

## DATASHEET

## ONE521-5G

*The Premium-Performance Router for the Ultra-Connected Branch-Office*



## Integration with Today's and Next Generation OSS



Industry-standard MIBs, TR-069 client and Command Line Interface (CLI) enable a swift integration with incumbent management systems and a short learning curve for operational teams. The 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. It has therefore driven OSS vendors to support this protocol to deal with Network Function Virtualization (NFV). And OneOS6 is ready today for a swift migration to new management platforms.

- Combines dual-pair VDSL, fiber and 5G for hybrid access and service continuity
- Next-generation VDSL for superior performance and interoperability
- Optional state-of-the-art Wifi (dual-concurrent radio, 802.11ac)
- Certified Microsoft Teams Direct Routing
- Industry-standard CLI and NETCONF
- Flexible licensing options designed for Managed Internet, VPN business and SD-WAN services

## The Ultra-Connected Branch-Office

The ONE521-5G answers to the needs of evolving broadband access, with higher accessibility to fiber connectivity and high-speed VDSL enabled thanks to vectoring and bonding. The packet forwarding engine delivers premium performance to address these new frontiers in WAN throughputs, even when combining multiple WAN links. The ONE521-5G supports hybrid access scenarios such as fiber offload over VDSL or 5G

The ONE521-5G enables the branch-office to be ultra-connected: not only does it connect the WAN at high-speed, but it maximizes WAN availability and throughput thanks to intelligent algorithms that select on a application level the optimal WAN path.

## 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.

All products of the OneAccess family have a common hardware/software architecture, thereby saving service providers effort and time during integration with their IT and network infrastructure.

The modular design enables to fine-tune the service offering for price sensitive markets. The ONE521-5G can be customized with an array of WAN interface combinations (Fibre, VDSL, 5G) and optional WiFi on LAN side. Its feature set can be used from a basic managed Internet service up to full enterprise needs.

## 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

- Combo Gigabit Ethernet WAN port
- 5G radio interface
- 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 (8 PVCs, OAM, encapsulations IP, IPoE, PPP, PPPoE)
- RJ-11 connector
- Exclusive from GHSDSL

### Gigabit Ethernet WAN Interface

- 1 Fiber / Copper, configurable SFP/UTP
- SFP slot for fibre modules: 1000BASE-X, GPON ready
- UTP interface 10/100/1000 BASE-T with RJ-45 connector

### 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 2x2 (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)

### 5G Radio Interface

- 5G Sub-6Ghz
- Compliant to 3GPP rel 16
- NSA / SA mode
- MIMO 4x4
- LTE backward compatibility
- SMA connectors for external antennas

### Console Port

- RS232 – RJ-45 port

### Performance and Sizing

- 250 Mbps bidirectional routing performance with services (IMIX409)
- 550 Mbps aggregated IPv4 routing performance (IMIX409)
- 350 Mbps aggregated IPv4 routing performance on 5G interface
- 1 Gbps best effort routing performance
- 5G interface with up to 350Mbps aggregated best effort routing performance
- 60 Mbps bidirectional IPsec performance with services (IMIX410)
- 10 VRFs
- 20.000 IPv4 + IPv6 routes
- 50.000 NAT sessions

### 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

## Technical Features

### 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
- 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 \*

### 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

- Metal housing:
  - W x H x D: 295 x 44.5 x 166 mm (11.6 x 1.8 x 6.5 in)
  - Weight: 1.3 kg (2.8 lb)
- Operating temperature: 0-40°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 24/48V DC powering
- Power consumption: <36 W
- Dying Gasp

\* 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 Nuvla 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.

