## APPLICATIONS

- Intelligent PC controller for factory automation machinery and equipment.
- High-Speed Industrial Storage
- Very-High/Ultra-High USB 3.0 Vision Processor
- Industrial Data Aggregation and Storage
- Industrial IoT Gateways and Controllers

- Secure Networking Devices
- Mobile Telephony
- Traffic Engineering
- Transportation
- Wind Turbine Datalogging and Collision Avoidance
- Drone Payload Computing
- Oil and Gas IPC
- Unmanned Autonomous Systems

**PRELIMINARY**

## FEATURES

- 6th Generation Intel® Core™ Celeron/i5/i7
- Intel® Q170 Chipset
- Up to 32GB DDR4-2133
- TPM 2.0
- 4x USB 3.0
- 4x SATA 6 Gb/s

- DVI/HDMI/DP/USB3.0-IPEX Conn
- 4x PCIe X1 Expansion Lanes
- Operating Temperature -20C to 70C; Optional -40C to 85C
- Windows and Linux Compatible with Full Driver Support
- MTBF > 250,000 hours

## DESCRIPTION

The ADLQ170HDS is the latest in ADL's line of high-performance 3.5" Intel® Core™ single board computers (SBC).  It makes use of 6th generation Intel Core processors and Intel's Q170 chipset to provide a robust set of features including 32 GB DDR4 DRAM, TPM 2.0, 4x SATA 6Gb/s, 4x USB 3.0 and much more.

This makes it ideal for a variety of system-critical industrial applications where these high-performance features are an absolute necessity, but no less critical are less tangible features like high MTBF, long-life availability, hardware and firmware revision control, obsolescence management, technical, engineering and design support.

**Custom System Solutions...**

As well, ADL Embedded Solutions, Inc. is expert at collaborating with customers to create custom system solutions built on our strong portfolio of embedded computing products and engineering and design expertise.  Contact us at **www.adl-usa.com** or **sales@adl-usa.com**.

## ORDERING INFORMATION

| ITEM CODE | PART # | DESCRIPTION |
|---|---|---|
| **CPU** | | |
| ADLQ170HDS | | 6th Generation Intel® Core™ Celeron/i5/i7 Quad/Dual |
| | | ** LGA1151 Processors </= 35W TDP Only. |
| **Memory** | | |
| DDR4-2133-8GB | | DDR4-2133 MHz 8GB Standard Temperature |
| DDR4--2133-16GB | | DDR4-2133 MHz 16GB Standard Temperature |
| DDR4-2133-8GB-EX | | DDR4-2133 MHz 8GB Extended Temperature |
| DDR4-2133-16GB-EX | | DDR4-2133 MHz 16GB Extended Temperature |
| **Options and Accessories** | | |
| ADL-ET | 290000 | Extended Temp Screen (-40º to +85º C) |
| ADLQ170HDS-CK | | Standard Cable kit for ADLQ170HDS |
| ADL35-mPCIe | | 3.5" SBC Expansion: 3x mpCIe, 1x M.2 KeyB 2280 SATA |
| **Thermal Solutions** | | |
| ADLQ170HDS-SPREADER | | 0.375" Thick Heat Spreader |
| ADL35-BBHS | 294152 | Oversized Large Heatsink for Bench Testing. |
| ADL35-LFAN | 294154 | Large Fan for ADL35-BBHS |
| ADL35-SOSET | 294156 | 37mm High Standoff Kit for ADL35-BBHS |

*Data subject to change without notice.

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## TECHNICAL SPECIFICATIONS - ADLQ170HDS

| FEATURE | FUNCTION | NOTES |
|---|---|---|
| **CPU** | | |
| CPU | 6th Generation Intel Core i3/i5/i7 | Dual and Quad Core variants. |
| Socket | LGA1151 | Includes mechanical retention plate. |
| **Chipset** | | |
| Chipset | Intel Q170 | |
| Hardware Monitoring | NCT7491MNTXG | |
| **Memory** | | |
| Type | 2x SODIMM260 1.2V DDR4 | |
| Max. Memory | 32 GB | |
| Max. Speed | DDR4-2133 | |
| **Graphic** | | |
| Controller | CPU Integrated | |
| Video BIOS | Intel Extreme BIOS | |
| Memory | Max 512MB DVMT | |
| CRT | - | |
| DVI | DVI/HDMI 1.4 | |
| DVI/HDMI/DisplayPort | 1/1/1 | 2 Connectors: 1x DVI/HDMI; 1xIPEX DVI/HDMI/DP |
| LCD Resolution | HDMI 1.4:     2560x1600 @ 60Hz; 4096x2160 @ 24Hz<br>DisplayPort:  4096x2304 @ 60Hz<br>DVI:          1920x1200 @ 60Hz | |
| **BIOS** | | |
| Manufacturer | AMI Aptio | 128 Mbit SPI-Flash |
| Power Management APM/ACPI | APM/ACPI | |
| Speedstep/ATM | Speedstep supported | Adjustable Fixed Frequency Available |
| Powerstates S0/S1/S3/S4/S5 | S0/S1/(S3)/S4/S5 | |
| **I/O** | | |
| LAN1 | 10/100/1000 Intel Q170/i219 Phy | PXE Boot and WOL (Wake-On-LAN) |
| LAN2 | 10/100/1000 Intel i210 | |
| SATA | 4x SATA 6Gb/s | |
| SATA RAID | 0/1/5/10 | |
| USB 2.0 | 11x | Includes 5x USB 3.0 |
| USB 3.0 | 5x | 4x Front Side; 1x IPEX Connector |
| COM 1 | RS232 (RSD/TXD/TRS/CTS) | |
| **OTHER FUNCTIONS** | | |
| TPM | TPM 2.0 | |
| Watchdog | Yes | |
| BIOS API | Yes (hardware monitoring, health monitoring, fan control, watchdog,GPIO, user space) | Linux and Windows Drivers |
| GPIO | 8 bit | |
| Input Power | 3.3V, 5V, 5VS (12V for FAN) | |

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