



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

- Intel Elkhart Lake !
- 2x 4K HDMI !
- WLAN !
- 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	HBFD04-6412B (Non-WIFI) HBFD04i-6412B (WIFI)	HBFD04-6412T (Non-WIFI, TPM 2.0) HBFD04i-6412T (WIFI, TPM 2.0)

Motherboard Specification

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

WiFi	M.2 2230 E-key Open Slot for HBFDF04 Series (Non-WIFI) WiFi + Bluetooth Installed for HBFDF04i Series (WIFI)
SIM	M.2 3042 B-key Open Slot (USB bus for 3G/4G Modem)
TPM	Intel fTPM 2.0 (PTT) Trusted Computing Firmware Intel fTPM 2.0 (PTT) Trusted Computing Firmware Onboard NUVOTON TPM v2.0
Chassis Specification	
Enclosure Size	193 (W) x 142.4 (D) x 62 (H) mm
Storage Bay	1 * 2.5" SATA Drive Bay
Front I/O Port	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)
Rear I/O Port	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
Power	Adapter : AC_90~240V / DC_12V/60W
Environment	Operating Temperature : 0°C ~ 50°C with air flow Storage Temperature : -25°C ~ 85°C Humidity : 10% ~ 90% RH @40°C (non-condensing)
Application	Digital Signage, POS, Kiosk, Carputer, Industrial PC, Automation, Gaming, Digital Security, Surveillance, Transportation, Medical
Certificate	CE,FCC,ErP For Barebone CE,FCC,TUV,UL,CCC,CB,ErP For Power Adapter