



Main Features

- Cavium Octeon-TX CN80/81xx CPU based on ARMv8.1 64bit architecture
- On-board 1GBytes SLC NAND Flash. Upgradable to be up to 2GBytes
- On-board 1GBytes 64bit DDR4 (4x128Mx16bit) and 8bit ECC Supports 36/72bit memory configurations with ECC. Upgradable to be up to 2GBytes
- Another PCB version to support SO-DIMM for 4GBytes DDR4 and above
- Support 802.3bz 10G standard which can be backward compatible with 1/2.5/5Gbps
- Support 1-pair bypass feature
- Flexible daughter boards design to support different features like Wi-Fi, 3G/LTE, PoE (2-port 802.3at or 4-port 802.3af), Industrial management and Storage
- Dual power DC input selections by Industrial Phoenix 2-pin type (9V-32V DC) or standard coaxial power type with screw (12V DC)
- Fanless mechanical design
- Supports multiple mounting types: Din-Rail, rack mount shelf, desktop and wall mount

Product Overview

DNA 1520 adopts Cavium latest ARMv8.1 64-bit SOC to provide a high performance platform. It can support Cavium Octeon-TX either CN80xx or CN81xx series CPU. Daughter board design is flexible to support different features, like Wi-Fi, 3G/LTE, PoE, Industrial Management and Storage. It is a universal platform which can be for below applications.

- SDN Control Plane
- Virtualized GW
- Virtualized CPE
- NAS
- Firewall/IPS/AntiVirus
- VPN
- SMB Routers
- IoT GW
- Industrial Management
- Vehicle applications

Specifications

CPU

- Cavium Octeon-TX CN80xx/81xx Multicore ARM64 Processor
- ARMv8.1 64bit architecture
- Hardware floating point, SIMD and MMU support
- Hardware support for Virtualization

Memory

- On-board 128MB SPI Flash for system boot-up
- On-board 1GBytes SLC NAND Flash. Upgradable to be up to 2GBytes
- On-board 1GBytes 64bit DDR4 (4x128Mx16bit) and 8bit ECC. Supports 36/72bit memory configurations with ECC. Upgradable to be up to 2GBytes
- Another PCB version to support SO-DIMM for 4GBytes DDR4 and above

Ethernet

- One 1Gb copper WAN (RJ45)
- One 1Gb combo DMZ (RJ45+SFP plus)
- One 10Gb combo WAN/DMZ/LAN (RJ45+SFP plus)
- Four 1Gb copper LAN (RJ45)
- Support bypass feature between WAN and LAN1

Other I/Os

- One USB 3.0 Host
- One Micro SD Card reader with protective cover
- One RJ45 console supports serial modem

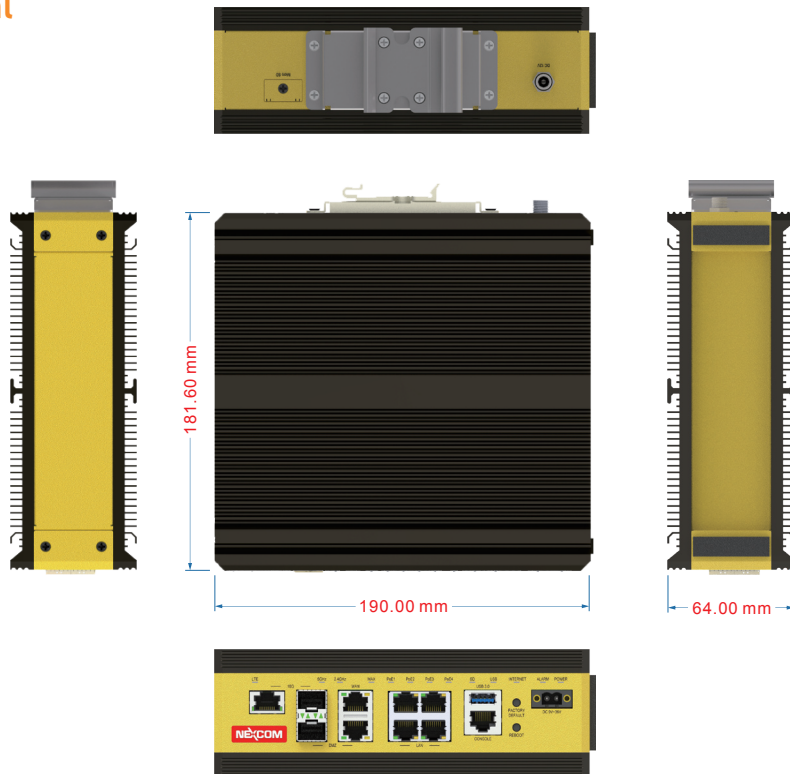
Indicators and Buttons

- LEDs for Power, Alarm, WAN, DMZ, LAN(1~4), 10G, USB, SD, Internet, PoE (1~4), MAX (PoE), 2.4GHz (Wi-Fi), 5GHz (Wi-Fi) and LTE
- One reset to default button
- One system reboot button

Optional Daughter Boards

- Two Wi-Fi and one 3G/LTE:
 - Two PCIe slots for two half/full-size WiFi PCIe cards via PCIe signal
 - One PCIe slot for 3G/LTE module via USB signal
- PoE
 - Supports 4-port PoE for up to 2-port 802.3at or 4-port 802.3af
- Industrial management
 - RS232/485/422
 - Digital input/output

ID/Mechanical



- Storage
 - Share the same board-to-board interface as WiFi/LTE board. Only support either one at the same time
 - Supports two SATA interfaces for two SATA SSD/HDDs

HW Monitor

- Support HW monitor features via two thermocouples and ten voltages Sensors

Power Input

- External AC to DC desktop power adapter
 - Power input: 100V ~240VAC
 - Power output: DC12V/65W (non-PoE). DC12V/150W (PoE)
- 2-pin DC to DC power input
 - DC9V~36V

Dimension

- 190 x 181.6 x 64mm

Weight

- 2.5kg

Environment

- Operation temperature: -20°C~70°C
- Storage temperature: 40°C~85°C
- Humidity: 5% to 90% maximum (Non-condensing)

Certifications

- FCC class B
- UL
- CE/CB

Ordering Information

- **DNA 1520 (P/N:10L00152000X0)**
Cavium Octeon-TX CN8120 2-core 1.5GHz main system