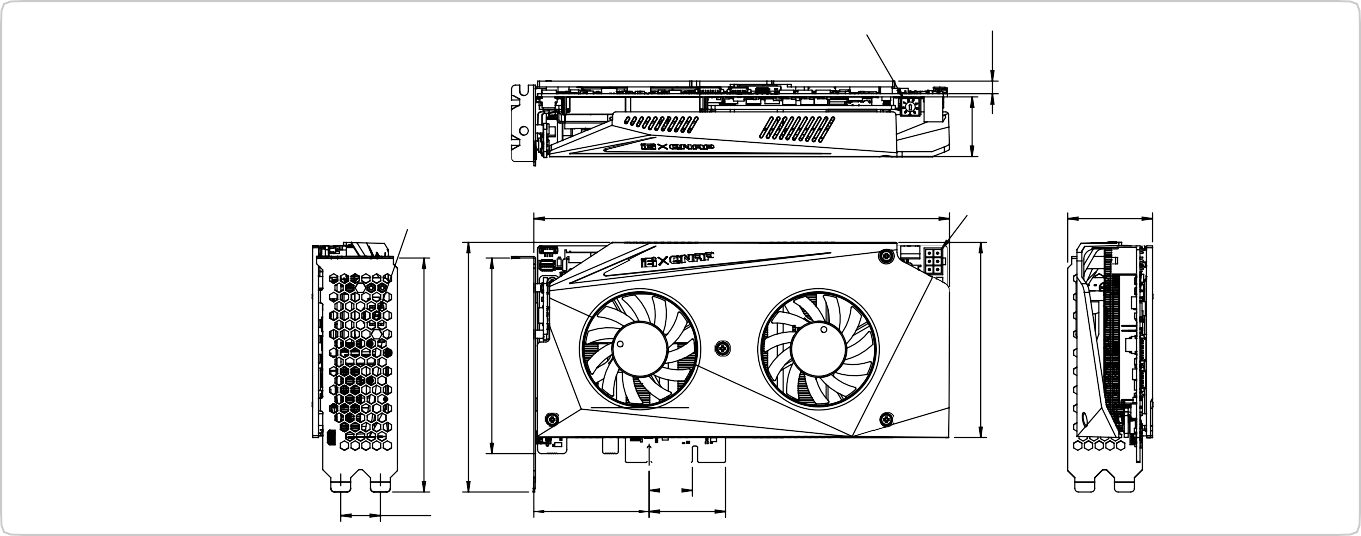
**PCIe x4 Golden Finger**

**Intel® i7-7567U Iris™ Plus 650**

**Intel® i7-7567U Iris™ Plus 650**

* **Block Diagram**

Every CPU on the Mustang-200 is accompanied with 16GB (2 x 8GB) RAM and an Intel® 600P series 512GB NVMe SSD. Once installed in a PCIe x4 slot, the host computer will be connected to both computing nodes on the Mustang-200 with 10GbE networks. The advantage of utilizing network-based structures is that no proprietary hardware is needed thus a lower cost is achieved. The computing nodes are powered by QTS-Lite, a lightweight version of QNAP's award-winning QTS operating system, and the eMMC component will serve as storage for QTS- Lite.



Number Adjustment button

***Mustang-200 Dimensions (Unit: mm)***

212.98

Power in

43.44

Number led

20.32

59.05

39

.15

22.15

30.61

6.50