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/R-DIMM 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.

Next-Gen Firewall (NGFW)
Small office / Chain store

Internet

(Secure SD-WAN)
Branch office

Internet

IPSec Tunnels

IPSec Tunnels

MPLS

Headquarters

Data Center