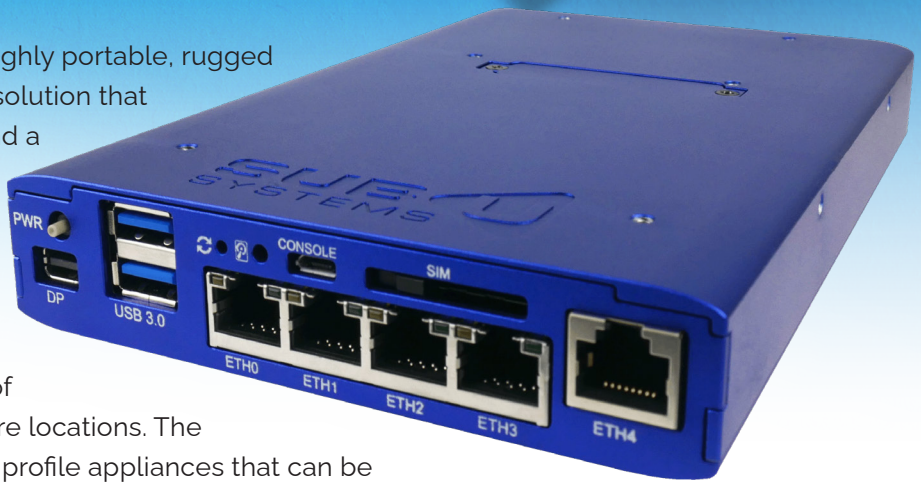
SDN-A™ EC

Software Definable Network-Appliance™



The **SDN-A™ Executive Comms (EC)** is a highly portable, rugged software programmable communications solution that combines the functionality of a IP router and a Virtual Machine (VM) server.

The SDN-A EC offers enterprise-class Virtualized Networking Function (VNF) performance in a small size, weight, and low power (SWaP) device that is durable enough to withstand the rigors of mobile and portable use in the most austere locations. The SDN-A™ EC is part of a family of small, low profile appliances that can be used individually or paired with other EC appliances as part of assembling a truly scalable executive communications capability. Other EC devices include the Cisco ESR6300 EC, the Cisco ESS3300 EC, the Cisco ESS9300 EC, the Haivision Kraken EC, JPS Interop RoIP EC, and the PSU/UPS EC.

SDN-A Technology

The SDN-A EC is based on SUB-U's Software Definable Network-Appliance (SDN-A) technology, which allows users to create an individualized IP networking appliance based on the use of Virtualized Networking Functions (VNFs). SDN-As support several different virtual machine hypervisors, along with virtual networking functions from companies such as Cisco, Aruba, Juniper, Palo Alto, Haivision, and SUB-U. When used with SUB-U's Linux based hypervisor, users benefit from the SDN-A EC's cellular and Wi-Fi transport technologies.

Scalability with other EC devices

SUB-U's EC products are modular, interoperable, and scalable with other SUB-U Executive Comms (EC) devices to meet IP networking requirements of any complexity. SUB-U's EC devices enable you to create flexible, scalable, secure, software defined small and light sophisticated comprised solutions to meet nearly any mission requirements.

IAS Router Operating System (IAS ROS)

SUB-U's IAS Router Operating System is a secure, high performance, enterprise-class IP router/ VPN gateway/ Virtual Machine Hypervisor that was custom developed from the ground up to support military and government deployable communications use cases. The IAS ROS uses patented WAN technology management capability providing Communicators:

- Offers multiple WAN technologies, including Ethernet, 4G/5G Cellular, Wi-Fi WAN and SATCOM
- 802.11ac and 802.11ax Wi-Fi 6 radios as either a traditional Wi-Fi access point and/or Wi-Fi client/WAN
- 5 Gigabit RJ45 Ethernet, all routable with individual MAC addresses using Intel Ethernet controllers
- User accessable SIM slot, that requires no tools to change
- Optional 2.5" SSD drive "bump" for applications that require up to 15TB of SSD storage
- USB 3.0, Mini Display Port, and USB console port to support field configurablity and various use cases

SUB U SYSTEMS

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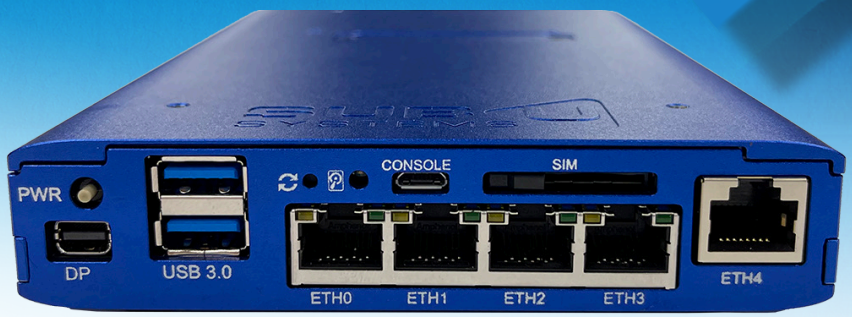

Specifications

- Size: 7.5" x 5" x 1.2" (L x W x H)
- Weight: <2 pounds
- Machined Aluminum enclosure

Power

- Wide Range Dirty DC Input: 9 ~ 36 VDC
- Power Consumption: <20 watts (< 25 watts with optional 2.5" SSD drive)
- PSU: 100~240 VAC 50/60Hz

WAN Technology

- (5) Gigabit routed Ethernet ports
- (2) USB 3.0
- 802.11ac Wi-Fi client and/or Access Point (Optional)
- (1) Built-in 3G/4G/5G cellular radio (Optional)

Environmental

- Operating Temperature: -20˚C ~ +70˚C
- Storage Temperature: -40˚C ~ +85˚C
- Operating Humidity: 5% ~ 95%

SDN-A Technology

- Intel E3950 Atom w/4Cores and 4 Threads
- 8GB RAM
- mSATA, SD Card (internal), or 2.5" SSD
- Mini- Display Port with 4K video support
- 2 USB controllers, 1 CPU based and 1 standalone component (TI based USB Hub)
- Micro USB Console Port (no need for serial cables)

Storage

- Optional 2.5" SSD (up to 15TB)

Configuration

- Micro USB console
- Mini Display Port with 4K video support
- USB 3.0 interfaces for keyboard/mouse

Virtualization

- Supports most commercial vendors' software based IP networking function and application server based virtual machine technologies
- Supports Intel VT-D and VT-X Technology

Virutalized Networking Functions Supported

- Cisco
  - CSR1000V
  - ASAv
  - Viptella
- Aruba
  - Virtual Mobile controller
  - ClearPass
  - Airwave
- Juniper
  - SRXv
  - 128 Technologies SD-WAN
- Palo Alto Virtual Firewall
- MS Windows Server 2019
- Linux (CENTOS, Ubuntu, RHLE
- XipLink
- Riverbed Steelhead
- And many more...

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