



**6th/7th Gen Intel® Core™  
Mini-ITX**

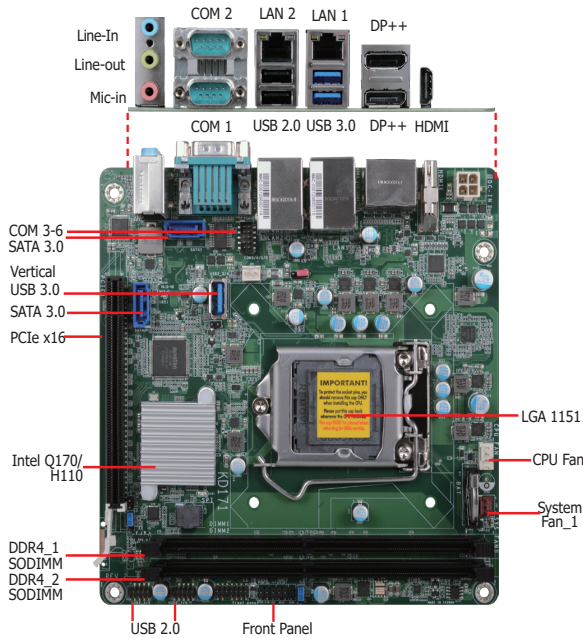


# KD171

Desktop

### Features

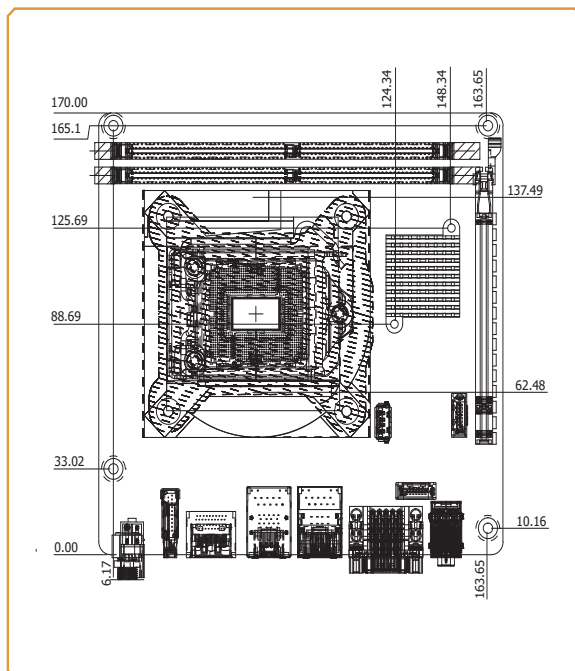
- 2 DDR4 UDIMM up to 32GB
- Three independent displays:  
DP++ + DP++ + HDMI (Q170)
- DP++ resolution up to 4096x2160 @ 60Hz  
HDMI 1.4 resolution up to 4096x2160 @ 24Hz
- Expansion: 1 PCIe x16
- Storage: 2 SATA 3.0
- Rich I/O: 2 GbE, 6 COM, 3 USB 3.0, 6 USB 2.0



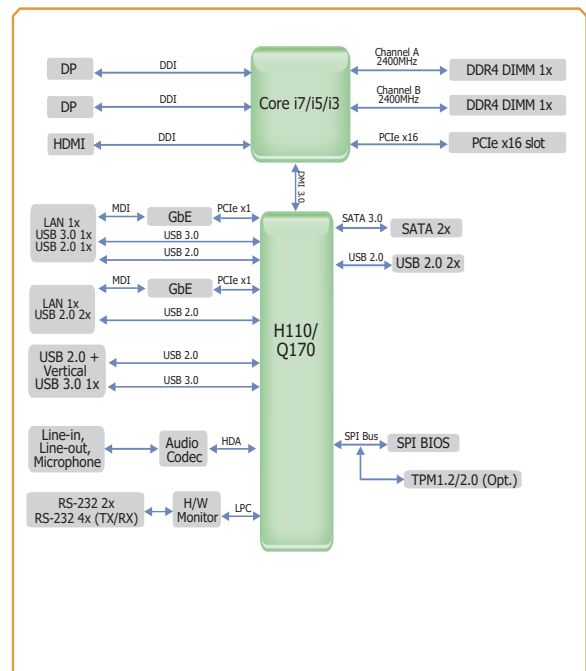
### Ordering Information

| Model Name        | P/N             | Memory  | GbE | DP | HDMI | RS-232 | SATA 3.0 | USB 3.0 | USB 2.0 | Power              | Thermal | Temp.     |
|-------------------|-----------------|---------|-----|----|------|--------|----------|---------|---------|--------------------|---------|-----------|
| <b>KD171-H110</b> | 770-KD1711-000G | 2 UDIMM | 2   | 2  | 1    | 6      | 2        | 3       | 6       | 12V DC             | Active  | 0 to 60°C |
| <b>KD171-Q170</b> | 770-KD1711-100G | 2 UDIMM | 2   | 2  | 1    | 6      | 2        | 3       | 6       | 12V DC             | Active  | 0 to 60°C |
| <b>KD171-H110</b> | 770-KD1711-200G | 2 UDIMM | 2   | 2  | 1    | 6      | 2        | 3       | 6       | 12V 4-pin vertical | Active  | 0 to 60°C |
| <b>KD171-Q170</b> | 770-KD1711-300G | 2 UDIMM | 2   | 2  | 1    | 6      | 2        | 3       | 6       | 12V 4-pin vertical | Active  | 0 to 60°C |

### Mechanical Drawing



### Block Diagram





**Specifications**

|                       |  |   |
|-----------------------|--|---|
| <b>SYSTEM</b>         | <b>Processor</b>   | 6th/7th Generation Intel® Core™ Processors, LGA 1151 Socket<br>Intel® Core™ i7-7700T Processor, Quad Core, 8M Cache, 2.9GHz (3.8GHz), 35W<br>Intel® Core™ i7-7700 Processor, Quad Core, 8M Cache, 3.6GHz (4.2GHz), 65W<br>Intel® Core™ i5-7500T Processor, Quad Core, 6M Cache, 2.7GHz (3.3GHz), 35W<br>Intel® Core™ i5-7500 Processor, Quad Core, 6M Cache, 3.4GHz (3.8GHz), 65W<br>Intel® Core™ i3-7101E Processor, Dual Core, 3M Cache, 3.9GHz, 54W<br>Intel® Core™ i3-7101TE Processor, Dual Core, 3M Cache, 3.4GHz, 35W<br>Intel® Celeron® G3930, Dual Core, 3M Cache, 2.9GHz, 51W<br>Intel® Celeron® G3930E, Dual Core, 3M Cache, 2.9GHz, 54W<br>Intel® Core™ i7-6700TE, Quad Core, 2.4GHz (3.4GHz), 35W<br>Intel® Core™ i5-6500TE, Quad Core, 2.3GHz (3.3GHz), 35W<br>Intel® Core™ i7-6700, Quad Core, 8M Cache, 3.4GHz (4.0GHz), 65W<br>Intel® Core™ i5-6500, Quad Core, 6M Cache, 3.2GHz (3.6GHz), 65W<br>Intel® Core™ i3-6100, Dual Core, 3.7GHz, 51W<br>Intel® Core™ i3-6100TE, Dual Core, 2.7GHz, 35W<br>Intel® Pentium® G4400, Dual Core, 3.3GHz, 54W<br>Intel® Pentium® G4400TE, Dual Core, 2.4GHz, 35W<br>Intel® Celeron® G3900, Dual Core, 2.8GHz, 51W<br>Intel® Celeron® G3900TE, Dual Core, 2.3GHz, 35W |
|                       | <b>Chipset</b>   | Intel® Q170/H110  |
|                       | <b>Memory</b>  | Two 288-pin UDIMM up to 32GB Dual Channel DDR4 2133/2400 MHz  |
|                       | <b>BIOS</b>  | Insyde SPI  |
|                       | <b>GRAPHICS</b>  | <b>Controller</b> Intel® HD Gen 9 Graphics<br><b>Feature</b> OpenGL 5.0, DirectX 12, OpenCL 2.1<br>HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9<br>HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9<br><b>Display</b> 2 x Full Size DP++ Full Size DP++: resolution up to 4096x2160 @ 60Hz<br>1 x HDMI 1.4 (optional) HDMI: resolution up to 4096x2160 @ 24Hz<br><b>Triple Displays</b> Q170: DP++ + DP++ + HDMI<br>H110: DP++ + DP++ + HDMI   |
| <b>EXPANSION</b>      | <b>Interface</b> 1 x PCIe x16 (Gen 3)  |   |
| <b>ETHERNET</b>       | <b>Controller</b> 2 x GbE (10/100/1000Mbps)<br>2 x Realtek® 8111HN or 8119 (opt.)                              |   |
| <b>REAR I/O</b>       | <b>Ethernet</b>  | 2 x GbE (RJ-45)   |
|                       | <b>Serial</b>  | 2 x RS-232 (DB-9)   |
|                       | <b>USB</b>   | 2 x USB 3.0<br>2 x USB 2.0  |
|                       | <b>Display</b>   | 2 x Full Size DP++<br>1 x HDMI 1.4 (optional)   |
|                       | <b>Audio</b>   | 1 x Line-in<br>1 x Line-out<br>1 x Mic-in   |
| <b>INTERNAL I/O</b>   | <b>Serial</b>  | 4 x RS-232 (TX/RX only)   |
|                       | <b>USB</b>   | 1 x Vertical USB 3.0<br>4 x USB 2.0   |
|                       | <b>SATA</b>  | 2 x SATA 3.0 (up to 6Gb/s)  |
| <b>WATCHDOG TIMER</b> | <b>Output &amp; Interval</b> System Reset, Programmable via Software from 1 to 255 Seconds                     |   |
| <b>SECURITY</b>       | <b>TPM</b> Infineon TPM 2.0  |   |
| <b>POWER</b>          | <b>Type</b>  | 12V DC  |
|                       | <b>Connector</b>   | DC Jack Vertical Type Connector (4-pin) (opt.)  |
|                       | <b>Consumption</b>   | Idle: i7-7700 65W: 12V @ 0.85A (10.2W)<br>Max: i7-7700 65W: 12V @ 9.16A (109.92W)   |
|                       | <b>RTC Battery</b>   | CR2032 Coin Cell  |
| <b>OS SUPPORT</b>     | <b>Microsoft/Linux</b> Windows 10 LTSB (64 bits)<br>Window 7 (32/64bit) for 6th Generation Processors<br>Linux |   |
| <b>ENVIRONMENT</b>    | <b>Temperature</b>   | Operating: 0 to 60°C Storage: -40 to 85°C   |
|                       | <b>Humidity</b>  | Operating: 5 to 90% RH Storage: 5 to 90% RH   |
|                       | <b>MTBF</b>  | KD171-Q170: 1,454,376 hrs @ 25°C; 737,553 hrs @ 45°C; 447,012 hrs @ 60°C<br>KD171-H110: 1,454,376 hrs @ 25°C; 737,553 hrs @ 45°C; 447,012 hrs @ 60°C<br>Calculation model: Telcordia Issue 4<br>Environment: GB, GC – Ground Benign, Controlled   |
| <b>MECHANICAL</b>     | <b>Dimensions</b>  | Mini-ITX Form Factor 170mm (6.7") x 170mm (6.7")  |
|                       | <b>Height</b>  | PCB: 1.6mm  |
| <b>CERTIFICATIONS</b> | CE, FCC Class A, RoHS  |   |

**Packing List**

|  |                 |
|--|-----------------|
| • 1 KD171-Q170/H110 motherboard            |                 |
| • 1 Serial ATA data cable (Length: 500mm)  | 332-553001-005G |
| • 1 Serial ATA power cable (Length: 260mm) | A81-000008-018G |

**Optional Items**

|  |                 |
|--|-----------------|
| • COM port cable (Length: 300m)              | A81-015041-018G |
| • USB 2.0 port cable (Length: 200mm)         | A81-001032-016G |
| • Serial ATA power cable (Length: 260mm)     | A81-000008-018G |
| • Serial ATA data cable (Length: 500mm)      | 332-553001-005G |
| • Thermal solution (For 35W, Height: 37.3mm) | A71-103004-000G |
| • Thermal solution (For 65W, Height: 72.8mm) | 552-200049-000G |
| • I/O shield                                 | A49-KD1710-010G |

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