

TECH4U-610-585

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1151
MicroATX with DVI-D/HDMI/DP++/eDP/VGA,
6 COM, Dual LAN, SATA III, 12 USB3.0



BIS
Regn.No.
R-85000140

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

Features

- Supports Intel® Xeon®/ 6th & 7th Gen Core™ i7/i5/i3 processor with Q170/C236.
- Four DIMM sockets support up to 64 GB DDR4 2133 MHz SDRAM
- Supports DVI-D, HDMI, DP++, eDP, VGA (optional) display
- Supports Intel AMT 11.0 and Intel vPro competent
- Supports PCIe Gen3, upto 12 x USB 3.0, 4 x SATAIII and dual GbE LAN, mini-PCIe
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports WISE-PaaS 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" 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.

Note: Intel 7th generation processors only support Windows 10 (64-bit).

Specifications



CE FCC

Utilities:



BIOS flash Monitoring

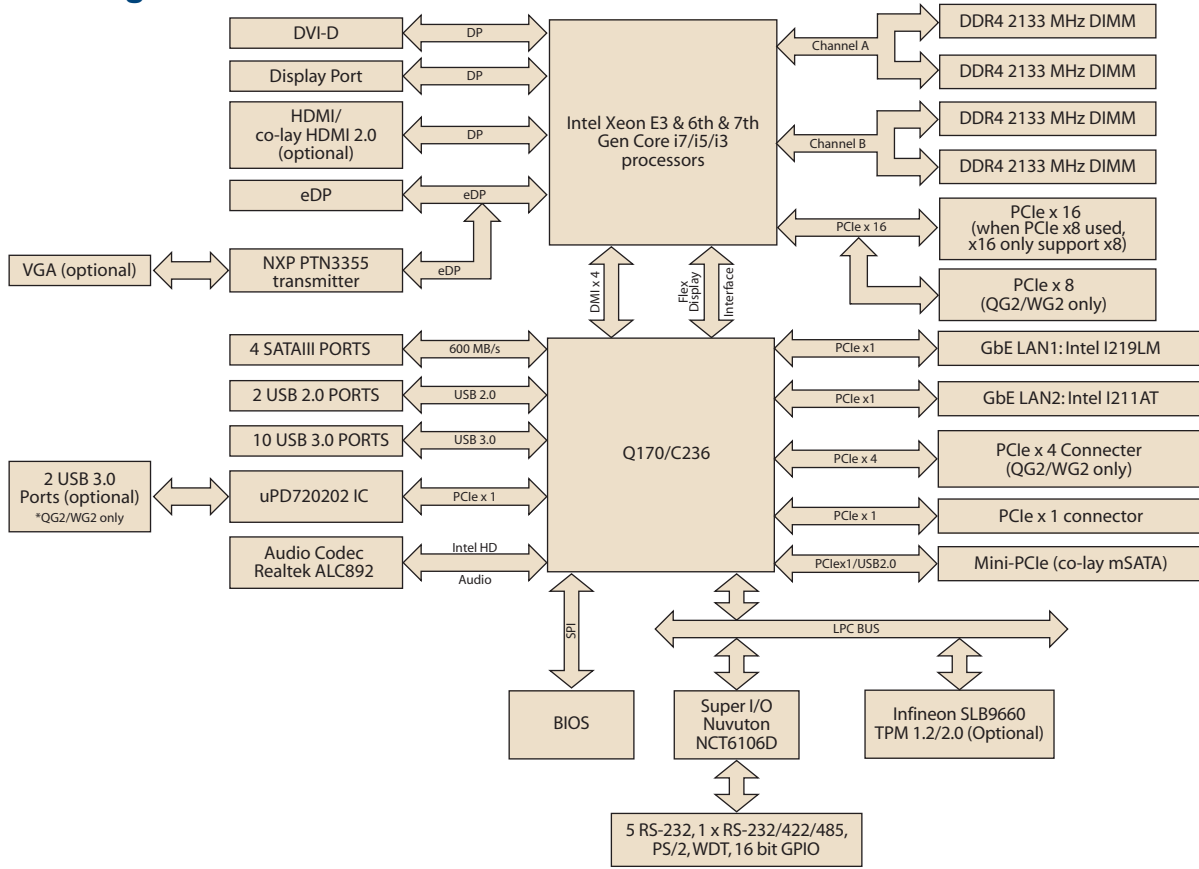
Software APIs:



SMBus H/W Monitor Watchdog GPIO

	CPU	E3-1275 v6	E3-1275 v5	E3-1225 v5	E3-1268L v5	I7-7700/ I7-7700T	I7-6700 / I7-6700TE	I5-7500/ I5-7500T	i5-6500 / i5-6500TE	I3-7101E/ I3-7101TE	i3-6100/ i3-6100TE		
Processor System	Core Number	4	4	4	4	4/4	4 / 4	4/4	4 / 4	2/2	2/2		
	Max. Speed	3.8GHz	3.6GHz	3.3GHz	2.4GHz	3.6GHz/ 2.9GHz	3.4GHz / 2.4GHz	3.4GHz/ 2.7GHz	3.2GHz / 2.3GHz	3.9GHz/ 3.4GHz	3.7 GHz / 2.7GHz		
	Integrated Graphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
	L3 Cache	8M	8M	6M	8M	8M/8M	8M / 8M	6M/6M	6M / 6M	3M/3M	4M / 4M		
	TDP (W)	80W	80W	80W	35W	65W/35W	65W / 35W	65W/35W	65W / 35W	54W/35W	51W / 35W		
	Supports Model	WG2	WG2	WG2	WG2	QG2/L	QG2	QG2	QG2	QG2/WG2	QG2 / WG2		
	Chipset	Q170/C236											
	BIOS	AMI EFI 128 Mbit SPI											
Expansion Slot	PCIe x1 (Gen3)	1 GB/s per direction, 1 slot (Gen2 only)											
	PCIe x4 (Gen3)	4 GB/s per direction, 1 slot (Q170,C236 only)											
	PCIe x8 (Gen3)	8 GB/s per direction, 1 slot (Q170,C236 only)											
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot (When x8 slot is used, x16 slot only offers x8 bandwidth automatically)											
Memory	Technology	Dual Channel DDR4 2133 MHz SDRAM											
	Max. Capacity	64 GB/16 GB per DIMM											
	Socket	4 x 288-pin DIMM											
Graphics	Controller	Intel HD Graphics											
	VRAM	Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1											
	HDMI	1 GB maximum shared memory with 2 GB and above system memory installed											
	VGA	Supports max resolution HDMI 1.2 1920 x 1200 @ 60 Hz (Colay HDMI 2.0,4096 x 2160 @ 60 Hz, optional)											
	DVI-D	Max resolution 1920 x 1200 @ 60 Hz (on board) (optional)											
	eDP	Supports max. resolution 1920 x 1200 @ 60 Hz											
	Display Port	Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board)											
	Triple Display	Supports max resolution 4096 x 2304 @ 60 Hz											
	Dual Display	eDP/ VGA + DP++ + HDMI, eDP/ VGA + HDMI + DVI-D, DP++ + eDP/ VGA + DVI-D, DVI-D + DP++ + HDMI DP ++ + HDMI, DP++ + DVI-D, DP++ + eDP/ VGA, HDMI + DVI-D, HDMI + eDP/ VGA, eDP, VGA + DVI-D											
Ethernet	Interface	10/100/1000 Mbps											
	Controller	GbE LAN1: Intel I219LM, GbE LAN2: Intel I211AT											
	Connector	RJ-45 x 2											
SATA	Max Data Transfer Rate	600 MB/s (SATA 3.0)											
	Channel	4											
Rear I/O	DVI-D	1											
	Display Port	1											
	HDMI	1											
	Ethernet	2											
	USB	8 (QG2,WG2: 6 x USB 3.0, 2 x USB 2.0)											
	Audio	2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.)											
	Serial	1 (RS-232)											
Internal Connector	USB 3.0	4											
	Serial	5 (4 x RS-232, 1 x RS-232/422/485 to support auto flow control)											
	VGA	1 (optional)											
	SATA	4 (SATA 3.0)											
	Extended Display Port (eDP)	1											
	JTAG	1											
	mini-PCIe	1 Full-size colay mSATA											
	GPIO	16-bit GPIO											
Watchdog Timer	Output	System reset											
	Interval	Programmable 1 ~ 255 sec/min											
Power Requirements	Power On	Intel Core i7-6700 3.4 GHz, 16 GB DDR4 2133 MHz x 4pcs											
		+5 V	3.3 V	12 V	5 Vsb							-12 V	
		1.31A	0.35A	4.52A	0.06A							0A	
Environment	Operating										Normal		
	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	Memory	USB 3.0	USB 2.0	VGA	DP	HDMI 1.2	DVI-D	eDP	SATAIII	PCIe x16/ PCIex8	PCIe x4	PCIe x1	COM	TPM	GbE LAN	AMP
TECH4U-610-585	Q170	Non-ECC	10	2	(1)	1	1	1	1	4	1/1	1	1	6	(1)	2	(1)
	C236	ECC/Non-ECC	10	2	(1)	1	1	1	1	4	1/1	1	1	6	(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

I/O View

