

DATASHEET

ONE421

The Smart Branch-Office Router



Deliver Agile High-Speed Services



As part of a complete product family enabling up to 10Gbps business data services, the ONE421 is designed to deliver VDSL and Fiber data services up to 100Mbps for the SME market with optional LTE for service continuity. The ONE421 is a powerful router based on a compact form factor. Based on the latest VDSL chipset technology, the ONE421 assures market-leading interoperability and superior performance.

The ONE421 guarantees 100Mbps bi-directional routing performance (IMIX409) with real-world services. The WiFi interface includes two radio chipsets to manage concurrently WiFi in the 2.4 and 5GHz frequency bands. WiFi reach and throughput is significantly increased by the number of antennas: 802.11b/g/n is supported by a 3x3 antenna system, while the 802.11a/ac relies on 4x4 MIMO. The MU-MIMO brings an additional improvement in throughput by multiplexing data streams of multiple users when they are spatially separated. The Ethernet switch ensures non-blocking switching at Gigabit speed between LAN and WiFi users.

- VDSL or fiber with optional LTE for service continuity
- Next-generation VDSL for superior performance and interoperability
- State-of-the-art Wifi ac
- Certified Microsoft Teams Direct Routing
- Industry-standard CLI and NETCONF
- Flexible licensing options designed for Managed Internet, IP VPN and SD-WAN services

The Right Platform for the Right Service Level

Service providers need to address different business market segments, the challenge being to balance diverse technical requirements and service price. Often the preferred solution is to select CPEs from different vendors. However the end result may end up being an increase in costs to the service provider, due to heavy product qualification and IT integration cycles. This unfortunately undermines the ultimate goal of gaining service agility and saving costs.

OneAccess product design leverages common hardware and software functions in series of products. Service Providers thus save time during product evaluation and the common, complete management stack enables quick adaptation of IT tools, whenever a change in service offering is required.

The modular design enables to fine-tune the service offering for price sensitive markets. The ONE421 can be customized with various WAN interface combinations (Fibre, VDSL and LTE) and optional WIFI.

SD-WAN Ready

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 highest 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 (O365, Salesforce, etc.).



Technical Features



General

- Giga Ethernet UTP port
- 4 port Gigabit Ethernet LAN switch
- Console port
- OneOS6 software

VDSL2 Interface (factory option)

- VDSL G.993.2 annexes A & B
- 1 pair with profiles 8, 12, 17, 30 & 35b
- G.998.4 (G.INP)
- G.993.5 (G.vectoring)
- EFM IEEE 802.3ah (10PASS-TS)
- ADSL G.992.1, G992.3, G992.5 - annexes A, B, J, L, M
- ATM (4 PVCs, OAM, encapsulations IP, IPoE, PPP, PPPoE)
- RJ-11 connector
- Exclusive from SFP slot and SHDSL

Wireless Radio Interface (factory option)

- Different variants available depending the region
- LTE with MIMO 2 x 2, Peak Rate Downlink/Uplink 150/50Mbps (cat4) 300/50Mbps (cat6) (factory option)
- UMTS/HSPA+
- Edge/GPRS & GSM
- Internal antennas, 2 SMA connectors for external antennas
- Dual SIM card

Gigabit Ethernet WAN Interface

- UTP port 10/100/1000BASE-T auto sense with RJ45 connector
- 1000BASE-X SFP slot (combo with UTP) exclusive with VDSL

LAN Interfaces

- 10/100/1000BASE-T auto sense ports
- 4 ports
- Automatic cross-over
- RJ-45 connectors

Wireless LAN (factory option)

- IEEE 802.11 b/g/n MIMO 3x3 (2.4 GHz)
- IEEE 802.11 a/n/ac MIMO 4x4 (5 GHz)
- Dual concurrent radio
- Internal antennas
- WMM QoS
- Encryption options WEP, WPA 1.2 (TKIP) and WPA 2.0 (802.11i, AES-CCMP)
- Authentication options WPA-PSK (pre-shared key) and 802.1x with a RADIUS server (PEAP, EAP-SIM, EAP-TLS and EAP-TTLS)

Console Port

- RS232 – RJ-45 port

Performance and Sizing

- 100 Mbps bidirectional routing performance with services (IMIX409)
- 800 Mbps best effort routing performance
- 30 Mbps bidirectional IPsec performance with services (IMIX410)

IP Addressing & 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

IP Quality of Service

- IP Classification and priority (DiffServ)
- Class-Based Queuing (CBQ), CB-WFQ on LAN/WAN interfaces
- 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 VPNs

- IPsec, GRE, IPIP, L2TPv2
- L2TPv3 *
- IPsec encryption: AES CBC
- IPsec ESP hashing: SHA2 256, 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 *

Technical Features



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

ONeSBC (Session Border Controller)*

- SIP trunking with demarcation – SIP Connect 1.1
- Hosted PBX solution
- Certified Microsoft Teams Direct Routing
- SIP normalization
- SIP v2.0 over UDP/TCP/TLS and RTP/SRTP
- Codec negotiation with transparency: G.711a/u, G.729a, G.729ab, G.722, G.722.2, CES, H.263, H.264
- VQM (Voice Quality Monitoring)
- Up to 100 simultaneous centrex calls
- Up to 60 simultaneous trunking calls (no transcoding)

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

Dimensions and Environmental

- W x H x D: 274 x 61 x 166 mm (10.8 x 2.4 x 6.5 in)
- Weight: 0.75 kg (1.65 lb)
- Plastic housing
- Operating temperature: 0-45°C
- Humidity: 5-90% non condensing

Power Supply

- External adapter 12V – 2A or 3A, region dependent
- Voltage range: 110 - 230 Vac – 50/60 Hz
- Optional 24/48Vdc powering
- Power consumption: <36 W

* Subject to a license

About



Ekinops is a leading provider of open, trusted and innovative network connectivity 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 as well as 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.

