RoHS compliant

APPLICATIONS

- Secure Networking Applications: Secure Routing, Traffic Monitoring and Gateways
- Cyber Security Edge Devices for ICS and SCADA threat security.
- Unmanned, and Drone Payload Computing
- Industrial IoT Gateways and Controllers
- Traffic Engineering
- Security and Surveillance USB 3,0 and IP Camera CPU Interface
- Oil and Gas IPC
- Unmanned Autonomous Systems

FEATURES

- **Compact** 120mm x 120mm Footprint.
- 6th Generation Intel® Core™ Processors **(Formerly Codenamed Skylake)**
- Intel® Q170 Chipset
- Long-term Available Intel Embedded Processors
- Up to 32GB DDR4
- 4x USB 3.0
- 4x Gbit/s LAN
- 2x M.2 (Key B) 2280 PCIe/SATA with USB 3.0
- **8x Stackable Expansion PCIe** lanes with up to 4x SATA and/or 4x USB3.0
- 2x DisplayPort Outputs
- Operating Temperature = -20-70C Standard; -40C to 85C Option
- Windows 7/10 and Linux Compatible

DESCRIPTION

The ADL120S is a high-performance, compact 120mm x 120mm SBC based on 6th Generation Intel Core i3 / i7 processors. It is full-featured with robust I/O including USB 3.0, LAN, M.2 PCIe/SATA and a wide operating temperature range (-40C to 85C) and high-resolution DisplayPort outputs. **Eight PCIe X1 expansion lanes** allow for custom expansion to address any application-specific environment.

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...

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 Board		
ADL120S-6700TE	296100	Intel® Core™ i7-6700TE 2.4 GHz 4C/8T, 8MB
ADL120S-6100TE	296105	Intel® Core™ i3-6100TE 2.7GHz 2C/4T, 4MB
DDR4 Memory and Storage		
DDR4-2133-8GB	997610	DDR4-2133 MHz 8GB Standard Temperature
DDR4--2133-16GB	997611	DDR4-2133 MHz 16GB Standard Temperature
DDR4-2133-8GB-EX	997612	DDR4-2133 MHz 8GB Extended Temperature
DDR4-2133-16GB-EX	997614	DDR4-2133 MHz 16GB Extended Temperature
2280M.2-64GB	205-4064	64GB 2280 M.2 SSD, MLC, Ext.
2280M.2-128GB	205-4128	128GB 2280 M.2 SSD, MLC, Ext.
2280M.2-256GB	205-4256	256GB 2280 M.2 SSD, MLC, Ext.
2280M.2-512GB	205-4512	252GB 2280 M.2 SSD, MLC, Ext.
Hybrid/SLC M.2	CALL	Call for Hybrid and SLC M.2 SSD Options.
Options		
ADL120-Fansink	295855	CPU Fansink (rated -40C to 50C)
2280M.2-WiFi	CALL	802.11ac/a/b/g/n 2T2R; Qualcomm QCA6174A + Adapter
ADL-ET	290000	Extended Temperature Chamber Screening (-40C to 85C)
ADL-UNDERFILL	807707	CPU BGA Underfill for mechanical and thermal stress
ADL-COATING	807706	CPU Conformal Coating for High Humidity

Embedded Solutions
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TECHNICAL SPECIFICATIONS

FEATURE	FUNCTION	NOTES
CPU		
CPU	6th Generation Intel Core Processors	Dual and Quad Core variants.
Socket	LGA1151	Includes mechanical retention plate.
Chipset		
Chipset	Intel Q170	
Memory		
Type	2x SODIMM260 1.2V DDR4	
Max. Memory	32 GB	
Graphic		
Controller	Intel HD Graphics Gen 9	
Windows API Support	Direct3D 12/11.3/11.2/11.1/10/9; /Direct2D; OpenGL 4.4; OpenCL 2.1/2.0/1.2; DirectX 12	
Video Codec	Gen 9 Hardware Accelerated Decode/Encode	
DisplayPort	DP 1.2; Resolution = 4096x2304 @ 60Hz	2 Output Ports
BIOS		
Manufacturer	AMI Aptio (UEFI)	128 Mbit SPI-Flash; fTPM 2.0 (firmware TPM)
Power Management APM/ACPI	ACPI	
BIOS-API	Functions: CPU and Board Temperature; Boot History; Watchdog, Board Voltages; GPIO, Fan Speed Monitoring	Requires Linux or Windows drivers. Linux Kernel 3.0+ required.
I/O		
LAN1	10/100/1000 Intel i219 Phy	WOL and PXE Boot
LAN2-4	10/100/1000 Intel i210	
USB 3.0	4x	Backward Compatible to USB 2.0
DisplayPort	DP 1.2; Resolution = 4096x2304 @ 60Hz	2 Output Ports plus 1x Expansion
Expansion and Storage		
M.2 (Key B) 2280	2x M.2 (Key B) 2280 PCIe/SATA with USB 3.0	
Stackable Expansion Interfaces	8x PCIe Lanes Multiplexed with up to 4x SATA and/or up to 4x USB 3.0; 1x DisplayPort; PSON, PGOOD, PWRBTN; Custom Power	**Custom expansion board services available.**
Power		
Input Power	20-30VDC	
Input Protection	Galvanically Isolated, Over/Under Voltage Protection; Reverse Voltage Protection	
RTC Battery	CR2032 Circular Compatible	

*Data subject to change without notice.