

# Nokia Wavence

## Ultra-Broadband Transceiver Single | Release 20 (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"><li>• Macro cell backhaul (access and hub)</li><li>• Split-mount or standalone configuration</li><li>• Enterprise broadband connectivity</li></ul>   |
| Physical    | 240 mm x 220 mm x 80 mm  |
| Interfaces  | <ul style="list-style-type: none"><li>• 1 x DC port</li><li>• Three GE ports:<br/>(1 x 100/1000 Base T RJ45 PFoE and 2 x 1/2.5/10 Gbit Optical SFP)</li><li>• 1 x XPIC 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>• Wideband radio capability</li><li>• 6 to 42 GHz (FDD)</li><li>• 1.3Gb/s per carrier</li><li>• Support for packet compression</li><li>• Channels: 7 MHz to 120 MHz</li></ul>  |
| Modulation  | <ul style="list-style-type: none"><li>• 4 QAM to 4096 QAM</li></ul>  |
| Weight      | <ul style="list-style-type: none"><li>• 4.1kg</li></ul>  |
| Power       | <ul style="list-style-type: none"><li>• -48 V (-30V to -57V)</li><li>• PFoE</li><li>• 50 W</li></ul>   |



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



#### About Nokia

We create the technology to connect the world. Powered by the research and innovation of Nokia Bell Labs, we serve communications service providers, governments, large enterprises and consumers, with the industry's most complete, end-to-end portfolio of products, services and licensing.

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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