CUSTOMER CASE

DEVELOPING INNOVATION, DELIVERING EXCELLENCE FOR 5G NETWORKS

EOLO CONNECTS HOUSEHOLDS ACROSS ITALY WITH 5G SPEEDS USING MARKET-PROVEN INTRACOM TELECOM TECHNOLOGY

Intracom Telecom is a global telecommunication systems and solutions vendor operating for over four decades in the market. The company has become the benchmark in Fixed Wireless Access (FWA) and innovates in the 5G/4G wireless fronthaul, midhaul and backhaul. Intracom Telecom invests significantly in R&D programs, thus developing cutting-edge products and competitive solutions. It has strong participation in the EU flagship initiative for 5G and has been significantly involved in the EU Horizon 2020 research framework. The company operates own R&D centers and production facilities in the EU, and employs 1,800 highly-skilled professionals worldwide.

Key Solutions for EOLO's Success

EOLO's ambition is to become the first internet service provider offering 5G ultra-broadband speeds on a fixed wireless network in Italy. For this reason, the company has acquired, on a national scale, the usage right for 224 MHz at the 28 GHz spectrum band, which is ideal due to transmission and capacity characteristics. EOLO's undertaking is mainly in suburban and rural areas, serving large parts of the population impacted by the digital divide.

↘ Ultra-Broadband Access

EOLO selected **WiBAS™**, after a careful and lengthy process of evaluation. WiBAS is a FWA product line, operating at microwave and millimeter wave bands (10.5 GHz, 24.25-29.50 GHz). It follows a hub and spoke architecture with base stations implementing wide service area footprint and ultra-broadband connectivity to the respective remote terminal stations.

The architecture of WiBAS is based on radios which can either operate as Point-to-Multipoint hub or as a Point-to-Point node, offering high capacity reaching modulation 1024-QAM or higher. Besides the advanced IP connectivity and sophisticated QoS features, the total aggregate capacity delivered from a fully equipped WiBAS base station site is 4 Gbit/s and serving up to 480 subscribers.

The WiBAS product line provides for a variety of subscriber terminal options. These devices must satisfy the demand for high capacity connections as well as allowing for quick and easy installation. WiBAS terminals can satisfy both these requirements because they are compact and lightweight radios that can deliver several hundreds of Mbit/s to each subscriber. Employing the sophisticated

Quality Of Service and networking features that WiBAS supports, it is the perfect fit for operators that want to follow a direct (single WISP) or wholesale (multiple WISPs) access model. The zero touch provisioning features and ease of installation leverage the operator need for fast and effortless deployment. EOLO took advantage of these benefits and managed very quickly to launch a service that is delivering 5G speeds to households.

↘ 5G Backhauling

To provide backhaul for the WiBAS base stations, especially in locations where fibre is not available or expedient to deploy, EOLO after careful study selected **UltraLink™-GX80**, Intracom Telecom's state-of-the-art, all-outdoor E-Band radio (71-76 / 81-86 GHz). UltraLink-GX80 delivers a throughput of up to 10 Gbit/s full duplex while offering industry-leading system gain, resulting in exceptional performance in terms of link range and availability.

The UltraLink-GX80 radio features an integrated Ethernet bridge with a rich set of Carrier Ethernet features for satisfying EOLO's backhaul networking needs in terms of service deployment, QoS and OAM. UltraLink-GX80's compact size and convenient fully outdoor design allows it to be easily and quickly deployed on rooftops or telecommunication towers, while requiring minimal space and supporting infrastructure. Furthermore, its unique integrated Radio Link Quality Monitoring and Diagnostics functionality expedites link impairment determination and troubleshooting, thus enabling EOLO to optimize its deployment and maintenance operations.

↘ Service Provisioning Automation

To accelerate the network roll-out for scales of several hundred thousand WiBAS devices, EOLO selected the **uni|MS™** SON Gateway, a FWA-specific rollout module of the uni|MS Network Lifecycle Management Platform, which enables Zero-Touch provisioning capabilities. Following the physical installation and alignment of WiBAS Terminal Station, the

uni|MS SON Gateway performs auto-discovery and auto-provisioning with the appropriate service profile for each subscriber's service plan, eliminating manual and error-prone configuration actions.

In this deployment option, the uni|MS SON Gateway is seamlessly integrating with EOLO's OSS/BSS infrastructure via REST API to enable status monitoring, performance collection & firmware upgrades. In another deployment option, the uni|MS SON Gateway can interwork with the uni|MS platform's planning and management application modules realizing Network Lifecycle Automation.

Committed to Innovation

Intracom Telecom continuously invests in innovative solutions for Access and Transmission to fulfill the challenging requirements of 5G and beyond. WiBAS is entering now its advanced 5th generation with WiBAS G5, a platform that operates in TDD and FDD mode. The WiBAS G5 can deliver speeds per household exceeding 550 Mbps. The new generation of terminal devices, **WiBAS™ G5 Connect+**, is a new ultra-light & compact terminal station that is capable of operating both in **FDD** or **TDD** duplexing modes and maintain compatibility with the previous WiBAS generation of base stations. Furthermore, Intracom Telecom continues to evolve the UltraLink E-Band radio series with ever higher capacity and enhanced networking features, such as IP/MPLS functionality and SDN-based management. Its next generation all-outdoor radio, **UltraLink™-XR80**, enables a single unit to host a dual E-Band radio offering up to 30 Gbit/s full duplex air capacity, while supporting a disaggregated networking architecture. ■

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