

## Nokia Wavence

### Ultra-Broadband Transceiver Twin | Release 20 (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.

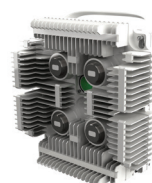
The Nokia Wavence UBT-T implements an innovative product design, with a hardware split between the active wideband radio part and the Antenna Interface Module (AIM), a passive part interfacing the antenna. Thanks to this design, the UBT-T can generically support channels belonging to different sub-bands 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).

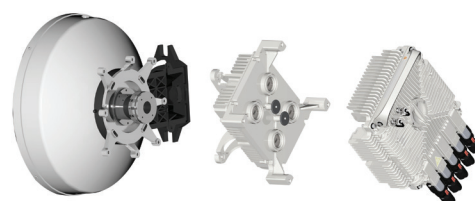
UBT-T	
Application	<ul style="list-style-type: none"> <li>Macro cell backhaul (access and hub)</li> <li>Split-mount or standalone configuration</li> </ul>
Physical	255 mm x 250 mm x 86 mm (9.8 in. x 9.8 in. x 4.2 in.)
Interfaces	<ul style="list-style-type: none"> <li>1 x DC port</li> <li>Three GE ports: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



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

#### About Nokia

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From the enabling infrastructure for 5G and the Internet of Things, to emerging applications in digital health, we are shaping the future of technology to transform the human experience. [networks.nokia.com](https://networks.nokia.com)

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Document code: SR1805025958EN (Feb) CID 205294