

# TECH4U-610-587

**Intel® Xeon® W12/10th Gen Core™ i9/i7/i5/i3 LGA1200, MicroATX with 2 DP++/VGA/eDP (LVDS)/6 COM, 2 10GbE LANs, 2 GbE LANs, 4 USB 3.2 Gen2, 2 USB 3.2 Gen 1**



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

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

## : YUhi fYg

- Supports Intel® Xeon® 10th Gen Core™ i9/i7/i5/i3 processor with W480E/Q470E chipset.
- Supports triple displays. (2DP++, eDP, VGA display).
- Supports Intel AMT 12.0 and Intel vPro competent.
- Supports PCIe Gen3, max up to 4x USB 3.2 Gen2, 6x USB 3.2 Gen1, 6x USB 2.0, 8x SATAIII, 2 GbE LANs, 2 10GbE LANs, M.2 (M Key)
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports DeviceOn and Embedded Software APIs
- Supports Dual BIOS feature.
- 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.

GdYVZVWhcbg



Utilities:

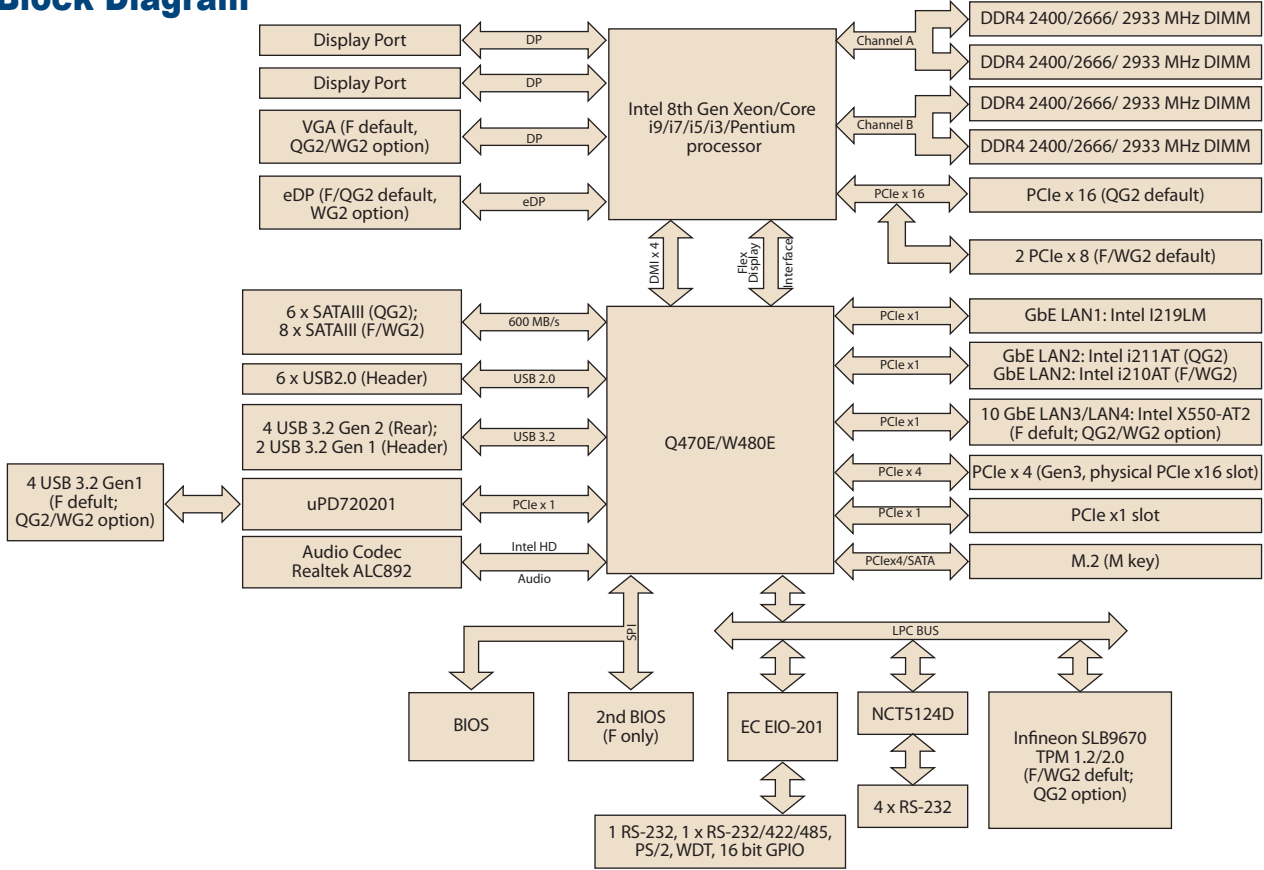


Software APIs:



	W1290E/ W1290TE	W1270E/ W1270TE	W1250/ W1250TE	i9-10900E/ i9-10900TE	i7-10700E/ i7-10700TE	i5-10500E/ i5-10500TE	i3-10100E/ i3-10100TE	G6400E/ G6400TE	G5900E/ G5900TE	
Processor System	CPU	W1290E/ W1290TE	W1270E/ W1270TE	W1250/ W1250TE	i9-10900E/ i9-10900TE	i7-10700E/ i7-10700TE	i5-10500E/ i5-10500TE	i3-10100E/ i3-10100TE	G6400E/ G6400TE	G5900E/ G5900TE
	Core Number	10/10	8/8	6/6	10/10	8/8	6/6	4/4	2/2	2/2
	Max. Speed	3.5GHz/ 1.8GHz	3.4GHz/ 2.0GHz	3.5GHz/ 2.4GHz	2.8GHz/ 1.8GHz	2.9GHz/ 2.0GHz	3.1GHz/ 2.3GHz	3.2GHz/ 2.3GHz	3.8GHz/ 3.2GHz	3.2GHz/ 3.0GHz
	L3 Cache	20MB/20MB	16MB/16MB	12MB/12MB	20MB/20MB	16MB/16MB	12MB/12MB	6MB/6MB	4MB/4MB	2MB/2MB
	TDP (W)	95W/35W	80W/35W	80W/35W	65W/35W	65W/35W	65W/35W	65W/35W	58W/35W	58W/35W
	Supports Model	WG2/F	WG2/F	WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F	QG2/WG2/F
	Chipset	Q470E/W480E								
	BIOS	AMI EFI 256 Mbit SPI								
Expansion Slot	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot								
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot (Gen3, physical PCIe x16 slot)								
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (Default on WG2/F, BOM Option on QG2)								
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (x8 Link on WG2/F sku)								
Memory	Technology	Supports Dual Channel DDR4 2933 (Xeon/i9/i7 CPU) / 2666 (i5/i3 CPU) / 2400 (Pentium/ Celeron CPU), ECC memory supported by CPU in WG2/ F								
	Max. Capacity	128GB (32GB per DIMM)								
	Socket	4 x 288 pin U DIMM (QG2/WG2)								
Graphics	Controller	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1								
	VGA	1, Max resolution 1920 x 1200 @ 60Hz (BOM option in QG2/WG2)								
	eDP	1, Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (Internal pin header) (default in QG2/ F sku, BOM option in WG2)								
	Display Port	2, Supports max resolution 4096 x 2304 @ 60 Hz								
	Triple Display	eDP + DP++ + VGA, eDP + DP++ + DP++, DP++ + DP++ + VGA								
	Dual Display	DP++ + VGA, DP++ + DP++ + eDP, VGA + eDP								
Ethernet	Controller	LAN1: Intel I219LM (QG2/WG2/L) LAN2: Intel I211AT (QG2) Intel I210AT (WG2/F) LAN3/4: Intel X550-AT2 (F default; BOM option on QG2/WG2)								
	Connector	RJ 45 x 2 ((Max up to 4 ports via BOM option on QG2/WG2) / RJ 45 x 4 (F)								
SATA	Max Data Transfer Rate	600 MB/s Max. (SATA 3.0)								
	Q'ty	6 (QG2); 8 (WG2/F), 1 colay with M.2 M key								
Rear I/O	Display Port	2								
	VGA	1 (F default; QG2/WG2 via BOM option)								
	Ethernet	2 (Default in QG2/WG2, Max 4 ports via BOM option); 4 (F)								
	USB	4 (4 USB 3.2 Gen2)								
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)								
Internal Connector	USB 3.2 Gen1	2 (QG2/WG2, Max 6 ports via BOM option); 6 (F)								
	USB 2.0	6								
	Serial	6 (5 x RS-232, 1 x RS-232/422/485 with auto flow control supported on QG2/F) 2 (1x RS-232, 1 x RS-232/422/485with auto flow control supported on WG2)								
	SATA 3.0	6 (QG2); 8 (WG2/F)								
	Extended Display Port (eDP)	1 (QG2/ F), 0 (WG2)								
	PS/2 (KBMS1)	1								
	M.2 (M key)	1 (2280 NVMe PCIe4 and SATA M.2 support)								
	GPIO	16-bit GPIO								
Watchdog Timer	Output	System reset								
	Interval	Programmable 1 ~ 255 sec/min								
Power Requirements	Power On	+5 V	3.3 V	12 V	12V_4P	5 Vsb	-12 V	TBD		
Environment	Operating	0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution						Non-Operating		
	Temperature							-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								

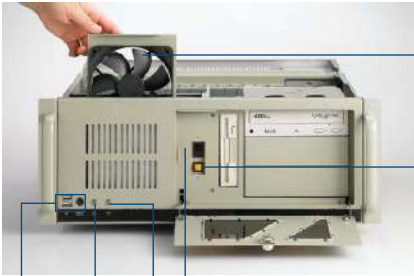
**Block Diagram**



**Ordering Information**

Part Number	Chipset	PSU	USB3.2 Gen2	USB3.2 Gen1	USB2.0	DP/VGA	eDP	GbE LAN	10GbE LAN	SATA III	COM	PClex16	PClex8	PClex4	PClex1	M.2 M-key	TPM	Dual BIOS
<b>TECH4U-610-587</b>	Q470E	ATX	4	2+(4)**	6	2/(1)	1	2	(2)	6	6	1	1	1	1	1	(1)	No
	W480E	ATX	4	6	6	2/1	1	2	2	8	6	1	1	1	1	1	1 (2.0)	Yes
	W480E	ATX	4	2+(4)**	6	2/(1)	(1)	2	(2)	8	2+(4)	1	1	1	1	1	1 (2.0)	No

\*() BOM options available on MP version.  
 \*\* BOM option with added USB 3.2 Gen 1 from controller IC



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

**I/O View**

