



omniMAX

*Fulfilling the **WiMAX** Vision!*





About INTRACOM TELECOM

INTRACOM TELECOM is an international telecommunication systems vendor operating in Eastern Europe, the Middle East & Africa, Russia, the CIS and Asia-Pacific. Over 100 customers in more than 50 countries choose INTRACOM TELECOM for its state-of-the-art products and solutions. INTRACOM TELECOM has 2,400 employees, operates subsidiaries in 16 countries and is amongst the largest European companies leading in R&D investments. Since June 2006, INTRACOM TELECOM is controlled by JSC SITRONICS (Russia) with 51%. JSC SITRONICS is the technology subsidiary of JSFC SISTEMA, a leading diversified holding company in Russia and the CIS. INTRACOM HOLDINGS Group (Greece) retains a 49% stake.

OmniMAX™ Unleashes the Full Potential of WiMAX

OmniMAX™, the new high-end access solution from INTRACOM TELECOM, **delivers the WiMAX promise** for toll-quality voice and carrier-grade services, while meeting the ever-increasing demand for high-speed access **inside, outside and on-the-move**.

OmniMAX™ enables the rapid delivery of innovative and personalized broadband services to **anyone, anywhere, anytime**, thus enhancing end-user experience.

Combining **green technology**, fast time-to-market service delivery and quality-assured performance at a **competitive price**, OmniMAX™ is the optimum cost saving **solution of choice** for every operator.

Greenfield operators can enter new markets and **bridge the digital divide**, while world-class telecom carriers have an **excellent alternative** to expand their offerings to a wider consumer audience and generate new revenue streams.

OmniMAX™ **plays a leading role** in the deployment of the WiMAX technology, fully integrated with the current and Next Generation Networks.



The logo for OmniMAX, featuring the word "OmniMAX" in a bold, sans-serif font. Above the letter "i" is a stylized Wi-Fi symbol consisting of three curved lines.



"Fulfilling the WiMAX Vision!"

Solution Description

OmniMAX™ is a powerful base station solution of compact size that operates in both 2.5 GHz and 3.5 GHz frequency bands. Being fully compliant with the IEEE 802.16e-2005 standard and the WiMAX Forum® Wave II certification profile, it incorporates a unique blend of design characteristics, such as Advanced Antenna Systems (AAS) and Radio Resource Management techniques.

With OmniMAX™, operators can serve different types of end-users – fixed, nomadic, portable and mobile – not reachable through other technologies.

OmniMAX™ is offered in split indoor – outdoor configuration suitable for urban, suburban and rural coverage, and is best fit for all contemporary wireless access applications, including residential, SOHO, SME, Corporate, Public sector and MTUs / MDUs.

The small form factor indoor unit combines the high sector capacity – up to three protected MIMO sectors – with great agility and unsurpassed ease of installation. The indoor unit is unique in offering electrical and optical OBSAI interfaces. The outdoor unit is a high-power radio that accommodates all its electronics in a robust, environmentally-hardened housing. Regarding components redundancy, multiple options are available to provide module or full path protection (i.e. from the antennas down to the network interfaces).

OmniMAX™ seamlessly integrates with other wireless backhauling offerings available from INTRACOM TELECOM, such as the Point-to-MultiPoint (PtMP) WiBAS™-2X/Pro, the Point-to-Point (PtP) family of products (INTRALINK™, OmniBAS™), establishing a one-stop framework for all the wireless needs the operators may have.



OmniMAX™
Outdoor Unit



OmniMAX™ Indoor Unit (Optical version)



OmniMAX™ Indoor Unit (Electrical version)

Highlights

- High sector capacity – up to three protected MIMO sectors from a single 1 RU indoor unit
- Cost-competitive form factor
- Electrical and optical OBSAI interface variety for unique network deployment flexibility
- Green technology – energy efficient and environmental friendly
- High output power & superior radio performance
- Advanced multiple antenna technology (MIMO) for delivering higher bandwidth and link robustness at the lowest possible cost
- Space saving & lightweight for easy installation; one-man lift outdoor unit
- Multiple redundancy options for partial or full system protection
- Fan-aided sun shield for operation in very hot climates
- Software-implemented MAC and PHY – future upgradeable

High-Speed Access Anywhere, Anytime

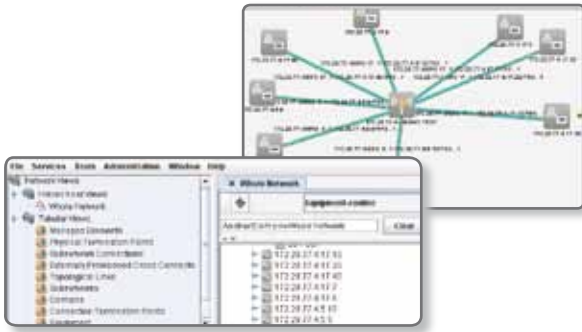
Managing OmniMAX™ Networks

The uni|MS™ Unified Management Suite is a state-of-the-art solution for deploying, supervising and managing contemporary telecommunication networks. It is a carrier-class Element, Network and Service management platform for all INTRACOM TELECOM wireless and wireline products (access, transmission and aggregation). Upon request, third-party products can also be managed through easy integration.

The mediation with the managed elements of the network is implemented through add-on drivers, for applying management functions, such as configuration changes, performance counters collection, alarms (traps) collection, service provisioning, inventory collection, and others.

The powerful core of uni|MS™ provides demanding users with a modernized tabbed Graphical User Interface (GUI) of unprecedented flexibility and convenience. The GUI offers true drag-n-drop capabilities and fully customizable reports for an amazing user experience.

uni|MS™ provides convergent service provisioning capabilities addressing the need for automated service provisioning across multi-vendor networks and diverse IT environments.



OmniMAX™: Benefits for the Operators

OmniMAX™ generates value for both operators and end-users. The combination of cost, flexibility and high performance features, make OmniMAX™ an attractive solution for operators aiming to enter new markets with minimal investment risk. Its small form factor design, as well as its exceptional characteristics allows operators to adapt the offered technology to a business case for a clear differentiation in the competition arena. Simultaneously, OmniMAX™ gives end-users the opportunity to have ubiquitous access, anytime, to new and innovative network services that enhance their daily life.

Greenfield Operators <ul style="list-style-type: none">• Offer competitive voice and personal broadband services• Start from fixed and step up to nomadic and mobile• Roll-out networks rapidly• Have alternative superior to WiFi/Mesh WiFi	Fixed Wireline Operators <ul style="list-style-type: none">• Extend broadband service to areas lacking DSL• Complement existing fixed wireline offering with nomadic wireless services
Fixed Wireless (BWA) Operators <ul style="list-style-type: none">• Upgrade existing wireless network• Migrate toward a standard-based solution• Offer broader range of services	Mobile Operators <ul style="list-style-type: none">• Have an option in case of 3G spectrum congestion• Offer nomadic and portable wireless services



General

Configuration:

- Split architecture (OBSAI RP3-01)

Compliance:

- Fully compliant with IEEE 802.16e-2005 standard and the WiMAX Forum® Wave II certification profile

Operating Bands:

- 2.5 GHz (2.3 - 2.4 GHz, 2.5 - 2.7 GHz)
- 3.5 GHz (3.3 - 3.8 GHz)

Channel size: 5 MHz / 7 MHz / 10 MHz (TDD duplexing)

Antenna Diversity Support:

- MRC
- 2x2 MIMO-A (Space Time Coding)
- MIMO-B (Spatial Multiplexing)

Output Power (Max.):

- 40 dBm - DPD

Redundancy Options:

- N+1 ODU
- 1+1 ODU
- 1+1 IDU, N+1 ODU
- 1+1 IDU, 1+1 ODU

Convergence Sublayers: IPv4, IPv6, ETH

Dynamic QoS: BE, nrtPS, rtPS, ertPS, UGS

ASN Gateway Interface: R6 Profile C

Networking L2 / L3 Functions:

- L2 / L3 forwarding
- IEEE 802.1q
- GRE tunneling

Interfaces

Network:

- 2 x GbE (electrical, optical)

OBSAI:

- IDU: Six optical or three electrical
- ODU: Two optical and/or one electrical

Other:

- GPS antenna input
- Synchronization IN / OUT / PPS
- Console input (Ethernet 10/100BaseT and serial, RJ-45)
- External alarms (mini DB9)
- Network management (RJ-45)
- IDU protection link (RJ-45)

Management

- SNMP-based management with FCAPS functionality
- Command Line Interface (CLI)
- Element Management System (EMS)

PHY Specifications

- SOFDMA support
- MIMO support: Matrix A, Matrix B, Collaborative Spatial Multiplexing
- Adaptive modulation & coding: QPSK, 16QAM, 64QAM
- Re-transmission support: H-ARQ & ARQ
- Integrated GPS module for synchronization and IEEE 1588

MAC Specifications

- L2 / L4 classifiers support: MAC address, VLAN / 802.1p, IP address, DSCP / TOS, UDP / TCP
- Up to eight priority queues per QoS class
- Advanced radio resource management algorithms to exploit bandwidth allocation techniques: per subscriber, per CID, up to eight priorities
- Advanced security mechanisms support

Mechanical

Dimensions (W x D x H):

- 483 mm (19") x 245 mm x 44 mm (1U) (IDU)
- 390 mm x 140 mm x 625 mm (ODU)

Weight:

- 2.8 kg (IDU)
- 15 kg (ODU)

Ingress Protection (ODU): IP65

Electrical

Input Voltage (DC): -40 V to -60 V

Power Consumption: 290 W typical (three-sectored base station)

Environmental

Operating Temperature:

- -50 °C to +45 °C (IDU)
- -33 °C to +55 °C (ODU)

Relative Humidity (RH):

- 10% to 95%, non-condensing (IDU)
- 0% to 95%, non-condensing / 10% to 100%, condensing (ODU)

Wind Speed (ODU):

- 164 km/h (operational)
- 250 km/h (survival)

Standards:

- ETS 300 019-1-3, Class 3.2 (IDU operation)
- ETS 300 019-1-4E (ODU operation)
- ETSI EN 300 019-2-2 v2.1.2:1999, Class 2.3 (IDU & ODU transportation)
- ETSI EN 300 019-2-1 v2.1.2:2000, Class 1.1 (IDU & ODU storage)
- ETSI EN 300 019-2-3 v2.2.2:2003, Class 3.2 (IDU stationary use)
- ETSI EN 300 019-2-4 v2.2.2:2003, Class 4.1 (ODU stationary use)

Why INTRACOM TELECOM

One-stop Shop:

- Own end-to-end radio access & backhaul solutions
- Proven integration & interoperability
- Own end-to-end network management system
- Best-of-breed partners ecosystem for technology platform, network equipment (ASN, CSN), CPEs and relevant services

Established Wireless Vendor:

- Growing and continuous presence for a variety of access and transmission solutions
- Growing brand name recognition for own PtMP solutions

Recognized for Service Excellence:

- Extensive implementation track record
- Specialized & highly experienced personnel
- Consulting, design, implementation & support
- Commitment to adding customer value

Continuous Innovation:

- Innovating in the wireless access and transmission field for over 15 years
- Successful development and deployment of PtP and PtMP systems with numerous operators in Europe, the Middle East, the USA and the CIS
- Investing heavily on the continuous evolution of its own wireless product lines
- Adopting latest standards and state-of-the-art technologies to deliver wireless solutions that best fit customer current and future needs



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