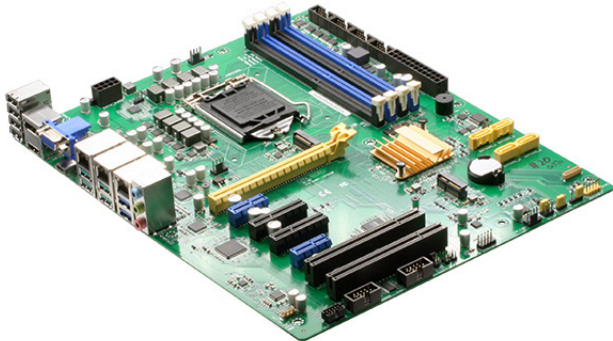


Industrial Motherboards for OEM/ODM

ONYX ATX-Q370A

ATX Industrial Motherboard with 8th/9th Generation Intel® Core™ Processor



Features

- 8th/ 9th Generation Intel® Core™ LGA1151 Processor
- Supports Power 95W max
- DDR4 2666/2400/2133 MHz, max. 64GB
- Three Independent Displays: HDMI x 1, VGA x 1, DP x 1
- Dual Intel® Gigabit Ethernet, i211AT x 1 (option: i211AT x 2), i219LM x 1
- M.2 E-key (PCIe/USB) x 1, M.2 M-key (PCIex4/SATA3) x 1
- TPM Onboard



Specifications

System

Processor	8th/9th Generation Intel® (Coffee Lake-S) Core™ i9/ i7/ i5 / i3, Pentium™ 14nm LGA 1151 socket Processor, Max. 95W
Chipset	Intel® Q370 Express Chipset
Memory	DIMM x 4, DDR4 (2666/2400/2133 MHz, max. 64GB) Non-ECC, un-buffered memory Dual-channel memory architecture
I/O Chipset	NCT6793D+ F81216HD
Ethernet	Intel® PHY i219LM Giga LAN x 1 (supports Intel® AMT 12.0) Intel® i211AT Giga LAN x 1 (BOM option: i211AT x 2) RJ45 x 2 (BOM option: RJ45 x 3)
Audio	Realtek® ALC887 6-Channel High Definition Audio CODEC
TPM	Nuvoton NPCT750ABBYX TPM2.0 onboard (optional)
Expansion Slots	PCIe 3.0[x16] Slot x 1, PCIe 3.0[x4] Slot (open edge) x 2, PCIe 3.0[x1] Slot (open edge) x 2, PCI x 2, M.2 2230 E-key (PCIex1/USB2.0/CNVi) x 1, M.2 2280 M-key (PCIex4/ SATA3) x 1
BIOS	256M bit Flash ROM x 1, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on CPU/Chassis
WatchDog Timer	1~255 steps by software program
Smart Fan Control	CPU Fan x 1, Chassis Fan x 2
Wake on LAN/ PXE	Yes (WOL / PXE)
Power State	S3, S4, S5

Graphics

Graphics Chipset	Intel® Graphics Media Accelerator
Graphics Multi Display	HDMI+VGA+DP (BOM option: USB 3.2 Gen 2 Gen2-10Gbps Type-C connector (Alternate Mode: USB+DP) x 1)
VGA	Up to 1920 x 1200 @60Hz (via IT6516B)
DVI	—
HDMI	Up to 4096 x 2160 @ 24 Hz / 2560 x 1600 @ 60 Hz, with Digital Audio
Display Port	Up to 4096 x 2160 @ 24 Hz / 3840 x 2160 @ 60 Hz, with Digital Audio
LVDS	—
eDP	—
Backlight Control	—

Environment / Power / ME

Battery	Lithium battery
Power Requirement	24-pin ATX connector x 1, 8-pin (2x4) ATX 12V Power connector x 1
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 A)
Form Factor	ATX, 12" x 9.6" (305mm x 244mm)
Weight	1.76 lb (0.8 Kg)
MTBF (Hours)	281,410

Rear Panel I/O Ports

USB	USB 3.2 Gen 2 ports (10 Gbps) x 4, USB 3.2 Gen 1 ports (5 Gbps) x 2, USB 2.0 ports x 4
Display I/O	HDMI x 1, VGA x 1, DP x 1, USB Type-C x 1 option
Audio I/O	Audio Jack x 3: Line-in, Mic-in, Line-out
LAN I/O	LAN (RJ45) ports x 2 (BOM option: RJ45 x 3)
Serial Port	—
PS/2 Port	—
Others	—

Internal I/O Connectors

Storage	SATA III (6.0Gb/s) ports x 4, support RAID 0/1/5/10 M.2 2280 M-key (PCIex4/SATA3) x 1
USB	USB 2.0 headers x 1 support additional 2 USB ports (2x5PIN, p=2.54mm)
Display I/O	—
Audio I/O	speaker header (Line-out) x 1
Serial Port	5 x RS-232 headers 1 x RS-232/422/485 (COM1, supports 5V/12V/RI optional)
PS/2 Port	—
Parallel Port	—
DIO	8-bit Digital I/O interface (In/Out programmable) x 1
FAN	CPU Fan connector(s) (4-pin) x 1, Chassis Fan connector(s) (4-pin) x 2
Power	—
Others	Chassis intrusion x 1 AT/ATX mode select jumper x 1 Front panel header x 1 Clear CMOS jumper x 1
OS Support	Windows® 10 64bit, Linux Ubuntu 64bit (18.04.1/ Kernel4.8.0)