

DATASHEET

ONE641

10 Gigabit Wi-Fi router suitable for branch offices up to fifty employees



- Quad-core architecture for high speed managed data services
- Powerful routing engine sufficient for branch offices with many concurrent users (100K concurrent sessions)
- 10 Gigabit fibre access
- Wi-Fi 6 with embedded antennas
- Ready for edge computing applications (FlexCPE)
- Industry standard CLI and NETCONF, ready for SD-WAN

Powerful Engine

Ekinops ONE641 with OneOS6 software combines networking, security, and SD-WAN services for high performance multi-Gigabit WAN connectivity in the access network.

Designed for Service Providers, it offers 10 Gigabit WAN connectivity and a large sizing capable of routing 100.000 concurrent sessions (200.000 flows).

Flexible 10 Gigabit WAN Options

Several variants are proposed, including a combo UTP/SFP+ WAN port and cost optimized versions with only UTP or only SFP+ WAN.

Powerful Distribution over 10Gbps LAN & Wi-Fi

On the LAN side, it comes with one 10 Gigabit Ethernet UTP port and four Gigabit Ethernet UTP ports, as well as high speed Wi-Fi connectivity up to WiFi-6.

Eco-Design

The ONE641 has been designed for an optimized ecological footprint too. Many features allow to reduce its power consumption to the lowest possible today: A fanless design, a very efficient quadcore ARMv8 CPU, support of "green ethernet" gigabit interfaces, the possibility to completely switch off power of wireless modules - all contribute to the improved power consumption of the device. The integrated real time power meter allows to supervise the consumption in real time.

Ready for Edge Computing

Ekinops ONEOS6 combined with the Ekinops/SixSq Nuvla.IO platform can be used to leverage the ARMv8 virtualization capabilities to enable secure and managed edge computing on the device using docker containers.

High Speed Wi-Fi

Wi-Fi antennas are fully integrated into the plastic housing of the device and provide excellent coverage of smaller offices. Several variants of the product are available, covering up to three frequency bands (2.4Ghz, 5GHz and 6GHz).

10 Gigabit Wi-Fi Router for Branch Offices



5G Backup

The ONE641 has optionally a 5G radio connectivity for backup purposes. The 5G operates in the sub-6GHz frequency band. It can be deployed in Non Stand Alone (NSA) or Stand Alone (SA) mode. As the 5G radio is also LTE compatible, it can also be used in regions where 5G coverage is not yet available.

Security

The ONE641 is built for use in secure networks. To avoid any risks of hijacking the router with a specially crafted software, it is built with a secure boot hierarchy and accepts only firmware signed by Ekinops for installation. All devices are manufactured in Ekinops own factory in Europe. As the best security technology won't be useful if the keys are not safely managed, Ekinops organization has been certified ISO27001. This underlines the trust you can put in the Ekinops organization for the secure management of firmware keys, as well as the continuous supervision and correction of security issues.

An optional Trusted Platform Module (TPM) can be used to further increase the security against ransomware attacks by enabling a secure hierarchy for storing certificates and credentials including VPN certificates and SSH certificates for logging into the router.

An embedded hardware accelerator can be used to enable up to 1.4Gbps of bidirectional IPSec traffic.

Features such as the use of secure management tools, a Zone Based Firewall (ZBF) and DDoS protection along with a permanent OneOS6 vulnerability monitoring further secure the router against the many threats in today's fully connected world.

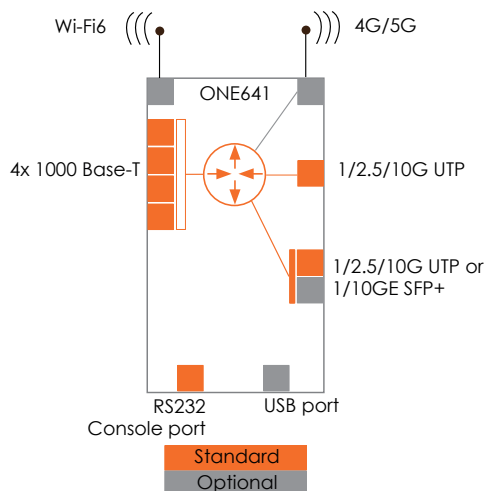
Integration with Today's and Tomorrow's OSS

Industry-standard MIBs, a TR-069 client and a Command Line Interface (CLI) enable a swift integration with incumbent management systems and a short learning curve for operational teams. In addition the OneAccess OneOS6 software provides one of the most complete NETCONF implementations on the market. NETCONF enables a gain in service agility for service providers, as the programming of the provisioning flows is greatly accelerated by the transactional nature of NETCONF. Ekinops OneOS6 is available both on physical routers (pCPE) and on universal CPE (uCPE) as a virtual network function (VNF) integrated with the Ekinops OneOS-LIM software. This makes it a key enabler for a swift migration to new architectures.

SD-WAN Inside

Ekinops SD-WAN extends from the OneOS6 features and enhances them to deliver a feature-rich and full fledged SD-WAN solution. Additional functionalities embedded in the SD-WAN Xpress license enable Service Providers to transform their existing business VPN, delivering more value from the same infrastructure. SD-WAN Xpress is a perfect fit for SMBs and companies in various verticals such as Retail, which, above all, look for a cost effective solution enabling them to quickly adopt digital transformation and leverage SaaS services (Office365, SalesForce, etc.).

Technical Features



General

- 1x 10 Gigabit Ethernet SFP+/UTP combo
- 1x 10 Gigabit Ethernet UTP port
- 4x UTP Gigabit Ethernet LAN ports
- Optional 5G backup
- Optional TPM module
- OneOS6 software
- Optional USB port

Wi-Fi (optional)

- Two variants exists:
 - Entry level: Dual concurrent 2.4GHz/5GHz 2x2
 - Full fledged : Dual concurrent 2.4GHz 2x2/5GHz 4x4 Wi-Fi 6

Wireless Radio Interface 5G (optional) **

- 3GPP Rel16
- Frequency bands support: n1 (FDD 2000 Mhz), n2 (FDD 1900 MHz), n5 (FDD 900 MHz), n28 (FDD 700 MHz), n41 (TDD 2500 Mhz), n66 (FDD 2000 MHz, n77 (TDD 3500 MHz), n78 (TDD 3500 MHz), n79 (TDD 5000 MHz) ***
- LTE cat 16 (1200Mbps/200Mbps)
- NSA mode support
- SA mode support **
- MIMO 4x4
- SMA connectors for remote antenna
- Single SIM card (optional embedded eSIM)

Console Port

- RS232 – RJ-45 port

Performance and Sizing

- 2 Gbps/3.4 Gbps* bidirectional routing performance with services (IMIX409)
- 4 Gbps/ 11.7 Gbps* aggregated IPv4 routing performance (IMIX409)
- 10 Gbps best effort performance
- 1.2 Gbps bidirectional IPsec performance with services (IMIX410)
- 100,000 NAT sessions
- 62,500 IPv4 + IPv6 routes
- 2GB RAM (optional up to 8GB for FlexCPE applications)

IP Addressing & Routing

- IPv4 and IPv6
- NAT/NAPT: static/dynamic NAT, NAPT, selective NAT, twice NAT, application pass-through
- DHCP client, server, relay. IP helper addresses
- DNS proxy. DNS server update protocol: DynDNS
- Routing protocols: RIP v1/v2, OSPF v2, BGP v4
- Multicast routing: PIM-SM and IGMP v2/v3
- Policy-based routing
- VRRP, VRF
- Load balancing

IP Quality of Service

- IP Classification and priority (DiffServ)
- Class-Based Queuing (CBQ), Class-Based Weighted Fair Queuing (CB-WFQ)
- Low latency queuing, fragmentation and interleaving
- Policing, shaping and remarking
- RED, WRED, ECN
- QoS measurement probe
- Deep Packet Inspection (DPI)
- Netflow

Security

- Standard and extended access lists
- Zone Based Firewall (ZBF) *
- Session monitoring and limiting
- User authentication locally, via RADIUS and TACACS+
- TACACS+ authorisation and accounting
- Secure boot, optional TPM
- DDoS protection

IP VPNs

- IPsec, GRE, IPIP, L2TPv2
- L2TPv3 *
- IPsec encryption: AES, DES, 3DES
- IPsec ESP hashing: SHA-1, SHA-2 and MD5
- IKEv1 & IKEv2 with pre-shared keys & certificates
- IPsec tunnel and transport modes
- NAT traversal
- Easy VPN client / server *

Technical Features

- Dynamic Virtual Tunnel Interfaces (DVTI) *

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

Management

- Industry standard Command Line Interface (CLI)
- Telnet, SSH, HTTP(S) server
- NETCONF server compatible v1.0/v1.1
- Customizable web interface
- TR-069 provisioning
- SNMP V1/V2C/V3
- Support of user privileges
- FTP/TFTP, SFTP, SCP upload/download configuration and binaries
- Traceroute, ping
- Global statistics screens (console, web-based)
- Event and trace buffering
- Embedded event manager
- Telnet, SSHv2 client
- Syslog client

- Flow capture and decoding

Optional Features

- Compose SD-WAN Xpress *
- Session Border Controller (SBC) *
- Nuvla Edge *

Dimensional and Environmental

- Desktop, wall mountable
- W x H x D: x x 55 x z mm (x x 2.16 x z in)
- Weight: 1.2 kg (2.2 lb)
- Operating temperature: 0 - 40°C
- Humidity: 5 - 90% non condensing
- Fanless: Maintenance free, silent, reduced power consumption

Power Supply

- External adapter 12V – 3A, region dependent
- Voltage range: 110 - 230 V AC – 50/60 Hz
- Power consumption: TBC (depends on wireless variant)
- Dying Gasp

* Subject to a license

** Contact product management for availability

*** Contact product management for other frequencies support

Optional PoE power supply on first Gigabit Ethernet port

About



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 Layer 2 and Layer 3 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 four continents.

