



519.00 EUR  
incl. 19% VAT, plus [shipping](#)

- Intel Elkhart Lake !
- 2x 4K HDMI !
- Support NVMe !
- NUVOTON TPM v2.0 !

- Intel® Elkhart Lake Celeron® J and N Series SoC Processor
- Long-Life Embedded Class with Planned Lifecycle Through Q1'2036
- 2 \* DDR4-3200MHz Dual Channel SO-DIMM up to 32GB
- Up to 2 4K HDMI Displays
- 1 \* Intel i225-LM 2.5GbE, 1 \* Intel i211-AT GbE
- Onboard 32GB eMMC, 3 \* M.2 Slots
- ECO-design for EuP/ErP
- Onboard NUVOTON TPM v2.0

**Model Series** FDF04

**Part Number** HBFDF04-6412B (Non-WIFI)  
HBFDF04i-6412B (WIFI)

**Part Number** HBFDF04-6412T (Non-WIFI, TPM 2.0)  
HBFDF04i-6412T (WIFI, TPM 2.0)

#### Motherboard Specification

<b>CPU</b>	Intel® Celeron J6412, 2.00GHz – 2.60GHz Burst, 4-Core 4-Thread, 10W (Formerly Elkhart Lake)
<b>Memory</b>	2 x 260-pin Dual Channel DDR4-3200 SO-DIMM up to 32GB Total
<b>Graphics</b>	Intel® UHD Graphics for 10th Gen Intel® Processors
<b>Audio</b>	Realtek ALC662 HD Audio
<b>LAN</b>	1 x Intel I225-LM PCIe 2.5GbE 1 x Intel I211-AT PCIe Gigabit LAN
<b>Storage</b>	1 x SATA3 6Gb/s 1 x M.2 (SATA & PCIe 3.0 x2, M-key, 2242/2280 NVMe) Onboard 32GB eMMC

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<b>WiFi</b>	M.2 2230 E-key Open Slot for HBFDF04 Series (Non-WIFI) WiFi + Bluetooth Installed for HBFDF04i Series (WIFI)
<b>SIM</b>	M.2 3042 B-key Open Slot (USB bus for 3G/4G Modem)
<b>TPM</b>	Intel fTPM 2.0 (PTT) Trusted Computing Firmware Intel fTPM 2.0 (PTT) Trusted Computing Firmware Onboard NUVOTON TPM v2.0
<b>Chassis Specification</b>	
<b>Enclosure Size</b>	193 (W) x 142.4 (D) x 62 (H) mm
<b>Storage Bay</b>	1 * 2.5" SATA Drive Bay
<b>Front I/O Port</b>	1 Power Button 1 Reset Button 1 Power LED 1 HDD LED 2 USB 2.0 Ports 1 3.5mm Line-out Jack 1 3.5mm Mic-in Jack 2 Serial Ports (1 * RS232, 1 * RS232/422/485)
<b>Rear I/O Port</b>	1 3.5mm Line-out & MIC-in Combo Audio Jack 1 RJ45 LAN (10/100/1000/2500) 1 RJ45 LAN (10/100/1000) 3 USB 3.2 Gen 2 (10 Gb/s) 3 USB 2.0 Port 2 HDMI 2.0b (4096 * 2160 @ 60Hz) 2 Antenna Holes 1 GND Screw 1 +12V – 24V 2.5mm Diameter DC Power Jack
<b>Power</b>	Adapter : AC_90~240V / DC_12V/60W
<b>Environment</b>	Operating Temperature : 0°C ~ 50°C with air flow Storage Temperature : -25°C ~ 85°C Humidity : 10% ~ 90% RH @40°C (non-condensing)
<b>Application</b>	Digital Signage, POS, Kiosk, Carputer, Industrial PC, Automation, Gaming, Digital Security, Surveillance, Transportation, Medical
<b>Certificate</b>	CE,FCC,ErP For Barebone CE,FCC,TUV,UL,CCC,CB,ErP For Power Adapter