



4th Gen Intel Processor-based Products

3.5" & Mini-ITX (1)

Updated: July 3, 2015

| Form Factor | 3.5" | | Mini-ITX | | Mini-ITX | | Mini-ITX | | Mini-ITX | | |
|---------------|---|------------------------------|--|------------------------------|---|------------------------------|--|------------------------------|--|---------------------------|--|
| Application | Military, Infotainment, Medical | | | | | | Infotainment, Medical | | | | |
| Chipset | N/A | | N/A | | N/A | | H81 | | H81 | | |
| Platform | ULT | | ULT | | ULT | | Desktop | | Desktop | | |
| Model | HU551 | HU553 | HU171 | HU173 | HU101 | HU103 | HD171-H81 | HD173-H81 | HD100-H81 | HD101-H81 | |
| | same PCB | | same PCB | | same PCB | | same PCB | | | | |
| Processor | 4th Gen Intel Core | | 4th Gen Intel Core | | 4th Gen Intel Core | | 4th Gen Intel Core | | 4th Gen Intel Core | | |
| Memory | 1 DDR3L SODIMM up to 8GB | | 2 DDR3L SODIMM up to 16GB | | 2 DDR3L SODIMM up to 16GB | | 2 DDR3 SODIMM up to 16GB | | 2 DDR3 SODIMM up to 16GB | | |
| Display | 1 LVDS, 2 DP or 2 HDMI | | 1 HDMI, 1 DP, 1 LVDS or 1 VGA or 1 eDP | | 2 HDMI, 1 LVDS or 1 eDP | | DP, DVI-I (DVI-D signal), VGA | | HDMI, DVI-I, LVDS | | |
| LAN | 2 | | 2 | | 2 | | 2 | | 2 | | |
| Expansion | 1 full-size Mini PCIe (USB, PCIe, mSATA, LPC) 1 half-size Mini PCIe (USB, PCIe, 3G) 1 SIM | | 1 PCIe x1 1 full-size Mini PCIe (USB, PCIe, mSATA) 1 half-size Mini PCIe (USB, PCIe) | | 1 PCIe x1 1 Mini PCIe (USB, PCIe, mSATA) | | 1 PCIe x16 1 Mini PCIe (USB, PCIe, mSATA) | | 1 PCIe x16 1 Mini PCIe (USB, PCIe, mSATA) | | |
| SATA | 2 SATA 3.0 RAID 0/1 (Intel SRT) | | 3 SATA 3.0 RAID 0/1/5 (Intel SRT) | | 3 SATA 3.0 RAID 0/1/5 (Intel SRT) | | 2 SATA 3.0 | | 2 SATA 3.0 | | |
| USB | 4 USB 3.0 2 USB 2.0 | | 4 USB 3.0 6 USB 2.0 1 vertical USB 2.0 | | 4 USB 3.0 6 USB 2.0 1 vertical USB 2.0 (optional) | | 2 USB 3.0 7 USB 2.0 | | 2 USB 3.0 6 USB 2.0 | | |
| COM | 3 | | 4 | | 4 | | 4 | | 2 | | |
| Parallel | N/A | | N/A | | N/A | | N/A | | N/A | | |
| LPC* | N/A | | N/A | | N/A | | N/A | | N/A | N/A | |
| DIO | 8-bit | | 8-bit | | 8-bit | | 8-bit | | 8-bit | | |
| SSD | N/A | | N/A | | N/A | | N/A | | N/A | | |
| IDE | N/A | | N/A | | N/A | | N/A | | N/A | | |
| Audio | 5.1-channel | | 5.1-channel | | 5.1-channel | | 5.1-channel | | 5.1-channel | | |
| AMT | AMT 9.5 | | AMT 9.5 | | AMT 9.5 | | N/A | | N/A | | |
| TPM | optional | | optional | | optional | | optional | | optional | | |
| Power | 12V DC-in/ 4-pin power | 15~36V DC-in/ 4-pin power | 12V DC-in/ 4-pin power | 19~24V DC-in/ 4-pin power | 12V DC-in/ 4-pin power | 19~24V DC-in/ 4-pin power | 12V DC-in/ 4-pin power | 19~24V DC-in/ 4-pin power | ATX | 12V DC-in/ 4-pin power | |
| Compliance | N/A | | N/A | | N/A | | N/A | | N/A | | |
| Carrier Board | N/A | | N/A | | N/A | | N/A | | N/A | | |
| DVT Sample | Dec-2014 | | Released | | Released | | Released | | Released | Released | |
| MVT Sample | May-2015 | | | | | | | | | | |

*LPC connector supports the additional COM/Parallel ports



4th Gen Intel Processor-based Products

Mini-ITX (2)

| Form Factor | Mini-ITX | | | Mini-ITX | | |
|---------------|--|-----------------------|-------------------|--|-----------------------|-------------------|
| Application | Military, Infotainment, Medical | | | Military, Infotainment, Medical | | |
| Chipset | QM87 | | | HM86 | | |
| Platform | Mobile | | | Mobile | | |
| Model | HM100-QM87 | HM101-QM87 | HM103-QM87 | HM100-HM86 | HM101-HM86 | HM103-HM86 |
| | same PCB | | | same PCB | | |
| Processor | 4th Gen Intel Core | | | 4th Gen Intel Core | | |
| Memory | 2 DDR3L SODIMM up to 16GB | | | 2 DDR3L SODIMM up to 16GB | | |
| Display | HDMI, DVI-I, LVDS, DP | | | HDMI, DVI-I, LVDS, DP | | |
| LAN | 2 | | | 2 | | |
| Expansion | 1 PCIe x16 1 Mini PCIe (USB, PCIe, mSATA) | | | 1 PCIe x16 1 Mini PCIe (USB, PCIe, mSATA) | | |
| SATA | 2 SATA 3.0, RAID 0/1 (Intel SRT) | | | 2 SATA 3.0 | | |
| USB | 2 USB 3.0 6 USB 2.0 | | | 2 USB 3.0 6 USB 2.0 | | |
| COM | 2 | | | 2 | | |
| Parallel | N/A | | | N/A | | |
| LPC* | N/A | | | N/A | | |
| DIO | 4-bit input and 4-bit output | | | 4-bit input and 4-bit output | | |
| SSD | N/A | | | N/A | | |
| IDE | N/A | | | N/A | | |
| Audio | 5.1-channel | | | 5.1-channel | | |
| AMT | AMT 9.0 | | | N/A | | |
| TPM | optional | | | optional | | |
| Power | ATX | 12V DC-in/4-pin power | 19~24V DC-in | ATX | 12V DC-in/4-pin power | 19~24V DC-in |
| Compliance | N/A | | | N/A | | |
| Carrier Board | N/A | | | N/A | | |
| DVT Sample | Released | | | Released | | |
| MVT Sample | | | | | | |

*LPC connector supports the additional COM/Parallel ports



4th Gen Intel Processor-based Products

microATX

| Form Factor | microATX | microATX | | microATX | | | | |
|---------------|--|---|--|--|------------|---|--------------|------------|
| Application | Industrial Automation, Transportation, Communication, Infotainment | | | | | | | |
| Chipset | C226 | Q87 | | H81 | | | | |
| Platform | Workstation | Desktop | | Desktop | | Desktop | | |
| Model | DL310-C226 | HD310-Q87 | HD330-Q87 | HD332-H81B | HD332-H81X | HD330-H81B | HD330-H81D | HD330-H81C |
| | same PCB | | | same PCB | | same PCB | | |
| Processor | 4th Gen Intel Xeon | 4th Gen Intel Core | | 4th Gen Intel Core | | 4th Gen Intel Core | | |
| Memory | 4 DDR3 DIMM up to 32GB | | 4 DDR3 DIMM up to 32GB | 2 DDR3 DIMM up to 16GB | | 2 DDR3 DIMM up to 16GB | | |
| Display | HDMI, DVI-I | | HDMI, DVI-I | VGA, VGA/DVI-I (DVI-D signal) | | HDMI, DVI-I | | |
| LAN | 2 | | 2 | 1 | 2 | 1 | 2 | 2 |
| Expansion | 2 PCIe x16 (2 x8 signal) 1 PCIe x4 1 PCIe x1 | 2 PCIe x16 (1 x16 and 1 x1 signal) 1 PCIe x4 1 PCIe x1 | 1 PCIe x16 1 PCIe x4 1 Mini PCIe (USB, PCIe,mSATA) 2 PCI | 1 PCIe x16 2 PCIe x1 1 PCI | | 1 PCIe x16 1 PCIe x4 (1 x1 signal) 1 Mini PCIe (USB, PCIe,mSATA) 2 PCI | | |
| SATA | 6 SATA 3.0 RAID 0/1/5/10 (Intel SRT) | | 2 SATA 3.0, 1 SATA 2.0 RAID 0/1/5 (Intel SRT) | 2 SATA 3.0 2 SATA 2.0 | | 2 SATA 3.0 1 SATA 2.0 | | |
| USB | 4 USB 3.0 8 USB 2.0 | | 2 USB 3.0 10 USB 2.0 | 4 USB 3.0 6 USB 2.0 1 vertical USB 2.0 | | 2 USB 3.0 6 USB 2.0 | | |
| COM | 6 | | 6 | 2 | 10 | 2 | 2 | 6 |
| Parallel | 1 | | 1 | 1 | | 1 | 1 (optional) | 1 |
| LPC* | N/A | | N/A | N/A | | N/A | | |
| DIO | 8-bit | | 8-bit | N/A | | 8-bit | | |
| SSD | N/A | | N/A | N/A | | N/A | | |
| IDE | N/A | | N/A | N/A | | N/A | | |
| Audio | 5.1-channel | | 5.1-channel | 5.1-channel | | 5.1-channel | | |
| AMT | AMT 9.0 | | N/A | N/A | | N/A | | |
| TPM | optional | | optional | optional | | optional | | |
| Power | ATX | | ATX | ATX | | ATX | | |
| Compliance | N/A | | N/A | N/A | | N/A | | |
| Carrier Board | N/A | | N/A | N/A | | N/A | | |
| DVT Sample | Released | Released | Released | Released | | N/A | Released | Released |
| MVT Sample | | | | | | N/A | | |

*LPC connector supports the additional COM/Parallel ports



4th Gen Intel Processor-based Products

ATX

| Form Factor | ATX | ATX | ATX | | | | | | | |
|---------------|---|--|--|-------------------|-------------------|--|--|-------------------|-------------------|---|
| Application | Industrial Automation, Transportation | | | | | | | | | |
| Chipset | C226 | Q87 | H81 | | | | | | | |
| Platform | Workstation | Desktop | Desktop | | | | | | | |
| Model | DL631-C226 | HD631-Q87 | HD620-H81B | HD620-H81D | HD620-H81X | HD632-H81 | HD630-H81B | HD630-H81D | HD630-H81C | HD636-H81CS |
| | same PCB | | same PCB | | | | same PCB | | | same PCB |
| Processor | 4th Gen Intel Xeon | 4th Gen Intel Core | 4th Gen Intel Core | | | | | | | |
| Memory | 4 DDR3 DIMM up to 32GB | 4 DDR3 DIMM up to 32GB | 2 DDR3 DIMM up to 16GB | | | | | | | 1 DDR3 DIMM up to 8GB |
| Display | HDMI, DVI-I | HDMI, DVI-I | VGA, DVI-D | | | | HDMI, DVI-I | | | HDMI, VGA |
| LAN | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| Expansion | 2 PCIe x16 (1 PCIe x16 or 2 PCIe x8) 2 PCIe x4 (1 x4 and 1 x1 signal) 3 PCI | 1 PCIe x16 2 PCIe x4 (1 x4 and 1 x1 signal) 3 PCI | 1 PCIe x 16 1 PCIe x4 (1 x1 signal) 2 ISA 4 PCI | | | 1 PCIe x 16 1 PCIe x4 5 PCI | 1 PCIe x 16 1 PCIe x4 (1 x1 signal) 1 PCIe x1 1 Mini PCIe (USB, PCIe, mSATA) 4 PCI | | | 1 PCIe x16 2 PCIe x4 (2 x2 signal) 4 PCI |
| SATA | 6 SATA 3.0 RAID 0/1/5/10 (Intel SRT) | 6 SATA 3.0 RAID 0/1/5/10 (Intel SRT) | 2 SATA 3.0 2 SATA 2.0 | | | | | | | |
| USB | 4 USB 3.0 6 USB 2.0 | 4 USB 3.0 6 USB 2.0 | 2 USB 3.0 8 USB 2.0 1 vertical USB 2.0 (optional) | | | 2 USB 3.0 6 USB 2.0 1 vertical USB 2.0 | 2 USB 3.0 6 USB 2.0; or 4 USB 2.0 + 1 vertical USB 2.0 (optional) | | | 2 USB 3.0 6 USB 2.0 + 1 vertical USB 2.0; or 8 USB 2.0 (optional) |
| COM | 6 | 6 | 2 | 2 | 10 | 10 | 2 | 2 | 6 | 8 |
| Parallel | N/A | N/A | 1 | | | | 1 | 1 (optional) | 1 | 1 |
| LPC* | N/A | N/A | N/A | | | | N/A | | | N/A |
| DIO | 8-bit | 8-bit | 8-bit | | | | | | | |
| SSD | N/A | N/A | N/A | | | | | | | |
| IDE | N/A | N/A | N/A | | | | | | | |
| Audio | 5.1-channel | 5.1-channel | 5.1-channel | | | | | | | |
| AMT | AMT 9.0 | AMT 9.0 | N/A | | | | | | | |
| TPM | optional | optional | optional | | | | | | | |
| Power | ATX | ATX | ATX | | | | | | | |
| Compliance | N/A | N/A | N/A | | | | | | | |
| Carrier Board | N/A | N/A | N/A | | | | | | | |
| DVT Sample | Released | Released | N/A | Released | Released | N/A | Released | Released | Released | Released |
| MVT Sample | | | N/A | | | N/A | | | | |

*LPC connector supports the additional COM/Parallel ports



4th Gen Intel Processor-based Products

COM Express

| Form Factor | COM Express Compact | COM Express Basic | | COM Express Basic | | COM Express Basic | |
|---------------|---|---|--------------------------|---|--------------------------|--|--------------------------|
| Application | Industrial Automation, Transportation, Military, Energy, Medical | | | | | | |
| Chipset | N/A | QM87 | HM86 | QM87 | HM86 | QM87 | HM86 |
| Platform | ULT | Mobile | | | | | |
| Model | HU968 | HM961-QM87 | HM961-HM86 | HM960-QM87 | HM960-HM86 | HM920-QM87 | HM920-HM86 |
| | | same PCB | | same PCB | | same PCB | |
| Processor | 4th Gen Intel Core | 4th Gen Intel Core | | 4th Gen Intel Core | | 4th Gen Intel Core | |
| Memory | 2GB/4GB/8GB DDR3L memory down | 2 DDR3L ECC SODIMM up to 16GB | | 2 DDR3L SODIMM up to 16GB | | 2 DDR3L SODIMM up to 16GB | |
| Display | VGA, LVDS, DDI (HDMI, DVI, DP) | VGA, LVDS, DDI (HDMI, DVI, DP) | | VGA, LVDS, DDI (HDMI, DVI, DP) | | VGA, LVDS | |
| LAN | 1 | 1 | | 1 | | 1 | |
| Expansion | 1 PCIe x4 1 PCIe x2 1 PCIe x1 1 LPC, 1 SMBus, 1 I ² C, 2 serial | 1 PCIe x16 7 PCIe x1 1 LPC, 1 SMBus, 1 I ² C, 2 serial | | 1 PCIe x16 7 PCIe x1 1 LPC, 1 SMBus, 1 I ² C, 2 serial | | 1 PCIe x16 5 PCIe x1 4 PCI 1 LPC, 1 SMBus, 1 I ² C | |
| SATA | 3 SATA 3.0 | 4 SATA 3.0 RAID 0/1/5/10 (Intel SRT) | 2 SATA 3.0 2 SATA 2.0 | 4 SATA 3.0 RAID 0/1/5/10 (Intel SRT) | 2 SATA 3.0 2 SATA 2.0 | 4 SATA 3.0, 1 IDE RAID 0/1/5/10 (Intel SRT) | 2 SATA 3.0 2 SATA 2.0 |
| USB | 2 USB 3.0 8 USB 2.0 | 4 USB 3.0 8 USB 2.0 | 2 USB 3.0 8 USB 2.0 | 4 USB 3.0 8 USB 2.0 | 2 USB 3.0 8 USB 2.0 | 8 USB 2.0 | |
| COM | N/A | N/A | | N/A | | N/A | |
| Parallel | N/A | N/A | | N/A | | N/A | |
| LPC* | N/A | N/A | | N/A | | N/A | |
| DIO | 4-bit input and 4-bit output | 4-bit input and 4-bit output | | 4-bit input and 4-bit output | | 4-bit input and 4-bit output | |
| SSD | optional | optional | | optional | | optional | |
| IDE | N/A | N/A | | N/A | | 1 | |
| Audio | HD Audio | HD Audio | | HD Audio | | HD Audio | |
| AMT | AMT 9.5 | AMT 9.0 | N/A | AMT 9.0 | N/A | AMT 9.0 | N/A |
| TPM | optional | optional | | optional | | optional | |
| Power | N/A | N/A | | N/A | | N/A | |
| Compliance | Compact R2.1 Type 6 | Basic R2.1 Type 6 | | Basic R2.1 Type 6 | | Basic R2.1 Type 2 | |
| Carrier Board | COM331-B | COM331-B | | COM331-B | | COM330-B | |
| DVT Sample | Released | Released | | Released | | Released | |
| MVT Sample | | | | | | | |

*LPC connector supports the additional COM/Parallel ports



4th Gen Intel Processor-based Products

Carrier Board

| Form Factor | microATX | microATX |
|----------------|---|---|
| Application | Carrier Board | |
| Model | COM331-B | COM330-B |
| Display | DP, VGA, LVDS | VGA, LVDS |
| LAN | 1 | 1 |
| Expansion | 1 PCIe x16 1 PCIe x4 2 PCIe x1 1 Mini PCIe | 1 PCIe x16 1 PCIe x4 2 PCI 1 Mini PCIe |
| SATA | 2 SATA 3.0 2 SATA 2.0 1 SDIO | 2 SATA 3.0 2 SATA 2.0 1 CF |
| USB | 4 USB 3.0 4 USB 2.0 | 8 USB 2.0 |
| COM | 2 | 4 |
| Parallel | N/A | N/A |
| LPC* | N/A | N/A |
| DIO | 8-bit | 8-bit |
| SSD | N/A | N/A |
| IDE | N/A | N/A |
| Audio | HD Audio | HD Audio |
| Power | ATX | ATX |
| Compliance | COM Express R2.0, Type 6 | COM Express R2.0, Type 2 |
| Applied Module | Compact, Basic | Compact, Basic |
| Applied Model | HU968 HM960-QM87/HM86 HM961-QM87/HM86 | HM920-QM87/HM86 |

*LPC connector supports the additional COM/Parallel ports