

Industrial Motherboards for OEM/ODM

ONYX MIX-Q370D1

Mini-ITX with 8th/9th Gen Intel® Core™ Processor Family



Features

- DDR4 SODIMM x 2, Up to 32 GB
- Three Independent Display: DP x 2, eDP x 1, LVDS x 1
- Intel® LAN 210AT x 1, 219LM for iAMT 12.0 x 1
- M.2 Slot (M-key) x 1, M.2 Slot (E-key) x 1
- USB 3.2 Gen 2 x 4, USB 2.0 x 6
- PCIe [x4] x 1
- Support Intel® NVMe M.2 SSD
- 12V DC Power Input
- Low Profile



Specifications

System

Processor	8th Generation Intel® Core™ i7/ i5 /i3, Pentium® LGA 1151 socket Processor (formerly Coffee Lake-S), Max. 65W TDPs
Chipset	Intel® Q370 Express Chipset
Memory	SODIMM x 2, Max. 32GB, DDR4 2666/2400 MHz, Non-ECC, Un-buffered Memory, Dual channel
I/O Chipset	NCT6793D
Ethernet	Intel® PHY i219LM Giga LAN (support Intel® AMT 12.0) x 1 Intel® i210AT Giga LAN x 1
Audio	Realtek® ALC887
TPM	Nuvoton TPM version 2.0
Expansion Slots	PCIe 3.0 [x4] x 1 M.2 M key (22 x 80 mm) x 1 at Bottom side SATA & PCIe [x4] M.2 E key (22 x 30 mm) x 1 for Wireless-wifi module (PCIe+USB)
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis
WatchDog Timer	1~255 steps by software program
Smart Fan Control	CPU Fan/ Chassis Fan
Wake on LAN/ PXE	Yes (WOL / PXE)
Power State	S3, S4, S5

Graphics

Graphics Chipset	Intel® HD Graphics
Graphics Multi Display	Three Independent Display
VGA	—
DVI	—
HDMI	—
Display Port	Up to 4096 x 2160 @ 24 Hz / 3840 x 2160 @ 60 Hz, with Digital Audio, DP+supported
LVDS	LVDS Up to 1920 x 1200 @ 60 Hz, dual-channel 18/24 bit 40-pin LVDS connector x 1 40-pin eDP connector x 1 LCD backlight connector (inverter) x 1 (via Chrontel 7511)
eDP	eDP UP to 4096 x 2304 @ 60Hz
Backlight Control	Voltage/PWM

Environment / Power / ME

Battery	Lithium battery
Power Requirement	12V DC
Operation Temp.	32°F ~ 140°F (0°C ~ 60°C)
Storage Temp.	-40°F ~ 185°F (-40°C ~ 85°C)
Operation Humidity	0% ~ 90% RH, non-condensing
Certificate	CE & FCC (Class)
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5 Kg)
MTBF (Hours)	256,310

Rear Panel I/O Ports

USB	USB 3.2 Gen 2 (10 Gbps) x 4
Display I/O	DP x 2
Audio I/O	Mic-in x 1, Line-out x 1
LAN I/O	LAN (RJ-45) port x 2
Serial Port	—
PS/2 Port	—
Others	DC Jack

Internal I/O Connectors

Storage	SATA 6.0Gb/s x4 M.2 M key (22 x 80 mm) x1 (Support Intel® NVMe M.2 SSD)
USB	3 x USB 2.0 pin header support additional 6 USB ports
Display I/O	40-pin LVDS connector x 1 40-pin eDP connector x 1 LCD backlight connector (inverter) x 1
Audio I/O	Speaker for 2W/4Ω x 1 AAFP follow ASUS pin out x 1
Serial Port	Boxer header x 1 for COM (COM1: RS-232/422/485 supports 5V/12V/RI)
PS/2 Port	—
Parallel Port	—
DIO	8-bit x 1 (In/Out programmable)
FAN	4-pin CPU Fan connector x 1, 4-pin Chassis Fan connector x 1
Power	12V DC Power Jack x 1
Others	Front panel header x 1 Clear CMOS jumper x 1 AT/ATX select jumper x 1 Chassis Intrusion x 1 4-pin SATA power x 1
OS Support	Windows® 10 64 bit, Ubuntu 16.04 LTS