

# PUZZLE-IN001

1U Rackmount Network Appliance with Intel® Xeon® E and 8th & 9th Generation Intel® Core™ i3/Pentium®/Celeron® Processor, two PuIM module slots and two PCIe slots



## Features

- Intel® Xeon® E, 8th & 9th Generation Intel® Core™ / Pentium®/Celeron® processor
- 8 x GbE RJ45 via Intel® I211
- 2 x 288-pin DIMM, DDR4 2400MHz ECC & non ECC, up to 32GB
- 1 x RJ45 Console, 2 x USB 3.2 Gen 1 (5Gb/s), LCM
- 2 x 2.5" SATA drive bay, 1 x M.2 B-Key (SATA, USB 3.2 Gen 1 (5Gb/s)), 1 x PCIe Mini
- Support PCIe x4, PCIe x8 slot and two PuIM module slots
- Redundant PSUs

## Specifications

|                            |  | PUZZLE-IN001-XE   | PUZZLE-IN001-i3T  |
|----------------------------|--|---|---|
| Platform                   | Form Factor                                | 1U  |   |
|                            | CPU  | Intel® Xeon® E-2136 processor, 6C/12T, up to 4.50 GHz   | 8th Generation Intel® Core™ i3-8100T processor, 4C/4T, up to 3.10 GHz |
|                            | Chipset                                    | Intel® C246   |   |
| Memory                     | Memory Technology                          | 2 x DDR4 2400MHz ECC/Non-ECC/RDIMM  |   |
|                            | Memory Capacity                            | Up to 32GB  |   |
|                            | Memory Socket                              | 2 x 288-pin DIMM  |   |
| Network and Security       | Network Acceleration and Security Function | <ul style="list-style-type: none"> <li>• Intel® AES New Instructions</li> <li>• Intel® Software Guard Extensions (Intel® SGX)</li> <li>• Intel® Memory Protection Extensions (Intel® MPX)</li> <li>• Intel® Trusted Execution Technology</li> </ul> |   |
|                            | TPM  | 1 x TPM 2.0 pin header  |   |
| Networking                 | Ethernet IC                                | 1 GbE NIC: Intel® I211-AT   |   |
|                            | Ethernet Port                              | 8 x 1GbE RJ45 LAN ports   |   |
|                            | Network Module Slot                        | 2 x PuIM module slots   |   |
| Expansion Slot             | PCIe Slot                                  | 1 x PCIe 3.0 x8 (FHHL) slot, 1 x PCIe 3.0 x4 (FHHL) slots   |   |
|                            | PCIe Mini Card Slot                        | 1 x PCIe Mini card (PCIe 3.0 & SATA 3.0, USB 2.0)   |   |
|                            | M.2  | 1 x 3042/2260 M.2 B key (SATA 3.0 / USB 3.2 Gen1)<br>Support SATA SSD and 4G LTE module   |   |
| Storage                    | Storage                                    | 2 x 2.5" SATA HDD/SSD bay support SATA 3.0 (6 Gbps) (RAID 0/1 support)  |   |
|                            | eMMC                                       | N/A   |   |
|                            | SD Card                                    | N/A   |   |
| External I/O               | USB  | 2 x USB 3.2 Gen 1 (5Gb/s)   |   |
|                            | Console                                    | 1 x RJ45  |   |
| Internal I/O               | HDMI                                       | N/A   | 1 x HDMI connector (optional)   |
|                            | USB  | 4 x USB 2.0 (pin header)  |   |
| Power and Mechanical       | Power Switch                               | 1 x Power switch  |   |
|                            | Reset Button                               | 1 x Reset button  |   |
|                            | Power Input                                | 100 V ~ 240 V   |   |
|                            | Type/Watt                                  | Redundant power 300W  |   |
|                            |  | 90V ~ 264V AC   |   |
|                            | Processor Cooling                          | 1 x Passive CPU heatsink  |   |
|                            | System Cooling                             | 4 x Cooling fans with smart fan   |   |
| Antenna Hole               | 1 x Antenna hole                           |   |   |
| Physical and Environmental | Storage Temperature                        | -20°C ~ 75°C (-4°F ~ 167°F)   |   |
|                            | Operating Temperature                      | 0°C ~ 40°C (32°F ~ 104°F)   |   |
|                            | Operating Humidity                         | 5% ~ 90% non-condensing   |   |
|                            | Dimensions (W x L x H) (mm)                | 430 x 426 x 44.2  |   |
|                            | Weight                                     | 7kg   |   |
| OS and Certifications      | Certification                              | CE / FCC / RoHS   |   |
|                            | Operating System                           | Linux Ubuntu 18.04.04<br>CentOS 7 / Red Hat / Fedora EPEL<br>Microsoft Windows 10   |   |
| Indicators                 | LCM  | LCM, 2 buttons  |   |
|                            | LED  | 1 x Power LED, 1 x Storage LED, 1 x Alert LED   |   |

## Ordering Information

| Part No.                   | Description  |
|----------------------------|--|
| PUZZLE-IN001-R-R11*        | 1U Rackmount Network Appliance support Intel® Gen8 Xeon®E3, Core™ i3, Pentium® or Celeron® processor, two DDR4 slots, two SSD slots and eight 1GbE, two PuIM, two PCIe expansion without heatsink, Redundant Power, RoHS |
| PUZZLE-IN001-XE/R-R11      | 1U Rackmount Network Appliance with Intel® Gen8 Xeon® E-2136 processor, two DDR4 slots, and eight 1GbE, two PuIM module slots, two PCIe expansion, Redundant Power, RoHS   |
| PUZZLE-IN001-i3T/R-R11     | 1U Rackmount Network Appliance with Intel® Gen8 Core™ i3-8100T processor, two DDR4 slots, and eight 1GbE, two PuIM module slots, two PCIe expansion, Redundant Power, RoHS   |
| PUZZLE-IN001-XE/16G/R-R11  | 1U Rackmount Network Appliance with Intel® Gen8 Xeon® E-2136 processor, two 8GB DDR4, two 256GB SSD, and eight 1GbE, two PuIM module slots, two PCIe expansion, Redundant Power, RoHS                                    |
| PUZZLE-IN001-i3T/16G/R-R11 | 1U Rackmount Network Appliance with Intel® Gen8 Core™ i3-8100T processor, two 8GB DDR4, two 256GB SSD, and eight 1GbE, two PuIM module slots, two PCIe expansion, Redundant Power, RoHS                                  |

\* A CPU heatsink must be purchased separately

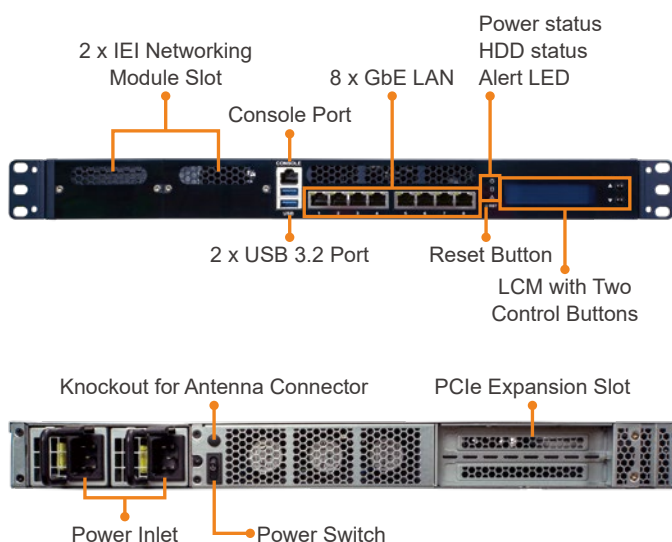
## Packing List

|                               | PUZZLE-IN001-R | PUZZLE-IN001-XE/R | PUZZLE-IN001-i3T/R | PUZZLE-IN001-XE/16G/R | PUZZLE-IN001-i3T/16G/R |
|-------------------------------|----------------|-------------------|--------------------|-----------------------|------------------------|
| Power cord                    | 2              | 2                 | 2                  | 2                     | 2                      |
| Rack mounting ears            | 2              | 2                 | 2                  | 2                     | 2                      |
| Screws for rack mounting ears | 6              | 6                 | 6                  | 6                     | 6                      |
| USB to console cable          | Option         | Option            | Option             | 1                     | 1                      |
| RS-232 to console cable       | 1              | 1                 | 1                  | Option                | Option                 |
| Slide rail                    | Option         | Option            | Option             | Option                | Option                 |

## Options

| Item                    | Part No.            | Description  |
|-------------------------|---------------------|--|
| Slide rail              | RAIL-B02            | New rail kit for new 1U & 2U NAS: TVS-471U, 1253U, etc   |
| USB to console cable    | 32013-004000-100-RS | Round cable; LAN CABLE; FTDI console cable; 2; 1800MM; (A)USB A TYPE 4P MALE+PCB:FTDI_FT232RL; (B)RJ45 8P8C; RoHS  |
| RS-232 to console cable | 32005-005100-100-RS | Round cable; RS-232/422/485; PUZZLE RS-232 cable; 2; 500MM; 24AWG; (A)D-SUB 9P MALE+#4-40 Screw; (B)RJ45 PLUG 8P8C; ONE PCS PKG; TC&C; RoHS                                    |
| HDMI cable              | 19B00-000403-00-RS  | Z532; Accessory module; PUZZLE series HDMI cable assembly (only processor support graphics model ); standard; 00, RoHS   |
| Heatsink (TDP: 35W)     | 34000-000731-RS     | HEATSINK; 90*90*27MM, GREASE:35*35mm_K=6.5; Washer*4+SPING SCREW Set*4, for CPU TDP 35W; RoHS  |
| Heatsink (TDP: 80W)     | 34000-000722-RS     | HEATSINK/Heat Pipe; FIN:89.5X88.4X20MM+Ø6 Heat Pipe*1, Copper Block:40*36*3MM + Aluminum Block:90*90*4.0MM; SCREW+SPRING+E-RING+WASHER*4, GREASE:X23-7762for CPU TDP 80W; RoHS |

## IO Interface



## Dimensions (Unit: mm)

