

TECH4U-610-506

**Intel® 8th 9th Gen Core™ i7/i5/i3
LGA1151 MicroATX with VGA/DP/DVI-D/
eDP(LVDS), 14 COM, 8 USB 3.0, 12 USB
2.0, Dual LAN**



**BIS
Regn.No.
R-85000140**

**Conforming to
BIS Standard
IS 13252
(Part-1): 2010**

Features

- Supports Intel® 8th/9th Gen Core i7/i5/i3 processor with H310 chipset.
- Supports up to 14 COM, 8 USB 3.0, 12 USB 2.0, TPM 1.2/2.0 (optional)
- Supports Dual display of VGA, DP, DVI, eDP, LVDS (optional) and two GbE LAN.
- Two DIMM sockets support up to 64 GB DDR4 2666 MHz SDRAM.
- Supports 400 W ATX PFC PS/2 power supply.
- Easy to install front-accessible drive bays to hold three 5.25" and two 3.5" drives (one front-accessible & one internal).
- Front-accessible USB & PS/2 interfaces.
- Front LEDs indicate power status, and HDD activity.
- Lockable front door prevents unauthorized access.
- Supports WISE PaaS/Device-On, McAfee, Acronis and Embedded Software
- Supports Internal 5.25" DVD-RW.

Specifications

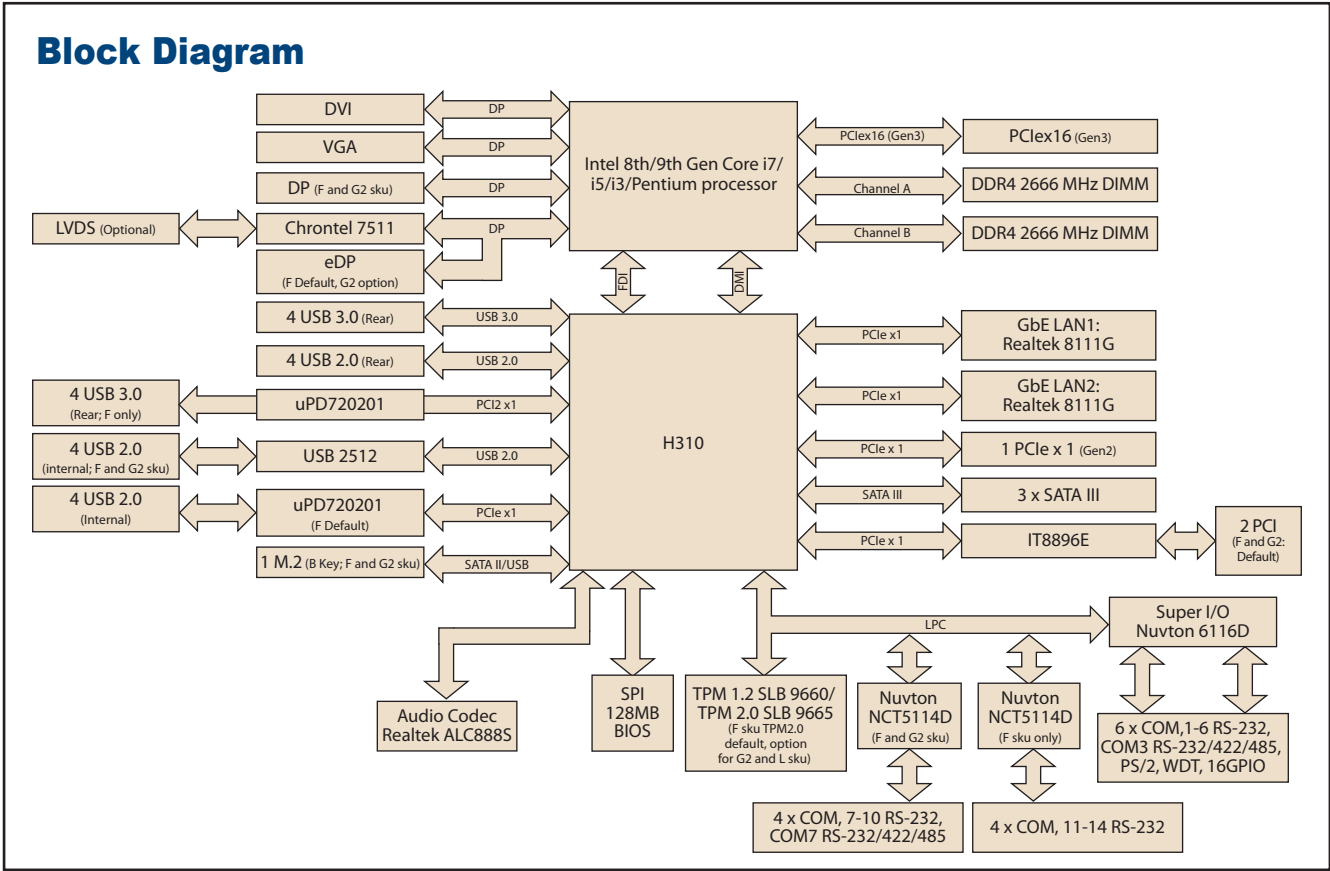


Utilities: BIOS flash, Monitoring

Software APIs: SMBus, H/W Monitor, Watchdog, GPIO

Processor System	CPU	I7-9700E/ I7-9700TE	I7-8700/ I7-8700T	I5-9500E/ I5-9500TE	I5-8500/ I5-8500T	I3-9100E/ I3-9100TE	I3-8100/ I3-8100T
	Core Number	8/8	6/6	6/6	6/6	4/4	4/4
	Max. Speed	2.6GHz/ 1.8GHz	3.2 GHz/ 2.4 GHz	3.0GHz/ 2.2GHz	3.0 GHz/ 2.1 GHz	3.1GHz/ 2.2GHz	3.6GHz/ 3.1GHz
	L3 Cache	12MB/12MB	12MB/12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB
	TDP (W)	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W
	Chipset	H310					
	BIOS	AMI EFI 128 Mbit SPI					
	Expansion Slot	PCI	32-bit/33 MHz, 2 slot (F sku; G2 sku)				
PCIe x1 (Gen3)		1 GB/s per direction, 1 slot					
PCIe x16 (Gen3)		16 GB/s per direction, 1 slot					
Memory	Technology	Dual Channel DDR4 2666 MHz SDRAM					
	Max. Capacity	64 GB/32 GB per DIMM					
	Socket	2 x 288-pin DIMM (Non-ECC)					
Graphics	Controller	Intel HD Graphics					
	LVDS	Supports dual channel 48 bit and up to 1920 x 1200 (optional)					
	eDP	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (F sku on board, G2 sku optional)					
	VGA	Yes, Max resolution 1920 x 1200 @ 60 Hz					
	DP	Supports max resolution 4096 x 2304 @ 60 Hz					
	DVI-D	Up to 1920 x 1200 @ 60Hz refresh rate					
Ethernet	Dual Display	DP+DVI-D, DP+VGA, DVI-D+VGA, DP+eDP (LVDS), DVI-D+eDP (LVDS), VGA+eDP (LVDS)					
	Interface	10/100/1000 Mbps					
	Controller	GbE LAN1: Realtek RTL8111G GbE LAN2: Realtek RTL8111G					
SATA	Connector	RJ-45 x 2					
	Max Data Transfer Rate	600 MB/s (SATA 3.0)					
Rear I/O	Channel	3					
	VGA	1					
	DVI-D	1					
	Ethernet	2					
	USB	12 (8 USB 3.0, 4 USB 2.0 on F sku and G2 sku)					
Internal Connector	Display port	1 (F and G2 only)					
	Audio	2 (Mic-In, Line-out)					
	USB	8 (F sku, 8 USB 2.0) 4 (G2, 4 USB 2.0)					
	Serial	14 (G2-FL sku: 12 x RS-232, 2 x RS-232/422/485; COM 3 and COM 7 support RS-232/422/485 auto flow control; COM1 and COM 2 support 5V/12V by jumper selection)					
		10 (G2-00 sku: 8 x RS-232, 2 x RS-232/422/485; COM 3 and COM 7 support RS-232/422/485 auto flow control; COM1 and COM 2 support 5V/12V by jumper selection)					
	M.2 (B Key)	1 (2242/3042 with SIM card holder, F and G2 sku only)					
	SATA	3 x 600 MB/s (SATA 3.0)					
	Extended Display Port (eDP)/ LVDS	1 (F sku only; Default: eDP)					
	GPIO	16-bit GPIO					
	PS/2 (KBMS1)	1					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec/min					
Power Requirements	Intel Core i7-9700E, 16 GB DDR4 x2 pcs						
	Power On	+5V	+3.3V	12V_4P	12V	-12V	5VSB
Environment	Operating						
	Temperature	0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution					
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 466 mm (19" x 7" x 17.6")					

Block Diagram



Ordering Information

Part Number	PCH	Memory	VGA	DVI	DP	eDP/LVDS	USB 3.0/2.0	COM	SATA	LAN	PCIe x 16	PCIe x 1	M.2 B-Key	PCI slot	AMP
TECH4U-610-506	H310	Non ECC	1	1	1	1/(1)	8/12	14	3	2	1	1	1	2	1
	H310	Non ECC	1	1	1	(1)/(1)	4/8	10	3	2	1	1	1	2	1



HDD LED Power switch
USB & PS/2 Power LED

Easy-to-maintain cooling fan
System reset switch



One 3.5" drive bay Three 5.25" drive bays
One internal 3.5" drive bay space



Motherboard can fit in 450 mm (17.7") depth

Bracket View

