

# TECH4U-610-586

## Intel® Xeon® E3/ 8th & 9th Gen Core™ i7/i5/i3 LGA1151, MicroATX with HDMI/2 DP++/eDP (LVDS)/6 COM, 2 LANs, USB 3.1, ATX



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

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

### Features

- Supports Intel® Xeon® 8th / 9th Gen Core™ i7/i5/i3 processor with Q370/ C246 chipset.
- Supports triple displays. (HDMI, 2DP++, eDP or LVDS display)
- Supports Intel AMT 12.0 and Intel vPro competent
- Supports PCIe Gen3, max up to 4x USB 3.1 (Gen2), 2x USB 3.0, 8x SATAIII, 2 GbE LAN, 2x M.2 (M & E Key)
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports DeviceOn and Embedded Software APIs.
- 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" disk 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 Internal 5.25" DVD-RW.

### Specifications



CE FCC

Utilities:



BIOS flash



Monitoring

Software APIs:



SMBus



H/W Monitor



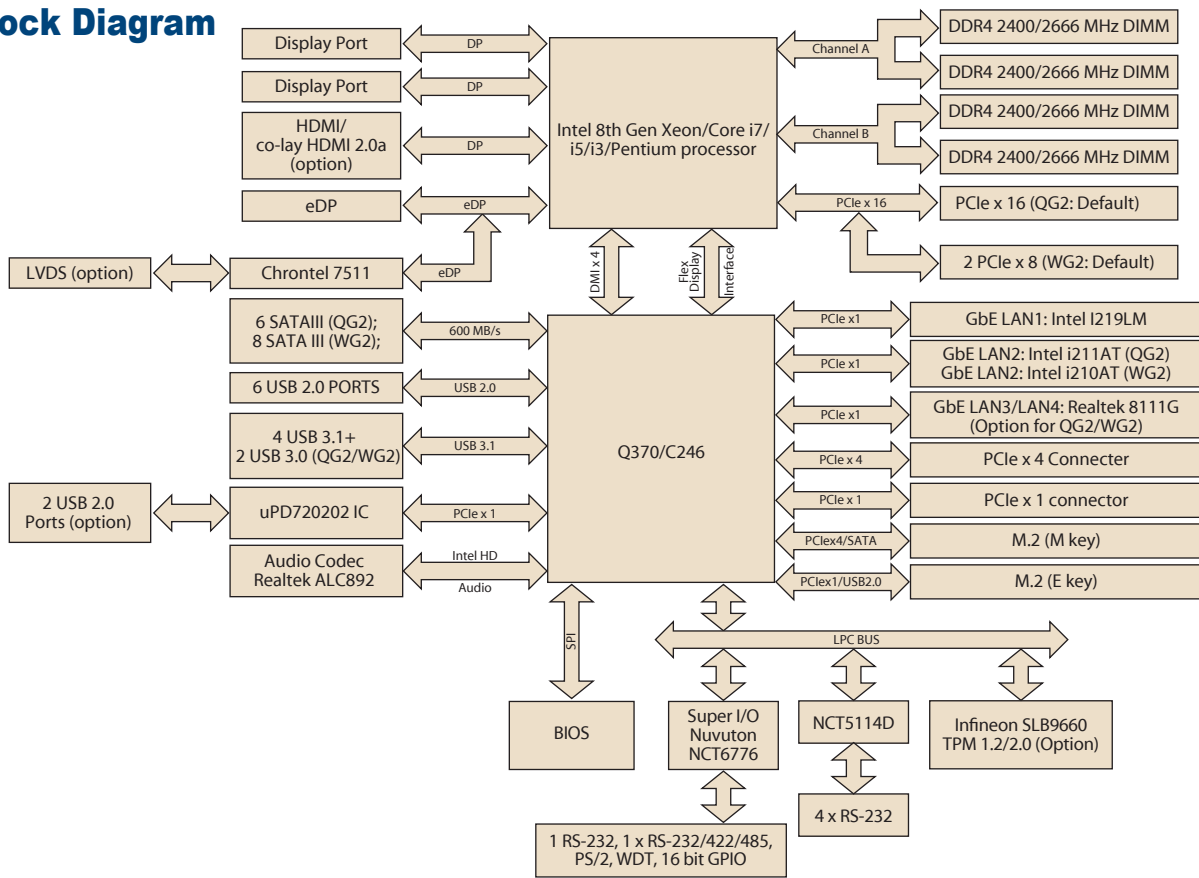
Watchdog



GPIO

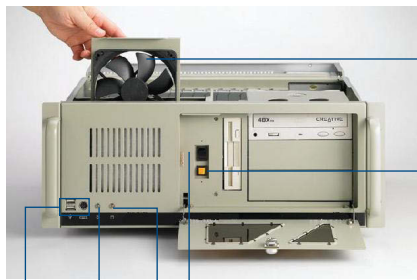
	CPU	E-2176G/ E-2124G	E-2278GE/ E-2278GEL	E-2226GE	i7-9700E/ i7-9700TE	i7-8700/ i7-8700T	i5-9500E/ i5-9500TE	i5-8500/ i5-8500T	i3-9100E/ i3-9100TE	i3-8100/ i3-8100T	G5400/ G5400T	G4900/ G4900T	
Processor System	Core Number	6/4	8/ 8	6	8/ 8	6/6	6/6	6/6	4/4	4/4	2/2	2/2	
	Max. Speed	3.7GHz/ 3.4 GHz	3.3GHz/ 2.0 GHz	3.4GHz	2.6GHz/ 1.8GHz	3.2GHz/ 2.4GHz	3.0GHz/ 2.2GHz	3.0GHz/ 2.1GHz	3.1GHz/ 2.2GHz	3.6GHz/ 3.1GHz	3.7GHz/ 3.1GHz	3.1GHz/ 2.9GHz	
	L3 Cache	12MB/ 8MB	16MB/ 16MB	12MB	12MB/12MB	12MB/12MB	9MB/9MB	9MB/9MB	6MB/6MB	6MB/6MB	4MB/4MB	2MB/2MB	
	TDP (W)	80W/ 71W	80W/ 35W	80W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/25W	54W/35W	
	Supports Model	WG2	WG2	WG2	WG2/QG2	WG2/QG2	WG2/QG2	WG2/QG2	WG2/QG2	WG2/QG2	WG2/QG2	WG2/QG2	
	Chipset	Q370/C246											
Expansion Slot	BIOS	AMI EFI 256 Mbit SPI											
	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot											
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot											
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot											
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (Only x8 Link on WG2 sku)											
Memory	Technology	Dual Channel DDR4 2400/2666MHz Non-ECC SDRAM/ ECC SDRAM (WG2 only)											
	Max. Capacity	128GB (32GB per DIMM)											
Graphics	Socket	4 x 288 pin U DIMM (QG2/WG2)											
	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1											
	HDMI	1, Supports max resolution HDMI 1.2 1920 x 1200 @ 60 Hz											
	eDP	1, Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (Internal pin header)											
	LVDS	1 (option), Supports dual channel 48 bits up to 1920 x 1200 (colay with eDP)											
	Display Port	2, Supports max resolution 4096 x 2304 @ 60 Hz											
	Triple Display	eDP (LVDS) + DP++ + HDMI, eDP (LVDS) + DP++ + DP++, DP++ + DP++ + HDMI											
Ethernet	Dual Display	DP++ + HDMI, DP++ + DP++, DP++ + eDP (LVDS), HDMI + eDP (LVDS)											
	Controller	LAN1: Intel I219LM (QG2/WG2) LAN2: Intel I211AT (QG2) Intel I210AT (WG2)											
SATA	Connector	RJ 45 x 2											
	Max Data Transfer Rate	600 MB/s Max. (SATA 3.0)											
Rear I/O	Q'ty	6 (QG2); 8 (WG2), 1 colay with M.2 M key;											
	Display Port	2											
	HDMI	1											
	Ethernet	2 (Default, Max 4 ports via BOM option on QG2/WG2)											
	USB	8 (4 USB 3.1, 4 USB 2.0 on QG2/WG2)											
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)											
Internal Connector	Serial	1 (RS-232)											
	USB 3.0	2 (QG2/WG2 only)											
	USB 2.0	2											
	Serial	5 (4 x RS-232, 1 x RS-232/422/485 with auto flow control supported on QG2/WG2)											
	SATA 3.0	6 (QG2); 8 (WG2), 1 colay M.2 M-key;											
	Extended Display Port (eDP)/LVDS	1 (Default: eDP)											
Watchdog Timer	PS/2 (KBMS1)	1											
	M.2 (M key)	1 (2280 NVMe PCIe4 and SATA M.2 support, QG2/WG2 only)											
	M.2 (E key)	1 (2230 for WIFI, QG2/WG2 only)											
	GPIO	16-bit GPIO											
	Output	System reset											
Power Requirements	Interval	Programmable 1 ~ 255 sec/min											
	Power On	Intel Core i7-8700, 16 GB DDR4 x 4pcs			+5 V	3.3 V	12 V	12V_4P	5 Vsb	-12 V			
					+1.361A	0.473A	0.365A	5.985A	0A	0A			
Environment	Operating							Non-Operating					
	Temperature	0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution						-40 ~ 85° C (-40 ~ 185° F)					
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 466 mm (19" x 7" x 17.6")											
Power	Input Mode	ATX input (Default)											

### Block Diagram



### Ordering Information

Part Number	Chipset	USB3.1	USB 3.0	USB 2.0	DP/HDMI	eDP (LVDS)	GbE LAN	SATA III	COM	PClex16	PClex8	PClex4	PClex1	M.2 E-key	M.2 M-key	TPM
TECH4U-610-586	Q370	4	2	6	2/1	1/(1)	2	6	1	1	1	1	1	1	1	(1)
	C246	4	2	6	2/1	1/(1)	2	8	(-)	2	1	1	1	1	1	(1)



HDD LED Power switch  
USB & PS/2 Power LED



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

### I/O View

