

PUZZLE-IN003B

Desktop Network Appliance with Intel Atom C3000 processor up to 16 CPU cores support up to 6 x 1 GbE, 2 x 10 GbE & 2 x M.2 slots, 1 x PCIe Mini, 1 x eMMC 32GB



Features

- » Desktop network appliance with Intel® Atom® C3000 processor
- » Support 6 x 1 GbE and 2 x 10 GbE SFP+ via X553 integrated in C3558/C3758
- » DDR4 2133MHz ECC (by CPU) or non-ECC UDIMM/RDIMM Up to 128GB
- » 1 x M.2 A key (USB 2.0, PCIe x1), 1 x miniPCIe (USB 2.0, PCIe x1) with SIM card slot
- » 1 x M.2 M key for PCIe 3.0 x4 nVME, 1 x eMMC 32GB
- » Support open source software, such as [pfSense®](#) and [OPNsense®](#).

[Learn more about PUZZLE series network appliances.](#)

Specifications

| | |
|-----------------------------|--|
| Form Factor | |
| Form Factor | Desktop |
| System | |
| CPU | Intel Atom® processor C3758, 8-core 16M cache, up to 2.20 GHz Intel Atom® processor C3558, 4-core 8M cache, up to 2.20 GHz |
| Chipset | Integrated in CPU |
| Memory | 4 x DDR4 2133MHz ECC (By CPU) or non-ECC UDIMM, Support RDIMM |
| Memory Max. | UDIMM up to 64GB RDIMM up to 128GB |
| Cooling method / System Fan | Two system fans (PUZZLE-IN003B-C0 sku) Fanless (PUZZLE-IN003B-C1 sku) |
| Physical Characteristics | |
| Dimensions (LxWxH) (mm) | 206 x 225 x 44.2 |
| Net Weight | 2 kg |
| Storage | |
| Storage | 1 x SATA : SATA DOM + 1 x SATA power 5V 1 x M.2(NGFF) M key 2260/2280, Support PCIe 3.0 x4 nVME 1 x eMMC : 32GB |
| I/O Interface | |
| Ethernet | 2 x SFP+ : 10 GbE (Integrated in CPU) 6 x LAN : GbE RJ-45 (NIC: Intel I211-AT, GbE PHY: Marvell 88E1512) |
| I/O Interface | 1 x External USB 2.0 1 x External USB 3.2 Gen1x1 1 x Console port(s) : RJ45 |
| Expansion | 1 x PCIe mini Card Slot (PCIe 3.0, USB 2.0) with SIM slot 2 x M.2(NGFF) : 1 X M.2 A key (PCIe 3.0& USB 2.0), 1 X M.2 M key 2260/2280 Support PCIe 3.0 x4 nVME |
| Wireless | |
| Wi-Fi | 2 for Wi-Fi/2 for WWAN |
| Other Features | |
| TPM | 1 x TPM 2.0 pin header |

| | |
|-----------------------|--|
| Power | |
| Input | 1 x DC jack, 12 V DC-in, 60W |
| Environment | |
| Operating Temperature | 0°C ~ 40°C (32°F ~ 104°F) |
| Storage Temperature | -20°C ~ 75°C (-4°F ~ 167°F) |
| Humidity | Relative humidity: 5% ~ 90% non-condensing |
| Certifications | |
| Safety & EMC | CE / FCC / RoHS |
| OS Support | |
| OS Support | Linux Ubuntu 18.04.04 |
| | CentOS 7/ Red Hat/Fedora EPEL |
| | Microsoft Windows 10 |

Ordering Information

| | |
|-------------------------|---|
| PUZZLE-IN003B-C1/8G-R10 | Desktop Network Appliance with Intel® ATOM® C3558 Processor , 6 x 1GbE, 2 x 10 GbE, 8GB DDR4, eMMC 32GB & 2x M.2 slot |
| PUZZLE-IN003B-C0/8G-R10 | Desktop Network Appliance with Intel® ATOM® C3758 Processor , 6 x 1GbE, 2 x 10 GbE,8GB DDR4, eMMC 32GB & 2x M.2 slot |

Packing List

| | |
|---------------------------------|-------------------------------------|
| » 1 x Power cord | » 1 x Power adapter |
| » 2 x Rack mounting ears | » 6 x Screws for rack mounting ears |
| » USB to console cable (Option) | » RS-232 to console cable (Option) |

Desktop Network Solution with Low Power and High Transmission Speed

The PUZZLE-IN003B is a desktop network device that can be easily placed in space-limited locations to provide network solution. The PUZZLE-IN003B comes with Intel® Atom® Processor C3000 series SoC which supports up to 128GB dual-channel DDR4 2400 MHz ECC, two 10 GbE Ethernet, and 32GB Embedded Multi Media Card (eMMC).

The PUZZLE-IN003B also provides one M.2 M-key slot for NVME, one M.2 A-key slot, and one PCIe Mini with SIM slot for Wi-Fi, 4G and LTE solutions. It also offers bypass function to ensure uninterrupted data transmission and supports Intel® QuickAssist Technology (Intel® QAT up to 20Gbps) to accelerate and compress cryptographic workloads.

- *High-Density,Low-Power Designs
- *High-Speed I/O Configurability
- *Multi-Core Scalability
- *Integrated Hardware Acceleration
- *Bypass Function Relay Modes



Intel® Atom® Process C3000

In terms of memory, the PUZZLE-IN003B incorporates double the Layer 2 cache, allowing edge analytics systems to quickly access data. Intel® Atom® Processor C3000 series also supports the Intelligent Storage Acceleration Library (ISA-L), a software library optimized for applications that require high data throughput and minimal latency. And the Intel® VT-c works with the Intel® Ethernet Controller integrated into the new Intel® Atom® processors to deliver I/O virtualization and quality of service (QoS) features.



Integrated with High Speed 10GbE Interface

The PUZZLE-IN003B equipped with Intel® Atom® C3000-series processor in a small form-factor chassis is designed with two 10GbE ports and six 1GbE ports to provide high-speed connections to the core network while maintaining reliability in a cost-effective manner.

2 x 10 GbE
6 x 1 GbE

Boost Encryption and Compression Performance with Intel® QuickAssist Technology

In 5G network, security is an indispensable requirement. To support increasing security requirements, Intel® Atom® C3000 processor series integrates Intel® QuickAssist Technology that provides up to 20 Gbps of crypto performance, ensuring secure data transfer while reserving valuable processor cycles for other tasks.

Intel®
QuickAssist
Technology

Firewall & SD-WAN Application

In the post-pandemic era, the demands of work from home (WFH) and distance learning are increasing dramatically. The desktop network appliance, the PUZZLE-IN003B, is ideal for entry-level UTM, WFH, firewall and VPN solutions. With its Linux tested platform, users can smoothly install any open-source software to meet a variety of network functions, such as firewall and VPN. Moreover, designed with six 1GbE and two 10GbE LAN ports with bypass function, the PUZZLE-IN003B can offer high-speed data transmission and uninterrupted service for you.

