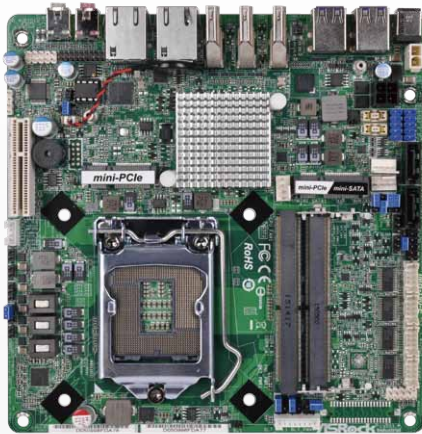




IMB-190 / IMB-190-E

Mini-ITX Motherboard

Spotlight Features

- Socket LGA1151 for Intel Core i7/i5/i3/Celeron (Skylake-S)
- Intel® Gen9 Intel Graphics DX 11/12, OGL4.3/4.4
- Supports Dual Channel DDR4 2133MHz, 2 x SO-DIMM, up to 16GB system memory
- 3 x HDMI, 1 x Dual Channel 24-bit LVDS/eDP
- 4 x USB 3.0, 4 x USB 2.0, 2 x SATA3
- 1 x Mini-PCle, 1 x PCIe x4 Slot, 1 x mSATA
- Gigabit LAN : 2 x Intel Lan
- 1 x TPM Header
- 12V / 19~24V DC-in

Specifications

Processor System		IMB-190	IMB-190-E
Dimension	Mini-ITX (6.7-in x 6.7-in)		
CPU	Socket LGA1151 for Intel Core i7/i5/i3/Celeron (Skylake-S)		
Core Number	(By CPU Max 4)		
Max Speed	(By CPU)		
L3 Cache	(By CPU)		
Chipset	Q170		
BIOS	UEFI		
Expansion Slot			
PCIe	1 x PCIe x4 slot		
Mini-PCIe	2 x Mini-PCIe (1 x full size colay with mSATA, 1 x half size, both with USB signal))		
mSATA	1 (colay with full size Mini-PCIe)		
Memory			
Technology	Dual Channel DDR4 2133 MHz SDRAM		
Max.	16G		
Socket	2 x SO-DIMM		
Graphics			
Controller	Intel® Gen9 Intel Graphics DX 11/12, OGL4.3/4.4		
VRAM	Shared Memory		
VGA	Supports max. resolution 1920 x 1200		
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz		
HDMI	HDMI1: Supports HDMI 2.0, max resolution 4096 x 2160@60Hz HDMI2,3: Supports HDMI 1.4a, max resolution 4096 x 2160@30Hz		
DVI	No		
Display Port	No		
Multi Display	Yes (Triple Display)		
Ethernet			
Interface	10/100/1000 Mbps		
Controller	1 x Intel i210 , 1 x Intel i219LM		
Connector	2 x RJ 45		
SATA			
Max Data Transfer Rate	SATA3 (6.0Gb/s)		

Rear I/O		IMB-190	IMB-190-E
VGA		0	
HDMI		3	
DVI-I/D		0	
Display Port		0	
Ethernet		2	
USB		4 x USB 3.0	
Audio		2 (Mic-in, Line-out)	
Serial		0	
e-SATA		0	
PS/2		0	

Internal Connector		
USB	4 (2*2.54 pitch header USB 2.0 compliant)	
LVDS/Inverter	1/1	0/0
eDP	0	1
VGA	1	0
Serial	4 x RS-232 (COM1, 2 support RS-232/422/485)	
SATA	2 x SATA3 (6.0Gb/s)	
m-SATA	1	
Mini-PCle	2	
Parallel	0	
IrDA	0	
GPIO	4 x GPI + 4 x GPO	
SATA PWR Output Con	1	
Speaker Header	1	

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12V / 19~24V DC-in (DC Jack / 4-pin ATX PWR Con)
Power On	AT/ATX Supported AT : Directly PWR on as power input ready ATX : Press button to PWR on after power input ready

Environment	
Operating Temperature	0°C – 60°C