

Nokia Wavence

Ultra-Broadband Transceiver Single | (ETSI/ANSI)

The Nokia Wavence Ultra-Broadband Transceivers (UBT) provide high-capacity, low latency microwave transport for shorthaul applications. Using the most advanced radio technologies and multi-frequency carrier aggregation, the UBTs support backhaul and Ethernet fronthaul evolutions with multi-gigabit capacities and low latency transport with best in class transmitted power.

The Nokia Wavence UBT-S implements an innovative product design, with a hardware split between the active wideband radio part and the Antenna Interface Module (AIM), a passive part interfacing the antenna. This simplifies the installation, maintenance and spare part management. The UBT-S is integrated in the Nokia Network Services Platform for common management and fully compatible with the Nokia Microwave Service Switches (MSS) and the rest of the Nokia microwave portfolio.

UBT-S	
Application	<ul style="list-style-type: none"> • Macro cell backhaul (access and hub) • Split-mount or standalone configuration • Enterprise broadband connectivity
Physical	240 mm x 220 mm x 80 mm
Interfaces	<ul style="list-style-type: none"> • 1 x DC port • Three GE ports: (1 x 100/1000 Base T RJ45 PFoE and 2 x 1/2.5/10 Gbit Optical SFP) • 1 x XPIC port • 100x1000 Base T RJ45 used as default management port or as user port
Radio	<ul style="list-style-type: none"> • Wideband radio capability • 6 to 42 GHz (FDD) • 1.3Gb/s per carrier • Support for packet compression • Channels: 7 MHz to 120 MHz
Modulation	• 4 QAM to 4096 QAM
Weight	• 4.1kg
Power	<ul style="list-style-type: none"> • -48 V (-30V to -57V) • PFoE • 50 W



Nokia Wavence UBT-S with its AIM and antenna

Technical specifications

UBT-S

Indoor/outdoor connections

- Maximum electrical cable length 100 m (328 ft) with Cat5e cable
- Longer distance with optical fiber (depends on fiber type)

Radio

- 1+0/2+0/1+1 HSB/SD
- Typical Tx power: 30 dBm
- Carrier aggregation
- Support for adaptive coding and modulation (ACM)
- Latency one way down to 60 usec
- Duplex technology: FDD
- Encryption: AES256-CTR
- Timing transport: IEEE 1588v2-PTP, SyncE
- ITU-T G.8264 support

Networking

- Ethernet interface: One electrical 100/1000Base-T, two (1G/2.5G/10G) optical SFP+ plug-ins
- Advanced QoS: Support for IEEE 802.1p, Diffserv, TTL and strict priority
- Dynamic scheduling according to air interface changes
- VLAN: IEEE 802.1P, IEEE 802.1Q, Q-in-Q support
- ERPS: ITU-T G.8032
- Ethernet OAM (IEEE 802.1ag, ITU-T Y.1731, IEEE 802.3ah)
- L3 VPN support
- SDN support
- Netconf/Yang support

Environmental

- Operating temperature: -40°C up to +55°C (-40°F up to +131°F)

- ETSI Class 4.1 (EN 300019-1-4), ANSI GR 3108 Class 4, GR-950, GR-63

- IP 67

Standards compliance

Regulatory

- Radio Equipment Directive 2014/53/EU - RED
- EN 302 217, FCC Part101, ISED Canada [Safety](#)
- EN 60950-1, EN 60825-1, 60825-2, GR-1089, GR-3108

EMC

- EN 301 489-1, EN 301 489-4, GR-1089, IEEE1613

Metro Ethernet Forum

- MEF 2.0, MEF 8, MEF 9, MEF 14, MEF 22

Antenna Interface Module

- Configuration: AIM contains one diplexer

Services

- Architecture and design
- Network planning
- Equipment and site engineering
- Installation services
- Integration services
- Performance analysis, network assessment, DCN, synchronization and QoS assessment
- Maintenance 24x7 technical support
- Return for repair or advanced exchange

Management:

- Secure FTP for software download and backup
- IPv4/IPv6 management
- Embedded web browser for network element configuration and monitoring
- Intuitive supervision systems
- SNMP agent with TCP/IP rerouting capability
- Nokia NSP Network Services platform



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