COMPOSE

EKINOPS
Empowering Networks

ONEe600

Embedded Router

The ONEe600 is a carrier-grade embedded router that comes as part of the OneOS6-LIM hypervisor for universal CPEs (uCPE).

Without the need for installing a dedicated router VNF, the embedded ONEe600 router allows service providers and system integrators to deploy value-added WAN services that include advanced application-aware routing, security and VPN services within an NFV environment.

Through an additional license, the ONEe600 router also supports the capability for delivering highly scalable and performant SD-WAN services.

Optimized Software for Virtualization

ONEe600 is based on OneOS6, a carrier-grade router engine. It is optimized for the delivery of virtualized network services. The OneOS6 modular software isolates the control and data plane and is tuned to leverage DPDK, SR-IOV and VirtIO acceleration mechanisms. For demanding high-speed applications, the dataplane can also use several CPU cores, making wirespeed routing possible up to 10 Gbps. The management plane exposes rich, open APIs such as NETCONF and REST to accelerate the programming of networking services.

Field-Proven, Carrier-Grade Reliability

The OneOS6 routing engine of the ONEe600 is today at the core of over 2 million Ekinops routers, under the OneAccess brand, around the world. Using proven and highly interoperable code it has been field-hardened at over 125 service providers. It includes advanced network troubleshooting and monitoring options.

Easy Migration to NFV

Reflecting a long heritage of supporting service providers, the Ekinops router portfolio is designed to facilitate moving managed services to NFV in a smooth and consistent manner. End-users experience the same carrier-grade reliability, irrespective of whether the service is delivered using a physical or virtualized device. The Ekinops product portfolio offers a smooth migration path, rather than a complex rip'n'replace strategy.

Rich Feature Set

The ONEe600 embedded router comes standard with a complete feature set which includes IPV4/IPV6 routing, Quality of Service mechanisms, VPN and security functions, and much more.

Optimized Footprint and Performance

The goal of ONEe600 router is to offer all standard networking services at the lowest footprint possible and to save processing resources for vendors VNFs running on the same device.

Ekinops commissioned EANTC AG, the European Advanced Networking Test Center, internationally recognized objective test center, to perform tests and evaluate its embedded router performance. EANTC, which provides vendor-neutral network performance test facilities for manufacturers, service providers and enterprise customers, executed in total fifteen test runs for three test scenarios of the Ekinops virtualization and embedded router e600 on an entry level uCPE hardware platform based on Intel's C3xxx Atom Denverton CPU. Overall, the ONEe600 demonstrated solid performance and versatility, making it a valid option for small to medium sized offices looking for a routing solution. Ekinops has demonstrated its virtualization solution made it possible for service providers to maximize compute cycle and monetize the Edge quickly. Full report is available here.
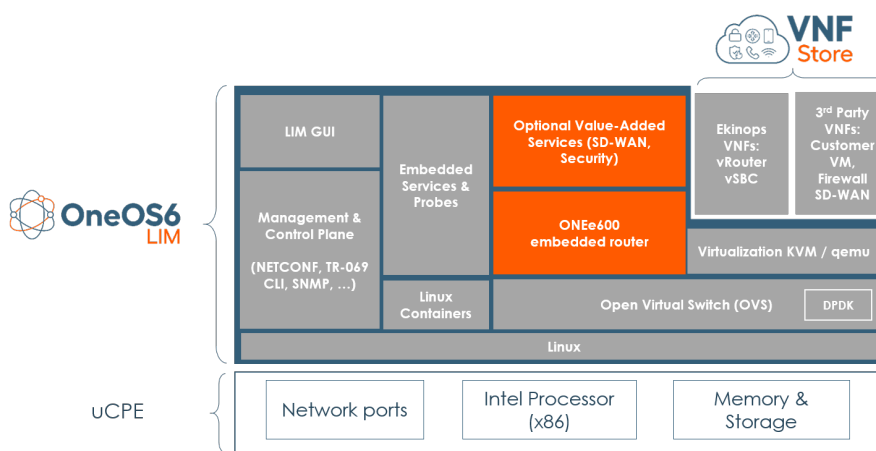
COMPOSE

ONEe600

Today's and Tomorrow's Service Management

OneOS6 includes industry-standard CLI and monitoring (such as SNMP, Ethernet OAM). OneOS6 can also be concurrently accessed by NETCONF clients and through web services.

Specifications

ONEe600 embedded router as part of the OneOS6-LIM delivery

Performance and Sizing (*)

- Up to 10 Gbps bidirectional routing performance with services (IMIX409)
- Up to 100 VRFs
- Up to 1.000.000 IPv4 routes
- Up to 200.000 IPv6 routes
- Up to 500.000 NAT sessions

Management Protocols

- NETCONF server compatible v1.0/v1.1
- Industry-standard Command Line Interface (CLI)
- Telnet, SSH, HTTPs server
- Telnet, SSHv2 client
- REST API
- SNMP v1/v2c/v3
- Embedded Event Manager (EEM)
- FTP/TFTP, SFTP, SCP upload/download configuration and binaries
- Syslog client
- Traceroute, ping
- Global statistics screens
- Event and trace buffering
- Embedded Event Manager (EEM)

IPv4/IPv6 Routing

- IPv4 and IPv6
- NAT/NAPT: static/dynamic NAT, NAPT, selective NAT, ALGs
- DHCP client, server, relay
- DNS client, proxy
- Routing protocols: RIP v1/v2/ng, OSPF v2, BGP v4, BFD
- Multicast Routing: PIM-SMv1/v2, IGMP v2/v3
- Policy-Based Routing
- VRRP, VRF
- Load balancing

IPv4/IPv6 Management

- IPv6 Neighbor Discovery (ND) and SLAAC (Stateless Address Auto-Configuration)
- IPv4 DHCP client / relay / server
- IPv6 stateless and stateful DHCP server
- IPv6 prefix delegation
- DNS client / server, dynamic DNS (DynDNS)

Specifications

IP Quality of Service

- IP Classification and priority (DiffServ)
- Class-Based Queuing (CBQ), CB-WFQ on LAN/WANinterfaces
- Low Latency Queuing, fragmentation and interleaving
- Policing and remarking
- RED, WRED, ECN
- QoS measurement probe
- Deep Packet Inspection
- Advanced Deep Packet Inspection (SaaS applications) **
- Netflow

Security

- Standard and extended access lists
- Zone Based Firewall **
- Session monitoring and limiting
- User authentication locally, via RADIUS and TACACS+
- TACACS+ Authorization and Accounting

IP VPN

- IPsec, GRE, IPIP, L2TPv2
- L2TPv3 **
- IPsec encryption: AES CBC
- IPsec ESP hashing: SHA-1 and MD5
- IKEv1 & IKEv2 with pre-shared keys & certificates
- IPsec tunnel and transport modes
- NAT traversal
- Easy VPN client / server **
- Dynamic Virtual Tunnel Interfaces **
- IPsec Group Mode **

Bridging and VLANs

- Bridging & Integrated Routing and Bridging (IRB)
- STP, RSTP, MSTP
- VLAN tagging and un-tagging
- Multiple VLAN IDs per port
- 802.1p priority tagging. ToS/CoS and CoS/ToS mapping
- Ethernet OAM
- 802.1x authentication

Minimum Resource Requirements

- 1 vCPU at 2000 MHz
- 1500 MB RAM
- Embedded Router

(*) Performance and sizing depends on the license, CPU and memory allocation
(**) Subject to additional license

About ��� EKINOPS

Ekinops is a leading provider of open and fully interoperable Layer 1, 2 and 3 solutions to service providers around the world. Our programmable and highly scalable solutions enable the fast, flexible and cost-effective deployment of new services for both high-speed, high-capacity optical transport networks and virtualization-enabled managed enterprise services

Our product portfolio consists of three highly complementary product and service sets: Ekinops360, OneAccess and Compose.

- Ekinops360 provides optical transport solutions for metro, regional and long-distance networks with WDM for high-capacity point-to-point, ring and optical mesh architectures, and OTN for improved bandwidth utilization and efficient multi-service aggregation.

- OneAccess offers a wide choice of physical and virtualized deployment options for access network functions.

- Compose supports service providers in making their networks software-defined with a variety of software management tools and services, including the scalable SD-WAN Xpress and SixSq Edge-to-Cloud solutions.

As service providers embrace SDN and NFV deployment models, Ekinops enables future-proofed deployment today, enabling operators to seamlessly migrate to an open, virtualized delivery model at a time of their choosing.

A global organization, Ekinops (EKI) - a public company traded on the Euronext Paris exchange operates on 4 continents.

EKINOPS360
Dynamic Optical Transport

ONEACCESS
Fast Network Virtualization

COMPOSE