# |CORE TECHNOLOGY

NETWORKS OPERATING SYSTEM LANCS NOS

Lancs NOS is an operating system for devices, network solutions and information security. Lancs NOS is developed by engineers and experts of Lancs Networks providing a full range of features about network, network security; enables the development of devices such as Multilayer Switch, Router, Multimedia Gateway, NGFW and SD-WAN & SASE based solutions.
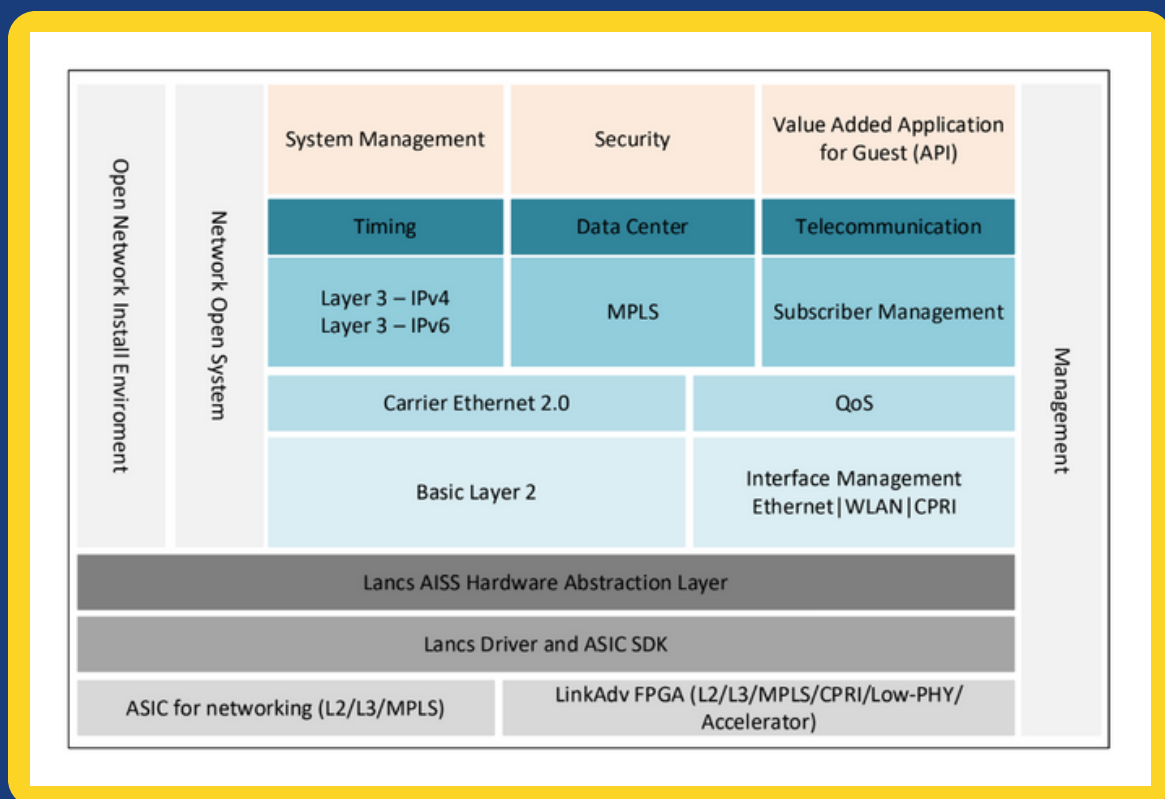
Integrated Features in Lancs NOS are rigorously tested for functionality, performance and stability. Lancs NOS supports many hardware platforms of different chip manufacturers such as Intel, Qualcomm, Mediatek, Marvell, Lancs FPGA Driver.

|OUTSTANDING FEATURES
OF LANCS NOS

NETWORK
Sufficient to analyze, process, forward packets from layer 2 to layer 7 in OSI model.

SECURITY
Safety and security solutions such as Firewall, ACL, SPI with many algorithms and solutions are accelerated on FPGA Technology (Lancs FPGA).

VPN
VPN solutions were Integrated to accelerate on FPGA technology such as IPSec, TLS/SSL, OpenVPN, PPTP, L2TP or WireGuard.

DEEP FILTER
Deep analysis of packets from layer 2 to layer 7, apply in IDPS, Web/Application Control, Anti - Virus, DPI. Get ready to accelerate on FPGA with Lancs FPGA.

MULTI-MEDIA
Allow to handle, sett up phone calls, messaging, transferring files... with multimedia features to set up your own information exchange system.

TRAFFIC MANAGEMENT
Allow to manage quality of service, bandwidth, package level, lapse rate for each application, each user. Ready to accelerate when combined with Lancs FPGA.

SOFTWARE DEFINE-WAN
Integrate redundancy features and load balance with Multi-WAN/Multi-Edge; Service Routing (AAR) by SLA; automatic management, Zero Touch Configuration and VPN.

NETWORK MANAGEMENT
Fully integrated to configure, manage devices using SSH/Telnet or Web GUI, App with NETCONF/YANG protocol suite or RESTful API.

DETAILED TECHNICAL FEATURES OF LANCS NOS

Switching
- MAC address look up table
- 802.1q VLAN & Trunk
- Spanning Tree Protocol
- IGMP/MLD Snooping
- Link Aggregation
- 802.1AB Link Layer Discovery
- DHCP Snooping
- Access Control List
- Rate limiting and storm control

IPv4 Routing
- Static Routing
- RIP v1/v2
- OSPFv2
- IS-IS
- IGMP router
- PIM SM/DM/Bidirectional /SSM DVMRP
- MSDP
- Network Address Translation

IPv6 Routing
- Static Routing
- Neighbor Discovery
- RIPv6
- OSPFv3
- IS-IS BGP4+
- MLD (v1/v2)
- ND Proxy
- PIM-SM/DM/SSM
- PIM-Bidirectional

MPLS
- RSVP-TE
- LDP
- IGP short cut
- OSPF-TE
- ISIS-TE
- L2-VPN
- L3-VPN

Fast Convergence
- BFD
- BGP/IS-IS/OSPF
- LDP
- MPLS-TE
- Static-Route
- IP-LFA
- Next-hop tracking

Management
- Hierarchical, commit based CLI
- NetConf/YANG
- SSH
- Telnet
- SNMPv2/V3 AAA/TACACS+
- Syslog

VPN
- IPsec
- Open VPN
- PPTP/L2TP
- GRE/ VTI/ VXLAN/ Wire Guard
- IKE v1/v2
- AES-CBC/ GCM128/ GCM192/ GCM256/ 3DEC
- PSK/RSA
- NAT-Traversal
- Site-to-Site, Client-to-Site

Security
- General Firewall
- Website Control
- Application Control
- Device Identification
- User Authentication
- Web Guard
- IDPS

Timing
- SyncE
- IEEE1588 – TC, BC

Multimedia
- Voice Codec: G.711 A/u law, G719, G729, G726
- Video Codec: VP8, VP9, H.261, H.264, H.265
- Voice Call/ Video Call/ Voice Mail/ Voice Conference / Instant Messages / IVR
- Compatibility : Cisco's CUCM, CME Series

QoS
- Classification based on: Interface/ Device/ User or Application / Service
- WRED, tail drop
- Weighted and strict priorityqueues
- Minimum latency queues
- 8 Queues per port/VLAN

SD-WAN & SASE
- Rest-API for Third Party
- Backup & Load Balancing: Multi-WAN; Multi Edge
- Application Aware Routing
- Auto Provisioning & Zero Touch
- Zero Trust