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# PUZZLE-IN003B

Desktop Network Appliance with Intel® Atom® Processor C3000 Processor 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 <a href="mailto:pfSense">pfSense</a> and <a href="mailto:oPNsense</a>.
- » Buy IoT Devices & IoT Hardware | Azure Certified Device Catalog

Learn more about PUZZLE series network appliances

## Specifications

Form Factor		
Form Factor	Desktop	
System		
СРИ	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	
	1 x M.2(NGFF) A key (PCIe 3.0& USB 2.0)	
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**

Desktop Network Appliance with Intel® ATOM® C3558 Processor , 6 x 1GbE, 2 x 10 GbE, 8GB DDR4, eMMC 32GB & 2x M.2 slot
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



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.

### 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.

