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## SKY-640V2

### 4U Rackmount Intel® Xeon® Scalable

GPU Server, Supporting 4x PCIe x16 Double-Deck Cards Plus 3x PCIe x8 Single-Deck Cards

### Features
- Processor: Dual 3rd Gen. Intel® Xeon® scalable processors
- Memory: 16x DDR4 3200 MHz ECC RDIMM/LRDIMM / Intel® Optane™ support up to 2TB
- Remote Management: IPMI function support
- Expansion: Supporting 4* PCIe x16 double-deck card + 2* PCIe x8 single-deck FH/HL card + 1* PCIe x8 card
- PSU: 2000W 1+1 redundant power supply with 80 PLUS Platinum level certification
- 3 x 12CM system fan with easy maintenance feature

### Specifications

<table>
<thead>
<tr>
<th>Processor System</th>
<th>Chipset</th>
<th>Intel® C621A chipset</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>CPU</td>
<td>Dual 3rd Gen. Intel® Xeon® Scalable processors (TDP up to 205W)</td>
</tr>
<tr>
<td>Memory type</td>
<td>Memory</td>
<td>16x DDR4 3200 MHz ECC RDIMM/LRDIMM / Intel® Optane™ support up to 2TB</td>
</tr>
</tbody>
</table>

### Graphics
- Controller: Aspeed AST 2500
- VRAM: 64 MB

### Expansion Slot
- Total PCIe slots: 11
- Slot1: PCIe x8 slot (Gen 4 x8 link)
- Slot2: PCIe x8 slot (Gen x8 link)
- Slot3: PCIe x16 slot (Gen4 x4 link), for double-deck 4.376"(H)/10.5"(L) expansion card
- Slot4: PCIe x8 slot (Gen 4 x8 link)
- Slot5: PCIe x16 slot (Gen4 x4 link), for double-deck 4.376"(H)/10.5"(L) expansion card
- Slot6: PCIe x8 slot (Gen 4 x8 link)
- Slot7: PCIe x16 slot (Gen4 x4 link), for double-deck 4.376"(H)/10.5"(L) expansion card
- Slot8: PCIe x8 slot (Gen 4 x8 link)
- Slot9: PCIe x16 slot (Gen4 x4 link), for double-deck 4.376"(H)/10.5"(L) expansion card
- Slot10: PCIe x8 slot (Gen 4 x8 link)
- Slot11: PCIe x8 slot (Gen 4 x8 link)

### Drive Bay
- 2.5" (Internal) 2
- 3.5" (Hot Swap) 8 (support 2.5"/3.5" drive)

### Networking
- Interface: GbE/10GbE LAN
- Controller: 2 x Intel® i210AT / Intel® X550-AT2 (dual 10GbE ports)

### Front I/O Interface
- USB: 2 x USB 3.2 Gen. 1
- PS/2: -
- COM: 1
- Display: 1 x VGA
- RJ-45: 5 (1 port dedicated for IPMI function)

### Rear I/O Interface
- USB: 6 x USB 3.2 Gen 1 ports (three onboard headers) + 1 x Type-A USB 3.2 Gen 1 port + 1 x Type-A USB 2.0 port
- COM: 1
- LPC: 1

### Watchdog Timer
- Output: System reset
- Interval: Programmable, 1-255 sec/min mode

### Power Supply
- Power Output Wattage: 80 PLUS Platinum 2000W redundant Power Supply (Depends on input voltage)
- Input Range:
  - 1000W: 200-127VAC
  - 1800W: 200-219VAC
  - 2000W: 220-240VAC

### Cooling
- Chassis Fan: 3(12cm/238cfm)
- Air Filter: -

### Miscellaneous
- LED Indicators: LAN1, LAN2, HDD, Power, Information
- Remote Management: Advantech Remote Monitoring Utility
- Advantech Remote Monitoring Utility

### Environment
- Operating:
  - Temperature: 0 – 35° C (32 – 85° F)
  - Humidity: 95% @ 40° C
  - Vibration (5 – 500 Hz): 0.75Grms
  - Shock: 10G (with 11ms duration, half sine wave)
- Non-Operating:
  - Temperature: -20 – 60° C (-4 – 140° F)
  - Humidity: 95% @ 60° C
  - Vibration: 2 G

### Physical Characteristics
- Dimension (W x H x D): 435 x 176 x 660mm (17.1" x 6.9" x 25.9")
- Package Dimension (W x H x D): 710 x 360 x 905mm (27.95" x 14.17" x 35.63")
- Weight (N.W. / G.W.): 34 Kg / 36 Kg

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*All product specifications are subject to change without notice.*

_Last updated: 9-Jun-2023*
**SKY-640V2**

**Dimensions**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Unit: mm (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front View</td>
<td>460.00 (18.15)</td>
</tr>
<tr>
<td>Rear View</td>
<td>173.35 (6.85)</td>
</tr>
<tr>
<td>Internal View</td>
<td>693.20 (27.29)</td>
</tr>
<tr>
<td>Internal View</td>
<td>660 (25.98)</td>
</tr>
<tr>
<td>Internal View</td>
<td>660 (25.98)</td>
</tr>
</tbody>
</table>

**Front View**
- Power/reset/alar reset indicators
- 2 x USB
- LED indicators
- Slim optical disc drive
- 2 x USB LED indicators

**Inside View**
- 2 x internal 2.5" HDD/SSD bracket
- 3 x 12cm system fans
- Power distribution board
- GPU card air duct

**Rear View**
- Support up to eleven single-deck expansion cards
- Rear IO reserved space

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>HDD</th>
<th>M.2 2280</th>
<th>VGA Chip</th>
<th>AJAS</th>
<th>IPMI</th>
<th>Power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKY-640-2R20A1</td>
<td>10</td>
<td>1 x M.2 2280 B+M key (SATA and PCIe) + 1 x M.2 2280 B+M key (PCIe)</td>
<td>AST 2500</td>
<td>5 (1 port dedicated for IPMI function)</td>
<td>YES</td>
<td>1+1 2000W RPS</td>
</tr>
</tbody>
</table>

**Packing List**

<table>
<thead>
<tr>
<th>Items</th>
<th>Advantech P/N</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Cooler</td>
<td>1970004567000</td>
<td>2</td>
</tr>
<tr>
<td>LGA4189 CPU carrier</td>
<td>165103476-01</td>
<td>2</td>
</tr>
<tr>
<td>GPU Extended Bracket</td>
<td>1960094025N000</td>
<td>4</td>
</tr>
</tbody>
</table>

**Optional Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Number Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCA-TPM-00B1E</td>
<td>TPM 2.0 Module by LPC</td>
</tr>
<tr>
<td>1700028224-01</td>
<td>Dual port USB 3.2 Gen cable (45 cm/17.7”) with bracket</td>
</tr>
<tr>
<td>1701094061</td>
<td>COM port cable with bracket</td>
</tr>
<tr>
<td>960016858</td>
<td>Rail Kit</td>
</tr>
<tr>
<td>98194140100</td>
<td>External FAN for SKY-640V2</td>
</tr>
<tr>
<td>1700029268-01</td>
<td>GPU PWR convert cable, convert CPU/MB to PCIe 6+2P</td>
</tr>
<tr>
<td>1700027928-01</td>
<td>UL Power core (125V/15A)</td>
</tr>
<tr>
<td>1700027909-02</td>
<td>BSMI Power Core (125V/15A)</td>
</tr>
<tr>
<td>1700026905</td>
<td>EU Power Core (250V/10A)</td>
</tr>
<tr>
<td>PCA-Audio-HDB1E</td>
<td>HD Audio-card</td>
</tr>
<tr>
<td>1702004600</td>
<td>J8P to 4P for audio board</td>
</tr>
<tr>
<td>1990540378000</td>
<td>Hold-down bar for GPU card power at north edge</td>
</tr>
<tr>
<td>1990510020</td>
<td>Rubber for GPU card power at north edge to pair with hold-down bar, and one GPU card needs one pcs rubber</td>
</tr>
</tbody>
</table>