siae microelettronica

Our experience, your advantage

ALFOplus80HDX

From 10 to 20 Gbps E-Band Full Outdoor

Whether in mobile, fixed or private networks, the E-band millimetre wave solution represents a fundamental technology tool bridging the gap between fibre high capacity systems and flexible cost effective wireless transmission. ALFOplus80HDX achieves 10GBps full-duplex ultra high capacity in a single unit, and 20GBps in a 2+0 XPIC configuration.

ALFOplus80HDX provides fibre like capacity, highest deployment flexibility and homogeneous operational behaviour as traditional microwave, allowing operators to fully liaise on existing knowledge and skills, minimizing introduction costs, while modernizing the transport network.

ALFOplus80HDX

UNIVERSAL PRODUCT ARCHITECTURE

Millimetre wave radio products have evolved in terms of functionality and physical arrangements to cover in an effective and efficient way they can be employed in any application.

ALFOplus80HDX as part of the SIAE MICROELETTRONICA Unified Product Architecture, utilizes at its core the SM-OS operating system based over three major components:
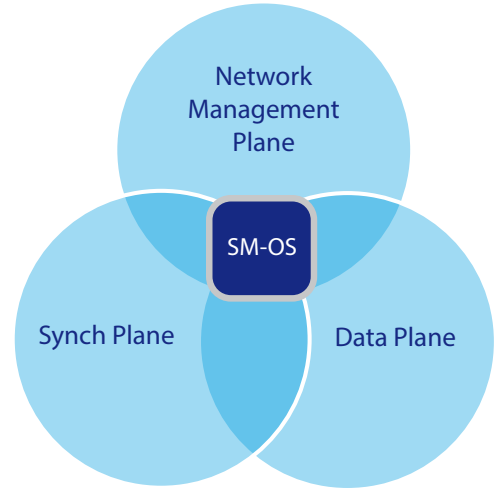
Network Management Plane

• NETCONF/Yang in SDN deployment

• SNMP v1/v2c/v3, HTTPs, SSH, SFTP

• RADIUS for centralized user management

Data Plane

• MEF 2.0 – Carrier Ethernet Services

• IP/MPLS – L2/L3 VPN Services

• QoS/HQoS – queue management/policing and shaping

Synch Plane

• Synchronous Ethernet

• ITU-T G.8275.1 Profiles (T-BC)

• 1 PPS in/out port

MAIN FEATURES

• SM-OS based platform

• Up to 10 Gbps Throughput with single unit

• Integrated XPIC circuitry (2+0 up to 20 Gbps)

• Channel bandwidth up to 2000 MHz

• BPSK/4/16/64/128/256 QAM modulation schemes

• Hitless Adaptive Coding Modulation and Bandwidth

• Integrated flat antenna (ETSI only)

• AES128/256 Encryption

• 10 Gigabit and Gigabit interfaces

• L1 link aggregation

• PoE and dedicated power feeder connectors

• Multi Carrier Aggregation (Full Outdoor Aggregation with ALFOplus2; Split Mount with AGS20 ODUs)

• Network Management System: NMS5

• SDN Microwave Domain Controller: SM-DC

Supported Configurations:

• Single Unit: 1+0 (10 Gbps)

• Two Units : 2+0 XPIC (20 Gbps)

LAYER 2 MAIN FUNCTIONALITIES

• MEF 2.0 certified

• 8 queues with flexible scheduler (Strict Priority, WRR and mixed)

• 4 level hierarchical scheduler (H-QoS)

• Flexible QoS definition based on VLAN, IPv4, IPv6, MPLS exp bits

• Per queue WRED congestion avoidance

• Flow Based Ingress Policing (CIR & EIR definition)

• Egress shaping

• Ethernet Ring Protection G.8032

• RMON statistics per service VLAN stacking (IEEE 802.1ad QinQ)

• Link Aggregation IEEE 802.3ad

• Ethernet OAM 802.3ah/ 802.1ag/ Y.1731

• Jumbo Frames up to 12 Kbytes