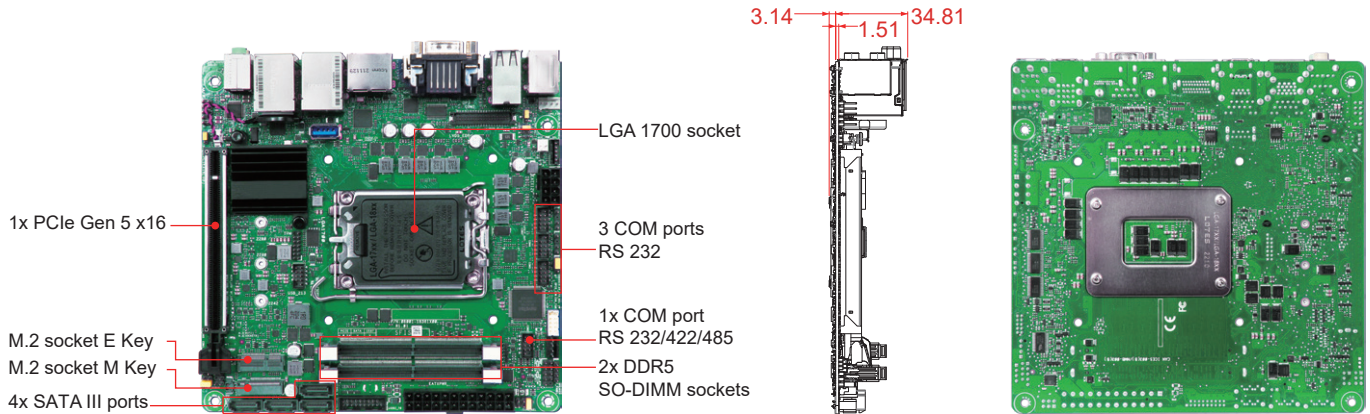


WADE-8213-Q670E

12th Gen Intel® Core™ Processors based Mini-ITX Board with DDR5 SO-DIMM up to 64GB, eDP/LVDS, 3x DP Ports, HDMI, Dual GbE LAN, 5x COM Ports

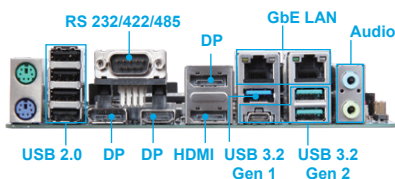


WADE-8213-Q670E is based on Intel® Q670E chipset and 12th Gen Intel® Core™ i9/i7/i5/i3 desktop processors. It supports multiple display outputs, options of legacy features for industrial applications, GPIO ports, dual LAN as well as rich expandability with PCIe Gen5, M.2 M and M.2 E keys. Featuring rich I/O capabilities and advanced connectivity on a smaller and thinner space-saving platform, the Portwell WADE-8213-Q670E is ideal for a wide range of embedded applications.

FEATURES

- Support 12th Gen Intel® Core™ Processors
- Two SO-DIMM support DDR5 DRAM up to 64GB
- Support dual Ethernet, 5x COM ports, 3x USB 3.2 Gen2 ports, 4x SATA III ports and Audio
- One PCIe Gen5 x16, one M.2 Key M for SSD, one M.2 Key E for Wireless

REAR I/O



ORDERING GUIDE

AB1-3P58	(R) WADE-8213-Q670E ATX ESB.Q670E w/o ECC LGA1700.w/ DDR5 /eDP/LVDS/Triple DP/HDMI/ Dual GbE/COM/Audio/USB
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PACKING LIST

One WADE-8213-Q670E Main board
One I/O shield
One SATA cable
One CPU cooler backplate

GENERAL

Processor	12 th Gen Intel® Core™ Processors CPU in LGA1700 package
Chipset	Intel® Q670E
BIOS	AMI uEFI BIOS
Memory	Support up to 64GB DDR5 4800 on two SO-DIMM sockets
Storage Devices	4x SATA III ports 1x M.2 socket (Key M, 2242/2260/2280)
Watchdog Timer	Programmable watchdog timer
Hardware Monitoring	System monitor (Voltage, Fan Speed and Temperature)
Expansion Interface	- 1x PCIe Gen5 x16 - 1x M.2 (Key M, 2242/2260/2280) for SSD - 1x M.2 (Key E, 2230) for Wireless

I/O INTERFACE

Audio	Audio jack on rear I/O with Line-out / Line-in with Realtek ALC897 audio controller
Ethernet	- Intel® I210AT (1GbE) and Intel® I225LM (2.5GbE) Ethernet controller - 2x RJ45 connectors on rear I/O
Serial port	- 2x RS232/422/485 ports (one port on rear I/O and one port on board header) - 3x RS232 ports on pin header
USB	- 3x USB 3.2 (Gen2) on rear I/O (2x Type A + 1x Type C) - 1x USB 3.2 (Gen1) on rear I/O - 1x USB 3.2 (Gen1) on board (Vertical Type-A) - 2x USB 3.2 (Gen1) on pin header - 4x USB 2.0 on rear I/O - 2x USB 2.0 on pin header
GPIO	8-bit configurable controlled by embedded controller

DISPLAY

Graphic Controller	Intel® UHD Graphics 770 supports DirectX 12, OpenGL 4.6
Display Interface	- DP: Three DP ports on rear I/O, resolution up to 8K - eDP/LVDS: One eDP/LVDS port on board header, switch by BIOS - HDMI: One HDMI connector on rear I/O

Mechanical & Environment

Dimension	170 mm (L) x 170 mm (W)
Power Supply	ATX power input
Environment	- Operation Temperature: 0°C to 60°C - Storage Temperature: -20°C to 80°C - Relative Humidity: 5% to 95%, non-condensing
MTBF	Over 100,000 hours at 40°C



Portwell, Inc. Headquarters
No. 242, Bo'AI St., Shu-Lin Dist,
New Taipei City 238, Taiwan
Tel: +886-2-7731-8888
Fax: +886-2-7731-9888
E-mail: info@portwell.com.tw
www.portwell.com.tw

American Portwell
(Fremont, CA)
Tel: +1-510-403-3399
E-mail: info@portwell.com
www.portwell.com

Portwell UK Ltd.
Tel: +44(0)1235-750-760
E-mail: info@portwell.eu
www.portwell.eu

Portwell Japan, Inc.
(Tokyo)
Tel: +81-3-6902-9225
E-mail: info@portwell.co.jp
www.portwell.co.jp

Portwell Japan, Inc.
(Osaka)
Tel: +81-6-4807-7721
E-mail: info@portwell.co.jp
www.portwell.co.jp

European Portwell
Tel: +31-252-620790
E-mail: info@portwell.eu
www.portwell.eu

KIOSK Embedded Systems GmbH
Tel: +49-8152-3982-500
E-mail: info@portwell.eu
www.portwell.de

Shanghai Portwell
Tel: +86-21-5771-2505
E-mail: info@portwell.com.cn
www.portwell.com.cn

Portwell Korea, Inc.
Tel: +82-31-450-3043
E-mail: info@portwell.co.kr
www.portwell.co.kr

Portwell India Technology
Tel: +91-80-4168-4255
E-mail: enquiry@portwell.in
www.portwell.in