

Nokia Wavence

Ultra-Broadband Transceiver Twin | (ETSI/ANSI)

The Nokia Wavence Ultra-Broadband Transceivers (UBT) provide high-capacity, low latency microwave transport for shorthaul applications. The UBT-T is a “dual carrier in a box” configuration supporting multiple microwave frequencies. 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.

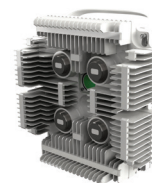
The Nokia Wavence UBT-T implements an innovative product design, with a hardware split between the active wideband radio part and the Antenna Interface Module (AIM), a passive part interfacing the antenna. Thanks to this design, the UBT-T can generically support channels belonging to different sub-bands on the same box. This offers a high flexibility in the deployment options, the configuration specificities being managed inside the AIM, thus simplifying the installation, maintenance and spare part management.

The UBT-T is integrated in the Nokia Network Services Platform for common management and fully compatible with the Nokia Microwave Service Switches (MSS).

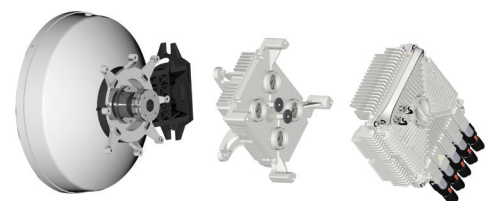
UBT-T	
Application	<ul style="list-style-type: none"> • Macro cell backhaul (access and hub) • Split-mount or standalone configuration
Physical	255 mm x 250 mm x 86 mm (9.8 in. x 9.8 in. x 4.2 in.)
Interfaces	<ul style="list-style-type: none"> • 1 x DC port • Three GE ports: (1 x 100/1000 Base T RJ45 PFoE and 2 x 1/2.5/10 Gbit Optical SFP) • 1 XPIC/MIMO port • 100x1000 Base T RJ45 used as default management port or as user port
Radio	<ul style="list-style-type: none"> • Dual carrier in one box • wideband radio capability • 6 to 42 GHz (FDD) • 2.5 Gb/s standard (1.3Gb/s per carrier) • Support for packet compression • Channels: 2 x 7-120 MHz
Modulation	• 4 QAM to 4096 QAM
Weight	• 6.1 Kg
Power	<ul style="list-style-type: none"> • -48 V (-30V to -57V) • PFoE • 80 W (dual carrier 2+0)



UBT-T with integrated antenna



UBT-T standalone



UBT-T with AIM and large band antenna

Technical specifications

UBT-T

Indoor/outdoor connections

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

Radio

- Dual carrier in one box
- 1+0/2+0/4+0/2+2 HSB/SD
- Carrier aggregation
- Embedded LAG L1
- Dual Band UBT-T (11+32 GHz)
- Latency one way down to 60 usec
- Typical Tx power: 30 dBm
- Support for adaptive coding and modulation (ACM)
- 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: OMT+diplexers, Coupler+diplexers, Diplexers only

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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