

INTERVIEW

INTRACOM TELECOM GROUP NEWSLETTER | ISSUE 42

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INTRACOM
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INTERVIEW

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WIBAS™ TECHNOLOGY TO DELIVER GIGABIT FWA ACROSS ITALY

Intracom Telecom and Open Fiber have strengthened their strategic partnership to accelerate the nationwide rollout of Fixed Wireless Access (FWA) for Gigabit to the Home across Italy. Building on a longstanding collaboration, Open Fiber has selected Intracom Telecom's WiBAS™ G5 smart-BS as the core platform in its ambitious national deployment plan.

Utilizing the pioneering 5G mmWave frequency band, this state-of-the-art solution delivers ultra-fast internet speeds of 1 Gbps download and 200 Mbps upload over distances up to 6 km, offering exceptional spectral efficiency of 29 bit/s/Hz. Open Fiber rigorously tested and validated the technology both in lab and field conditions.

Francesca Parasecolo, Open Fiber's Head of Network Engineering and Innovation, highlighted the importance of the partnership in bridging the digital divide, particularly in underserved areas. Acting CEO of Intracom Telecom, Kartlos Edilashvili, emphasized the role of the company's FWA platform in enabling rapid, cost-effective connectivity where fiber is not viable.

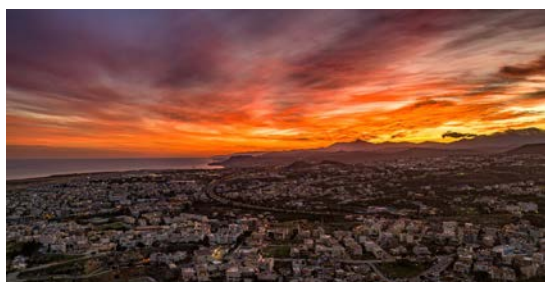
The collaboration supports EU Digital Compass goals and reaffirms Intracom Telecom's leadership in advanced broadband solutions.



UPGRADING SKYTELECOM'S NETWORK WITH ADVANCED FWA TECHNOLOGY

Intracom Telecom proudly announces its collaboration with SkyTelecom, Greece's largest wireless Internet service provider, to deliver ultra-fast broadband across the country. SkyTelecom has selected Intracom Telecom's WiBAS™ G5 dual-BS radio system, marking a shift to licensed 28 GHz mmWave spectrum and enabling speeds up to 1 Gbps.

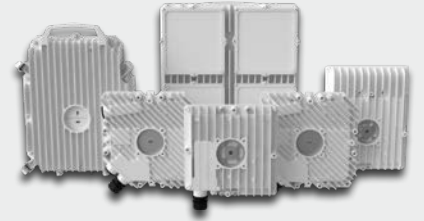
This strategic alliance empowers SkyTelecom to upgrade its network using Intracom Telecom's advanced Fixed Wireless Access (FWA) technology, ensuring fiber-like reliability and extended coverage exceeding 7 km. Designed for scalability and minimal infrastructure, WiBAS™ G5 supports up to 240 terminals per base station, offering efficient and cost-effective deployment.



SkyTelecom's CEO, Konstantinos Kordopitoulas, emphasized the significance of this Greek-led high-tech partnership, while Intracom Telecom's John Tenidis highlighted the company's commitment to transforming Greece's broadband landscape. This collaboration reflects the strength of domestic innovation and the potential of Greek technology on a global scale.

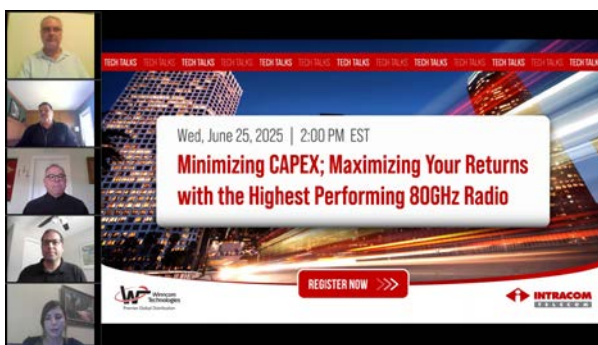
GROUNDBREAKING DOWNLOAD SPEED 2 GBPS PER SUBSCRIBER WITH 26/28 GHZ FWA

Intracom Telecom has unveiled a significant upgrade to its WiBAS™ G5 mmWave Fixed Wireless Access (FWA) solution. The enhanced system now delivers 2 Gbps download speeds per subscriber—doubling its previous Gigabit capacity—and extends coverage up to 9 km. Operating in the 24.25–29.50 GHz licensed mmWave bands, WiBAS™ G5 leverages Multi-User MIMO and Active Antenna System technologies with hybrid beamforming, enabling multigigabit broadband for homes and multi-dwelling units (MDUs). Already deployed in Europe and the USA, this upgrade allows telecom operators and ISPs to meet growing demands for high-bandwidth applications such as streaming, gaming, and remote work. John Tenidis, Product Management Director, highlighted that the platform's evolution reflects Intracom Telecom's commitment to delivering premium, green, and carrier-grade connectivity even in suburban and rural areas.



SILVER AWARD WINNER FOR DIGITAL INNOVATION IN WATER CONNECTIVITY

Intracom Telecom proudly received the Silver Award in the “2.4 Digital Water Tools & Connectivity” category at the prestigious Water Awards 2025, held in Athens this past June. Representing the company, Dr. Theodoros Pappas, Pre-Sales Vertical Solutions Section Manager, accepted the award on stage. This distinction highlights the impact of Intracom Telecom's cutting-edge software platform in driving the digital transformation of the water industry. A significant part of this innovation was developed through the EU-funded research project “PerManeNt,” under the “RESEARCH – CREATE – INNOVATE” initiative, co-financed by the European Regional Development Fund and national resources.



WEBINAR SERIES: “TECH TALKS BY INTRACOM TELECOM”

In partnership with our U.S. distributor Winncom Technologies, we delivered Episode 1 of our brand-new webinar series “Tech Talks by Intracom Telecom”, tailored to decision-makers in the WISP space explaining why now is the time to innovate in wireless infrastructure. This episode, entitled “Minimizing CAPEX; Maximizing Your

Returns – Highest Performance 80 GHz Radios” focused on how Intracom Telecom's 80 GHz technology minimizes your CAPEX by extending ranges, simplifies product configurations and installation, and maximizes your ROI, bringing results sooner with a more effective TCO. The session concluded with a live Q&A to address audience questions.

To watch the webinar replay, scan the QR code.



SHOWCASING GROUNDBREAKING INNOVATIONS

Intracom Telecom successfully showcased its latest technological breakthroughs at MWC Barcelona 2025. At its stand, the company unveiled its cutting-edge Smart Carrier-Grade wireless transport and FWA portfolio, featuring mmWave FWA with speeds up to 2 Gbps over distances exceeding 8 km, and Long-Range E-Band Solutions delivering symmetrical 38 Gbps throughput ideal for 5G and 5G+ networks. Visitors also explored advanced 5G Backhaul technologies with multi-gigabit microwave transmission and Network Lifecycle Automation tools that simplify network deployment and optimization. Highlighting its commitment to innovation, Intracom Telecom presented AI-driven software platforms enhancing sustainability, quality of experience, and operational efficiency, including a new Unified Data and AI platform empowering rapid deployment of Generative AI applications.

To watch on-site interviews, scan the QR codes.



Wireless Access & Transmission highlights



Artificial Intelligence innovations



JOINING FORCES TO BOOST TECHNOLOGICAL INNOVATION

Intracom Telecom has signed a Memorandum of Understanding (MoU) with the Center for Research and Technology Hellas (CERTH), marking a strategic collaboration to enhance Macedonia's role in Southeast Europe's tech landscape. The agreement was formalized by Intracom Telecom's CEO, Kartlos Edilashvili, and CERTH's Chairman, Dr. Evangelos Bekiaris.



The partnership focuses on sustainable transport, decarbonization, digital transformation, and workforce upskilling. Through coordinated projects and joint R&D initiatives, including support for local start-ups, the two organizations aim to accelerate innovation and drive regional growth.

"This MoU paves the way for new collaborative research and industrial activities," said Dr. Bekiaris. Mr. Edilashvili added, "We are proud to help transform Macedonia into a hub of technological excellence and green innovation."

This milestone reflects Intracom Telecom's commitment to impactful partnerships that shape a sustainable, digital future for Greece and beyond.

ETSI GROUP LEADERSHIP

Intracom Telecom is now a full member of ETSI and has assumed leadership of a newly formed Software Development Group within the organization. ETSI is the leading European standards body for ICT, with global influence across frameworks such as 3GPP, ISO, and ITU. It plays a central role in shaping standards for networks, AI, IoT, cybersecurity, and digital infrastructure — ensuring interoperability and scalability across technologies. This leadership position places the company at the core of international standardization efforts, offering a platform to showcase software capabilities, influence industry direction, and align with future global standards. Congratulations to the Research Collaboration team for making this milestone possible.

INTRACOM TELECOM WINS RECOGNITION AT TM FORUM CATALYST AWARDS

Intracom Telecom participated in the TM Forum Catalyst Agent Fabric Phase II showcased at DTW Ignite 2025 in Copenhagen. The project, focused on advancing agentic AI architectures for fully autonomous networks, earned two TM Forum Innovation Awards: Outstanding Catalyst – Application of AI & Automation and Outstanding Catalyst – Innovative & Futuristic. As a key contributor, Intracom Telecom delivered the End-User Copilot (EUC), an intelligent agent designed to support subscribers during technical incidents. By dynamically interacting with other specialized domain agents across RAN, transport, and core, the EUC provides real-time transparency, guided support, and smart escalations. This recognition underscores Intracom Telecom's commitment to shaping next-generation intelligent networks and redefining customer experience through automation and AI-driven collaboration.



TELCO CLOUD INNOVATION INITIATIVE

The European Telecommunications Standards Institute (ETSI) has formally launched its newest Software Development Group (SDG), the Open Operator Platform (OpenOP) that joins ETSI's growing portfolio of SDGs dedicated to collaborative software development alongside standardization. Born from the SUNRISE-6G project, the Flagship SNS-JU EU Project that is building a pan-European Federation of 6G infrastructures and initiated by Intracom Telecom, with Dr. Vasileios Theodorou, Head of Research Collaboration acting as the group's Convenor. OpenOP is developing an open-source Operator Platform for the Telco Cloud. Aligned with industry-driven GSMA requirements and leveraging 3GPP standards for mobile network and AI/ML enablement, OpenOP will support seamless inter-operator federation and developer-friendly network exposure to verticals such as Industrial IoT, eHealth, and smart agriculture.



OpenOP
by ETSI

➤ <https://oop.etsi.org>

OPENOP AT THE INSTAR STANDARDS WORKSHOP

At the recent "Shaping the Future of 6G" workshop organized by INSTAR, Dr. Vasileios Theodorou, Head of Research Collaboration at Intracom Telecom, participated as an invited round-table speaker. Representing the EU-funded SUNRISE-6G project, he presented OpenOP—an open-source Software Development Group hosted by ETSI. OpenOP supports the GSMA Operator Platform to enable seamless federation and network service exposure across operator networks and next-gen Telco testbeds. Dr. Theodorou underscored OpenOP's pivotal role in driving an open, federated 6G ecosystem and strengthening Europe's impact on global 6G standardization through collaborative innovation.

LEADING IN SMART HOME ENERGY SOLUTIONS



The 4th General Assembly of the ODEON project took place on June 3–4 in Amiens, France, uniting all partners for two days of strategic collaboration. Attendees toured the pilot site of partner SICAE, showcasing state-of-the-art renewable energy and smart grid technologies. Intracom Telecom leads the development of an advanced Home Energy Management Application, empowering prosumers with AI-driven tools like non-intrusive load monitoring and real-time optimization. This intelligent assistant helps households boost self-consumption, lower energy costs, and engage in flexibility markets, while ensuring privacy through integrated edge computing—marking a major advancement in smart, consumer-focused energy solutions.

➤ <https://odeonproject.eu>

AI AND GIGABIT CONNECTIVITY TRANSFORMING GREECE

Intracom Telecom showcased its latest AI-driven solutions at BEYOND 2025, Greece's premier digital technology and innovation exhibition. Visitors at our stand explored advanced offerings including AI-powered data center management, intelligent chatbots and voicebots, IoT applications for smart cities, and cutting-edge Fixed Wireless Access (FWA) systems delivering Gigabit connectivity. Our CTO for Software and ICT Solutions, Christos Rizos, participated in key sessions focusing on the transformation of patient care through technology and AI's critical role in promoting sustainability. This engagement underscores Intracom Telecom's dedication to driving innovation and greener technologies in both healthcare and telecom sectors.



NEW CEO AT INTRAROM



Intrarom, a member of Intracom Telecom Group, announced the appointment of Mr. Spyros Giannitsopoulos as Chief Executive Officer, effective July 8, 2025. With over two decades of leadership experience in Sales, Marketing, and Business Operations, Mr. Giannitsopoulos has held senior roles in national and multinational companies across the Consumer Goods, Durable Goods, and Technology sectors. He holds executive qualifications in business and marketing from leading international institutions and is an active member of prominent professional associations. In his new role, he will drive Intrarom's strategic growth in the Romanian market and oversee the Group's production facilities. His diverse sector expertise and results-oriented leadership are expected to strengthen Intrarom's market position and support the company's long-term strategic objectives.

NEW CHIEF HUMAN RESOURCES OFFICER AT INTRACOM TELECOM

Intracom Telecom announced the appointment of Mr. Nikos Maragkoudakis as Chief Human Resources Officer, effective April 1, 2025. Mr. Maragkoudakis brings extensive experience in human capital strategy, having held senior HR leadership roles at Novibet, Kaizen Gaming, Folli Follie Group, OPAP, and Alpha Bank. His expertise spans organizational transformation, talent development, and performance optimization across diverse industries. A graduate of the University of West Attica in Business Administration, with a master's degree in Human Resources Management from ALBA Graduate Business School, Mr. Maragkoudakis combines academic rigor with proven operational leadership. His appointment reinforces Intracom Telecom's commitment to cultivating a high-performance culture and strengthening our organizational capabilities to support strategic growth and deliver enhanced value to our clients and partners.





WE EXPAND GLOBAL FOOTPRINT WITH STRATEGIC INVESTMENTS AND NEXT-GEN TECHNOLOGIES

Interview with Kartlos Edilashvili,
CEO at Intracom Telecom

Intracom Telecom is aiming for further growth and an expanded technological footprint both in Greece and abroad. The company designs and manufactures high-tech products and electronic systems for telecommunications and IT. In an interview with Capital.gr, the company's CEO, Kartlos Edilashvili, noted that despite the challenges of recent years, he sees strong signs of optimism for the future. Intracom Telecom currently holds a backlog of signed contracts worth €230 million, stretching through to the summer of 2026, laying the groundwork for business expansion and achievement of its strategic goals.

A central pillar of this growth is the company's new state-of-the-art facility in Kozani, an investment of €45 million. The plant will produce cutting-edge technology for 5G and 6G networks, create over 150 highly skilled jobs, and strengthen regional development. This new venture represents a strategic move for Intracom Telecom, expanding its existing production sites in Greece, Romania, and Italy, while meeting the surging global demand for advanced telecom

solutions. *"At the same time, it significantly enhances the EU's technological independence, contributing to its digital sovereignty,"* Mr. Edilashvili explained. Construction is already underway and is expected to be completed by 2027.

Over the past three years, the company's turnover has averaged €135 million annually, with nearly two-thirds coming from international markets. *"Our profit margins were affected by external factors, but this has not derailed our*

long-term strategy. Our investments in the Kozani plant, the 'Hermes' project, Fixed Wireless Access (FWA) technology, together with our diversified portfolio in software, Artificial Intelligence, and wireless solutions, will boost long-term revenue streams and ensure sustainable growth," the CEO emphasized.

"Previous years brought temporary pressure on certain financial indicators due to project funding delays, lower revenues from some contracts, and increased material costs that impacted deliveries" Mr. Edilashvili added.

High Speeds Where Fiber Cannot Reach

Fixed Wireless Access (FWA) is a technology steadily gaining ground worldwide, and one that Intracom Telecom has been betting on for years. The company develops specialized systems for both Greek telecom operators and international Telcos. "FWA is a game-changing solution for Greece. With our WiBAS and UltraLink technologies—particularly WiBAS™ G5—our products can deliver download speeds of up to 2.5 Gbps, especially in islands and mountainous areas where fiber deployment is difficult," said Mr. Edilashvili.

Although the technology has not yet taken off in Greece, it has already been widely adopted in countries such as Italy and the U.S., placing Intracom Telecom among the major players in the global telecom industry.

Within this framework, the company's "Hermes" project is of critical importance. Recently included in Greece's list of strategic investments and co-financed by the Greek state, the €42.9 million project focuses on the research and development of ultra-high-speed integrated wireless networks. It will strengthen Intracom Telecom's solutions in broadband wireless connections, which can be used by internet service providers and telecom operators to cover underserved rural and suburban areas in Greece.

The project's technological foundation lies in millimeter-wave technology and the integration of Artificial Intelligence and Machine Learning, aiming to design hardware and software that provide internet speeds above 1 Gbps while optimizing energy efficiency and system performance. "The project occupies 250 specialized engineers in microelectronics and software, contributing to Greece's technological advancement, the retention of top-level scientific talent, and the enhancement of the country's global competitiveness and export capacity. The project is in full development, despite funding not yet being received," Mr. Edilashvili noted.

We aim to expand our technological reach globally through strategic investments, to continue delivering sustainable, high-tech solutions worldwide

Projects in Greece and Abroad

Last year, Intracom Telecom carried out major projects, including the nationwide digital management system for medical imaging (PACS)—together with the necessary equipment—for 37 public hospitals across Greece. At the same time, the company partnered with SkyTelecom, a wireless internet provider in Greece, supplying Fixed Wireless Access (FWA) technology to upgrade and expand its network and deliver ultra-high-speed broadband services of up to 1 Gbps. Intracom Telecom also undertook the project for the physical security system of Athens International Airport and the upgrade of the new ERTFLIX platform on behalf of public television.

Internationally, Intracom Telecom continues to roll out wireless access solutions, strengthening partnerships in South Africa, Nigeria, and Italy with Open Fiber and Eolo, leveraging EU Recovery and Resilience Facility (RRF) funding. It is also competing for projects across Europe and in markets such as Indonesia and India. Notably, the company has expanded its presence in Canada and the U.S., while targeting further growth in Mexico and Brazil.

Today, Intracom Telecom employs more than 1,500 people, maintains a strong Greek footprint, and exports technology worldwide. Since January 2015, its sole shareholder has been Intracom Middle East FZE, based in Dubai and owned by a Swiss investor.

"Strategic investments, international cooperation, and the development of innovative technologies such as FWA, combined with annual R&D investments of €15 million, place Intracom Telecom at the heart of strengthening Greece's global competitiveness in telecommunications, while advancing the technological leadership of both the country and Europe," Mr. Edilashvili concluded. ■

INTERVIEW

HOW LICENSED MM-WAVE CAN ACCELERATE BEAD BROADBAND GOALS

Interview with Kyriakos Vergos, Chief Commercial Officer at Intracom Telecom



The Broadband Equity, Access, and Deployment (BEAD) program represents a historic federal push to close the digital divide in unserved and underserved U.S. communities. Wireless technology vendors are positioning themselves to support this goal, complementing fiber builds with innovative alternatives. Kyriakos Vergos, Chief Commercial Officer at Intracom Telecom and CEO of the Group's U.S. subsidiary, shares how licensed millimeter wave (mmWave) fixed wireless access (FWA) is emerging as a key tool for BEAD success.

The BEAD initiative aims to deliver broadband to unserved and underserved areas nationwide. How is Intracom Telecom contributing to this effort?

K. Vergos » BEAD is a once-in-a-generation investment targeting communities where broadband availability is limited or absent. While fiber remains the gold standard for high-speed internet, it's not always the most practical or cost-effective option, especially in rural or hard-to-reach areas. Our focus is on deploying licensed mmWave fixed wireless access technology that can deliver fiber-grade speeds without the extensive costs and delays of laying fiber.

Intracom Telecom has a long history of innovating telecom solutions that meet demanding performance requirements. Our wireless products are designed to deliver reliable, scalable broadband access that meets BEAD's stringent technical standards, including speed, latency, and service quality. By leveraging licensed spectrum bands, we help operators provide gigabit-capable service where fiber deployment is challenging.

Fiber is often seen as the ultimate broadband solution. Why is licensed mmWave wireless important for achieving BEAD's goals?

K. Vergos » Fiber is excellent but can be prohibitively expensive and slow to deploy, especially in low-density or geographically difficult areas. A fiber-only buildout to cover the entire country would require an estimated four times the BEAD funding allocated. Licensed mmWave fixed wireless access fills this gap by delivering multi-gigabit speeds over long distances with lower capital and operational costs.

Using licensed spectrum also offers clear advantages: it guarantees interference protection and consistent service quality, which are essential for critical applications like telehealth, education, and enterprise connectivity. Wireless solutions also accelerate deployment timelines, allowing communities to gain access to high-speed internet faster.

Interestingly, mmW FWA technology is considered a more reliable form of broadband access transmission than aerial fiber (fiber running across telephone poles).

Could you explain the role of licensed spectrum in your solutions and why it matters?

K. Vergos » Spectrum is the foundation of any wireless network. The Federal Communications Commission (FCC) has emphasized the importance of putting licensed spectrum to active use, encouraging holders to deploy networks or risk losing their licenses. Our technology operates in specific licensed mmWave bands—between roughly 24 GHz and 39 GHz—that offer wide bandwidths suitable for multi-gigabit data rates.

Operating in licensed spectrum minimizes interference risks and ensures a more reliable connection compared to unlicensed bands. This reliability is critical for meeting the performance metrics BEAD demands. Our equipment is designed to coexist with 5G networks, making it a complementary solution for operators looking to maximize their spectrum assets.

Beyond last-mile wireless access, how does your company support the broader network ecosystem needed for BEAD deployments?

K. Vergos » Providing last-mile connectivity is just part of the equation. Middle-mile transport infrastructure is essential to backhaul data efficiently from access points to the core network. We offer high-capacity microwave radio links that deliver 15 Gbps full-duplex Ethernet with ultra-low latency, serving as a cost-effective alternative to fiber for middle-mile connections in hard-to-reach areas.

We also provide network management platforms that give operators visibility and control over their entire broadband infrastructure—from planning and provisioning to ongoing optimization and service assurance. This integrated approach helps operators manage mixed wired and wireless networks effectively,

ensuring they can meet quality of service and customer experience expectations.

Multi-Dwelling Units (MDUs) are notoriously difficult to connect efficiently. How are you addressing those challenges?

K. Vergos » MDUs present two main challenges: delivering broadband to the building and distributing it internally without expensive rewiring. We use a groundbreaking hybrid approach that combines wireless access to building rooftops with advanced in-building technologies that leverage existing wiring such as coaxial or twisted-pair cabling.

This strategy significantly reduces installation time and costs while delivering gigabit-class speeds to individual apartments or offices. By avoiding invasive construction, operators can accelerate deployments and reduce customer disruption—both important factors for scaling broadband in urban and suburban multi-unit buildings.

The mmW FWA MDU use case is one of the next great leaps forward in broadband networks and Intracom Telecom is the world leader in this technology space.

Even the smallest providers can now build robust, multigigabit networks of the future thanks to licensed mmWave fixed wireless that delivers fiber-grade speeds without the cost or delay of fiber

How do your solutions handle service management and subscriber provisioning, especially as networks grow?

K. Vergos » Scalability and automation are key priorities. Our fixed wireless terminals support zero-touch provisioning, enabling rapid activation without manual intervention. Network elements can be monitored and managed through unified platforms that consolidate operational data, allowing operators to maintain high service levels while simplifying network operations.

Over time, we're moving toward fully integrated service orchestration layers that unify bandwidth control, traffic shaping, and service level agreement enforcement. This automation helps operators efficiently manage increasing subscriber numbers while maintaining the quality and reliability BEAD requires. Of course, AI is becoming increasingly important as a means to better manage networks and we're at the forefront of the telco AI push.

Many discussions focus on unlicensed spectrum bands like 5 GHz and 6 GHz for fixed wireless. Why maintain a focus on licensed mmWave?

K. Vergos » Unlicensed bands offer lower entry costs but come with significant drawbacks, including interference from other devices and unpredictable performance, particularly in dense urban environments. Licensed mmWave spectrum offers dedicated channels with minimal interference and exceptionally high throughput and quality of service. The challenge has been that until very recently mmW technology had not reached a level of maturity to give the necessary stability of service and signal propagation at high modulation levels over long distances; this is exactly the breakthrough that Intracom Telecom has achieved.



This reliability and performance are vital for critical applications and future-proofing networks as demand grows. Licensed mmWave can deliver speeds exceeding 2 Gbps per terminal and sector capacities beyond 5 Gbps—making it suitable for next-generation broadband needs.

What final advice would you offer network operators aiming to make the most of BEAD funding?

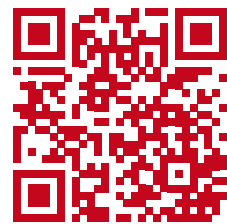
K. Vergos » Operators should adopt a strategic, flexible approach that combines fiber and wireless technologies to maximize coverage and cost efficiency. The digital divide is a complex challenge, and no single solution fits all scenarios. Licensed mmWave fixed wireless, supported by high-capacity transport and smart management, is a proven tool to expand broadband rapidly and reliably. Success in BEAD deployments will come from leveraging technology ecosystems that balance performance, cost, and deployment speed—ultimately en-

abling affordable, high-quality broadband for all communities.

By combining licensed spectrum with high-capacity wireless equipment and comprehensive management tools, companies like Intracom Telecom are playing a pivotal role in shaping the future of broadband in the U.S., helping bridge the digital divide faster and more efficiently.

Above all my single most emphatic piece of advice is not to assume that licensed mmW spectrum is only available to a few of the larger service providers. Today Intracom Telecom is poised to offer even some of the smallest WiSPs the possibility to attain mmW spectrum cost-effectively, to build highly profitable, robust multigigabit networks of the future. ■

SCAN TO ENABLE YOUR
PRIORITY BROADBAND
PROJECTS





UNLOCKING GIGABIT ACCESS IN EVERY BUILDING



WiBAS^{G5}
MDUconnect

RELIABLE GIGABIT FWA FOR HOMES & MDUs

The **WiBAS™ G5 MDUConnect** solution features a rooftop-installed mmWave Terminal Station connected to a Base Station, with end-user speeds exceeding the gigabit benchmark. The Terminal Station is connected to a G.hn Aggregator, located on the MDU rooftop or indoors, which redistributes the offered bandwidth through legacy coaxial or twisted-pair wiring to individual apartments. Compact G.hn CPEs at each apartment complete the chain, delivering Ethernet connectivity while enabling unified QoS management and reverse power feeding where applicable.



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INTERVIEW

INTRACOM TELECOM'S INNOVATIONS POWER APAC WIRELESS CONNECTIVITY

Interview of Barinder Chhabra, Head of Business Development for APAC at Intracom Telecom



As the Asia Pacific (APAC) pushes ahead with digital transformation, the demand for high-capacity, reliable, and flexible wireless infrastructure is greater than ever, especially in areas where fiber deployment is costly or geographically challenging. From dense urban centers to remote islands, Intracom Telecom is providing scalable solutions that can bridge coverage gaps and support carrier-grade wireless connectivity services.

Barinder Chhabra, Head of Business Development for APAC, talked to Telecom Review Asia and provided insight into how his leadership and the company's wireless innovations are shaping the region's network future.

What recent technology developments has Intracom Telecom introduced to address the diverse connectivity needs across the APAC region?

B. Chhabra » At Intracom Telecom, we focus on enabling ultra-fast, reliable connectivity across the APAC region, especially in areas where laying fiber is impractical.

Our WiBAS™ G5 platform, operating in the 26–28 GHz millimeter wave (mmWave) band, is designed to serve multi-dwelling unit (MDU) residential and small and medium-sized enterprise (SME) subscribers with multi-gigabit broadband service at distances beyond 8 km. We recently concluded a high-profile trial with a large Indonesian telecom operator, and we're actively engaging with other Tier I operators and telecommunication regulators to promote millimeter wave adoption for fixed wireless access (FWA). It's worth noting that our WiBAS™ 10.5 GHz systems have been in commercial use since 2014 by major operators and wireless internet service providers (WISPs) in Indonesia and

the wider Southeast Asia region, providing stable performance, even under demanding weather conditions.

For 5G transport, we're a market leader with our UltraLink™ E-Band radios. The 10-Gbps platform of UltraLink-GX80 is now evolving to UltraLink-GX80 Advanced with 15 Gbps, followed in our committed roadmap by a 40-Gbps radio, delivering the capacity needed for 5G backhaul and fronthaul. Our OmniBAS™ microwave solutions address both short and long-haul requirements, making them ideal for island nations like Indonesia where fiber rollout faces geographical constraints.

Unifying all these radio technologies and greatly simplifying operations is our uniMS™ software platform, which offers advanced network automation to streamline planning, deployment, and operations. All our solutions are EU-designed and manufactured, backed by over four decades of research and development (R&D) and in-house testing.

How is Intracom Telecom tailoring its wireless connectivity solutions to meet the varying network conditions in the APAC markets?

B. Chhabra » APAC's geography spans everything from dense metropolitan areas to remote islands, requiring wireless solutions that are both high-performing and highly adaptable. On the access side, our WiBAS™ G5 platform is evolving to support frequencies above 28.5 GHz, expanding its role in delivering multi-gigabit fixed wireless access in urban and suburban environments. For broader coverage in rural or weather-challenged areas, our WiBAS™ 10.5 GHz system—trusted by major operators since 2014—now features smart software to increase subscriber density, ensure fair capacity use, and maintain service stability.

On the transport side, long-range connectivity is especially important in island nations of the APAC region. Our OmniBAS™ Long Haul (6–11 GHz) solution delivers multi-gigabit capacity over long distances by combining multiple channels and using advanced signal techniques. It's ideal for extending connectivity into remote or hard-to-reach areas, while also supporting a smooth transition to internet protocol (IP)-based networks and accommodating legacy systems when needed.

Meanwhile, our UltraLink™ E-Band series, now scaling from 10 Gbps to 15 Gbps with the UltraLink-GX80 Advanced, and then further up to 40 Gbps, meets the ultra-high-capacity and low-latency transport demands of dense 5G environments.

All of this is supported by our own engineering and testing facilities, ensuring our products meet the highest carrier-grade standards.

Our solutions also include software-driven capabilities like remote optimization and dynamic resource allocation, allowing operators to maintain quality-of-service (QoS) in any deployment scenario.

Can you highlight some key partnerships in the APAC region and how these collaborations are helping to expand broadband access?

B. Chhabra » Strategic partnerships are at the heart of our growth in APAC. Since 2014, we've worked closely with Dialog Axiata in Sri Lanka, deploying our WiBAS™-based fixed wireless access solutions to deliver high-speed broadband to underserved and rural areas. In Indonesia, our ongoing collaboration with Lintasarta has enabled cost-efficient wireless broadband connectivity, supporting both urban and remote enterprise applications.

Our systems support high subscriber densities and can adapt to evolving traffic demands or spectrum changes, positioning operators for smooth transitions into future ecosystems

These aren't isolated projects; they reflect long-term, co-developed solutions involving joint planning, tailored rollouts, and continued adaptation to market needs. Globally, we've deployed point-to-multipoint (PTMP) networks on all continents, with over 20,000 hubs and 600,000 terminals shipped. In addition, we've supplied 140,000 microwave radios and 40,000 E-Band radios worldwide, making us one of the largest carrier-grade point-to-point (PTP) vendors on the planet. These deployments play a critical role in bridging the digital divide, expanding broadband access, and promoting inclusive digital growth across the Asia-Pacific region.

With 5G evolving and 6G on the horizon, how is Intracom Telecom preparing its technologies to remain future-ready?

B. Chhabra » At Intracom Telecom, we believe futureproofing starts with designing platforms that are flexible, scalable, and software upgradable.

Our systems support high subscriber densities and can adapt to evolving traffic demands or spectrum changes, positioning operators for smooth transitions into future ecosystems.

Beyond hardware, we are deeply focused on network intelligence. Our management systems incorporate automation, predictive analytics, and remote diagnostics to give operators real-time visibility and control over their infrastructure. This leads to better resource utilization, improved service continuity, and lower operational costs.

Looking ahead, we are involved in cutting-edge research on ultra-high-frequency (UHF) wireless technologies and AI-driven network management—key building blocks for 6G. These efforts focus on enabling extremely fast, low-latency connections, smarter signal control using intelligent surfaces, and flexible use of wide frequency bands. By participating in these developments, we're making sure our technology stays at the forefront of future network evolution. ■

BRIDGING THE RURAL DIGITAL DIVIDE WITH XGAIN INITIATIVE

KONSTANTINOS CHARTSIAS
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Principal Engineer, Research Programmes

Rural areas continue to face significant digital disparities compared to urban regions, with limited access to high-speed internet impeding economic development, public service delivery, and quality of life. Despite their strategic importance for sustainability and natural resource management, many rural communities remain underserved—only 65% of Europe's rural areas have connectivity above 30 Mbps. This lack of reliable broadband hampers access to education, healthcare, modern farming techniques, and remote work opportunities, driving depopulation and limiting resilience. This continued gap not only slows digital integration but also weakens rural economies by discouraging investment, limiting access to digital markets, and stalling local innovation ecosystems.

Telecommunication infrastructure is a critical enabler for closing the urban–rural digital divide. High-speed broadband and next-generation connectivity solutions form the backbone of inclusive development. Advanced technologies such as edge computing, combined wireless and wireline networks, can deliver low-latency, high-efficiency digital services tailored to rural needs. These include real-time monitoring in agriculture, UAV-assisted emergency response, and decentralized health and environmental applications supporting the "One Health" approach. Environmentally, these solutions can contribute to decarbonization by reducing the need for travel, optimizing resource usage in farming, and enabling energy-efficient smart infrastructure.

THE XGAIN APPROACH

Intracom Telecom is a partner in XGain, a Horizon Europe project supporting the EU's digital and green goals by identifying suitable telecom and edge computing architectures for rural areas. By providing tailored connectivity solutions, the project aims to enhance local capabilities, promote digital inclusion, and ensure all communities can participate in Europe's digital transformation. This holistic approach aligns technical feasibility with long-term sustainability, helping stakeholders balance investment with climate-conscious choices.

A core technical aspect of the project is defining dimensioning rules for each network topology, spanning access and transport technologies. The methodology involves a thorough cost analysis, comparing technical alternatives and scenarios to identify the most cost-effective options using economic and environmental indicators, including Green ICT analytics.

All insights are integrated into a Knowledge Facilitation Tool (KFT), designed to help non-experts assess different technology ecosystems. The KFT incorporates demand forecasting, component price trends, operational costs, and revenue projections to support informed decision-making. Accessible via a user-friendly interface, the KFT guides users—ranging from farmers and SMEs to public authorities—through a series of simple selections and questions. The tool evaluates each option across four pillars: technological, economic, environmental, and social impact. Furthermore, the results of KFT are also demonstrated and validated across diverse use cases: Rural Community Services in Spain, eHealth in Greece, Remote Community in the UK, Farming and Forestry in Lithuania, Aquaculture in Croatia, and Livestock and Agriculture in Belgium (see Figure 1).

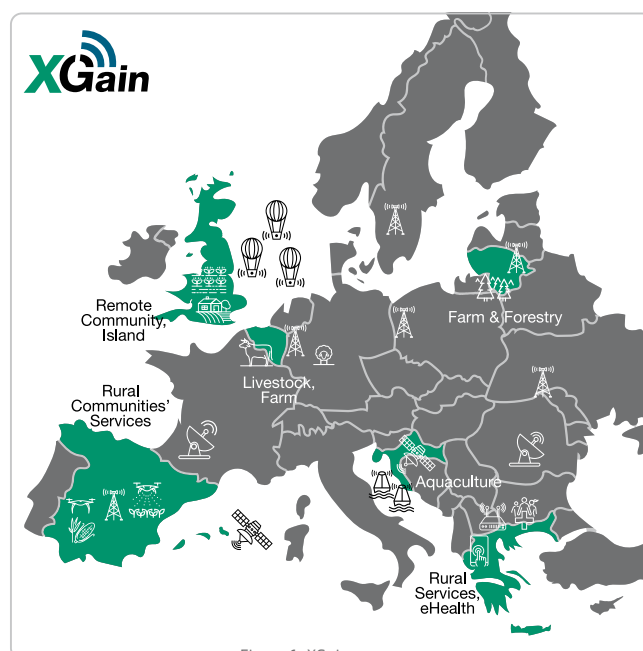


Figure 1: XGain use cases

INTRACOM TELECOM'S VALUE PROPOSITION

Intracom Telecom, a global technology systems and solutions provider, actively participates in the Horizon Europe-funded XGain project. This initiative aims to bridge the digital divide by developing a Knowledge Facilitation Tool (KFT) that assists stakeholders in selecting appropriate connectivity and edge computing solutions for rural, coastal, and urban areas.

In the XGain project, Intracom Telecom contributes with its broad expertise in network design, dimensioning, and optimization. Demonstrating its commitment to open-source community initiatives, the company developed a link power budget tool utilizing ITU-Rpy—a Python library based on ITU Recommendations for calculating atmospheric attenuation in slant and horizontal paths. This tool was developed, tested, and integrated as a module within the KFT, enhancing its capability to provide comprehensive assessments of connectivity solutions. Moreover, as part of the e-Health demonstration, Intracom Telecom deployed its WiBAS™ G5 solution, featuring the dual-BS hub and GigaConnect terminal stations. The dual-BS hub is

Through XGain's rural testbeds, WiBAS G5 showcased gigabit-class wireless broadband as a fast, cost-efficient backbone for digital inclusion and next-generation services in Europe's underserved communities

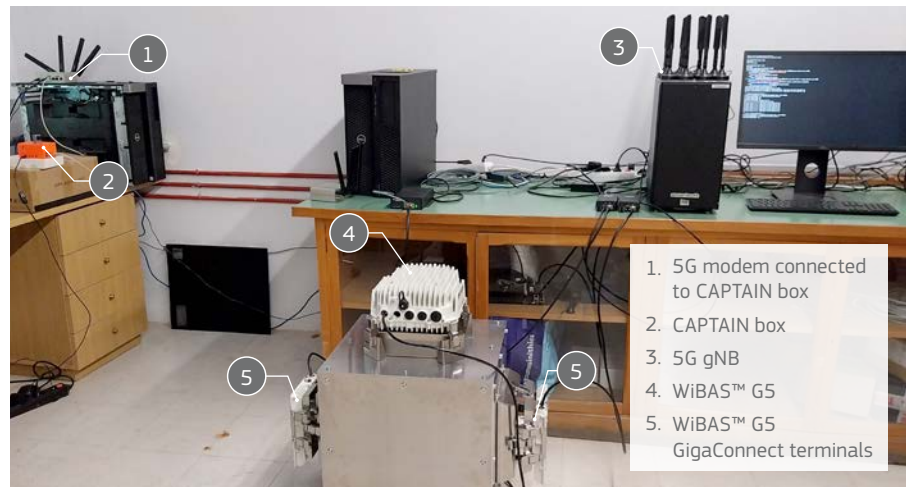


Figure 2: Integration of Intracom Telecom's PtMP system with ICCS's 5G infrastructure at NTUA Labs

a high-capacity PtMP radio supporting aggregate throughput of up to 2.6 Gbit/s and 240 terminals per sector, operating in the 27.50–29.50 GHz band with advanced MU-MIMO and interference cancellation techniques. The GigaConnect terminals offer up to 1 Gbit/s download speeds, support zero-footprint installations, and are ideal for cost-effective, high-performance Fixed Wireless Access (FWA) in rural and suburban areas. Due to its high-capacity capabilities (1 Gbit/s per terminal station), WiBAS™ G5 solution also serves as a transport infrastructure for LTE/5G base stations

Lab trials were scheduled to be performed at ICCS-NTUA Labs.

During the first phase, integration of Intracom Telecom's PtMP solution with the 5G system (5G RAN and 5G Core), the end devices and processing devices provided by ICCS, was performed.

At the final stage, integration of the end-user device from CAPTAIN to the existing testbed, was performed. The CAPTAIN's Box device consisted of a Raspberry Pi 4, a micro-projector, a camera and a sound-speaker. Captain box acts as a companion/caregiver in order to provide health and wellbeing guidance and interventions for elderly people living in rural areas

and Intracom Telecom's WiBAS™ G5, served as a last-mile connectivity solution.

Successful demonstration of the use case took place in ICCS Labs in April 2025 where operation of the complete infrastructure and the user application were showcased (see Figure 2).

CONCLUSION & OUTLOOK

By integrating advanced technologies and participating in initiatives like the XGain project, Intracom Telecom continues to play a pivotal role in enhancing connectivity solutions, particularly in underserved rural areas. Looking ahead, continued collaboration between telecom innovators, policymakers, and local communities will be vital to scale these solutions across Europe. Projects like XGain not only set a technological benchmark but also establish a roadmap for digitally inclusive, economically vibrant, and environmentally sustainable rural development. ■

ARTICLE



GIGABIT ACCESS FOR MDU RESIDENTS USING MM-WAVE FWA AND IN-BUILDING WIRING

PANTELIS TRAKAS

Principal Product Manager, Wireless Network Systems

As demand for high-speed broadband accelerates, Multi-Dwelling Units (MDUs) are increasingly in focus. These environments present a two-fold challenge for network operators aiming to deliver ultra-broadband: first, the high cost and logistical complexity of bringing fiber to every building; second, the technical difficulty of distributing gigabit services within buildings that often rely on legacy wiring infrastructure.

To address both of these challenges, a hybrid solution that combines millimeter wave (mmWave) Fixed Wireless Access (FWA) with Gigabit Home Networking (G.hn) based in-building distribution offers a practical, cost-effective alternative to full fiber builds. This architecture enables operators to deliver fiber-grade services over wireless links and reuse existing in-building cabling, providing high-speed connectivity without extensive construction or rewiring.

OVERCOMING EXTERNAL AND INTERNAL BARRIERS

The first major barrier is the last-mile fiber reach. Running new fiber to every MDU, especially in dense urban areas, can be time-consuming and cost-prohibitive due to permitting delays, physical obstacles, and rights-of-way issues. The second challenge lies inside the building. Even when fiber reaches the premises, distributing high-speed services to individual units requires dealing with outdated infrastructure such as coaxial or twisted-pair wiring, often not designed to withstand modern data rates.

A solution is needed that avoids the cost and disruption of fiber installation, while still achieving performance levels that support demanding applications. Combining mmWave wireless delivery with in-building G.hn distribution addresses both sides of the equation efficiently.



A DUAL-LAYER ARCHITECTURE: MMWAVE FWA AND GIGABIT HOME NETWORKING

This approach leverages two distinct yet complementary technologies:

- » **Outdoor Wireless Access (mmWave FWA):** Terminal Stations mounted on MDU rooftops establish high-capacity wireless links with a nearby mmWave base station. These Terminal Stations provide multi-gigabit throughput and act as the interface between the operator's access network and the building.
- » **In-Building Distribution (G.hn):** Traffic from the Terminal Station is passed to a G.hn Aggregation Multiplexer, which then redistributes it throughout the building using existing coaxial or twisted-pair cabling. Each subscriber unit features a G.hn terminal device that bridges the legacy infrastructure to Ethernet for the end user.

THE ROLE OF WIBAS™ BASE AND TERMINAL STATIONS

Intracom Telecom's WiBAS™ G5 smart Base Station and WiBAS™ G5 GigaConnect+ Terminal Station bring carrier-grade wireless broadband to Multi-Dwelling Units (MDUs) with unmatched speed, reliability, and scalability. Operating in the 24.25–39 GHz licensed spectrum, the WiBAS™ smart Base Station delivers over 5 Gbps per sector and supports up to 120 rooftop Terminal Stations, ensuring resilient and interference-free performance even in the dense urban environments. Thanks to advanced beamforming and multi-user MIMO technologies, operators can rapidly extend gigabit coverage without the delays and costs associated with FTTB solutions.

Each rooftop-installed WiBAS™ G5 GigaConnect+ Terminal Station is engineered to deliver up to 2 Gbps of down-link throughput, acting as a powerful wireless gateway into the building's in-house distribution network. Featuring a compact radio design and rapid installation in under 15 minutes, the WiBAS™ G5 GigaConnect+ enables fast service activation with minimal disruption. By combining the high-capacity, low-latency performance of mmWave access with flexible in-building distribution over existing wiring, WiBAS™ empowers service providers to deliver fiber-like broadband experiences while dramatically reducing time-to-market and deployment costs.

LEVERAGING GIGABIT HOME NETWORKING FOR IN-BUILDING CONNECTIVITY

G.hn is a broadband standard developed for high-speed transmission over existing wiring infrastructure. With data rates up to 1.7 Gbps per port, it enables gigabit service delivery without requiring new cable installations, significantly reducing time, labor, and cost. Performance depends on the medium:

- » **Twisted-pair wiring** supports symmetrical gigabit speeds over distances up to 250 meters, with up to 24 subscribers per Multiplexer device.
- » **Coaxial cable** allows for extended reach and higher capacity, supporting 8–16 subscribers per Multiplexer port with the use of splitters.

G.hn also supports VLANs, QoS, and multicast, making it ideal for triple-play services. In addition, reverse power feeding from in-unit devices allows the Aggregation Multiplexer to operate without requiring local power at distribution points, simplifying deployment.

DEPLOYMENT SCENARIOS

The combination of mmWave FWA with G.hn technology is suitable for a wide variety of building types:

» Legacy MDUs in urban cores

Avoid invasive upgrades by using existing phone or TV wiring.

» New constructions

Enable quick deployment without depending on fiber readiness.

» Suburban or semi-urban buildings

Extend fiber-like performance without running new fiber lines.

» Commercial or hospitality properties

Cost-effectively upgrade internet access with minimal service interruption.

UNIFIED MANAGEMENT AND SERVICE DELIVERY

The Intracom Telecom uni|MS™ Unified Management Suite plays a central role in the end-to-end management of the MDU solution, providing comprehensive control over both the mmWave FWA and G.hn distribution layers. Initially, the WiBAS™ Terminal Stations and G.hn Aggregators are provisioned separately, using uni|MS™ and the G.hn Management Platform respectively, but the solution can converge toward full integration, enabling a true single-pane-of-glass management experience.

Zero-touch provisioning for WiBAS™ Terminal Stations is achieved through the uni|MS™ SON Gateway, which automates device discovery, service profile assignment, and activation based on subscriber policies. For G.hn devices, uni|MS™ can either manage them directly or integrate via a centralized G.hn Management Platform, supporting scalable deployments while reducing configuration errors and operational overhead.

The mmWave FWA segment acts as a Layer 2 "fat pipe," transparently forwarding traffic with high capacity, while the G.hn layer functions as the Layer 2/3 QoS enforcement point. This enables precise bandwidth shaping, subscriber-level traffic classification, and service differentiation based on VLANs and SLAs.

As the solution matures, full-service orchestration will allow operators will be able to perform automated provisioning, real-time monitoring, alarm management, firmware upgrades, and performance analytics across all network elements through the uni|MS™, a full-blown management and automation platform. Key features include domain-wide fault and performance management, dynamic inventory tracking, audit logging, and seamless OSS/BSS northbound integration using open standard APIs. This unified approach accelerates troubleshooting and ensures consistent SLA enforcement across both wireless FWA (we suggest changing the word wireless with FWA to avoid any possible misunderstanding that wireless may also refer to the WiFi inside each home) and in-building wired segments, significantly enhancing the operational efficiency and customer experience for MDU broadband services.

KEY BENEFITS FOR NETWORK OPERATORS

The combined mmWave and G.hn solution offers several key benefits for network operators. First, it enables end-to-end cost optimization by avoiding the expenses and complexities associated with trenching and in-building rewiring.

Wireless backhaul, and the reuse of existing cabling allows high-speed services to be delivered without extensive civil works or infrastructure over-



hauls. Second, the solution ensures gigabit-class performance, combining the capacities of mmWave and G.hn technologies to support bandwidth-intensive applications such as 4K video streaming, cloud services, and video conferencing. Third, it offers flexible deployment options, supporting both indoor and outdoor G.hn Multiplexers with either direct or reverse powering schemes, making it adaptable to a wide range of MDU building types and installation scenarios.

CONCLUSION

Delivering ultra-broadband to MDUs is no longer limited by the availability of in-building fiber. By tackling both the external fiber access problem and the in-building wiring challenge, a combined mmWave and G.hn solution offers a clear, practical path forward. Operators can deliver gigabit-class services with speed, flexibility, and efficiency, without the delays or disruptions associated with traditional infrastructure upgrades.

This hybrid approach provides a future-ready architecture that is modular, standards-based, and optimized for high-density environments. It enables operators to rapidly scale service delivery while controlling both capital and operational expenditures, making it an ideal fit for the evolving demands of broadband connectivity in MDUs. ■



MAXIMIZING NETWORK EFFICIENCY AND CUTTING COSTS WITH E-BAND RADIOS

IOANNIS DRAVOPOULOS
Head, Transmission Radio Solutions

REVOLUTIONIZING NETWORK INFRASTRUCTURE AND OPTIMIZING COST OF OWNERSHIP USING ULTRALINK™-GX80 E-BAND FAMILY

In today's hyperconnected digital economy, the capacity and efficiency of telecommunications networks are under unprecedented pressure. Service providers must grapple with rising demands for high-speed data, expansive coverage, and bulletproof reliability—while simultaneously taming costs and enduring a long-term investment protection. Against this demanding backdrop, Intracom Telecom introduces the UltraLink™-GX80 family, a breakthrough in E-Band wireless transport technology that delivers performance excellence with optimization of total cost of ownership (TCO).

The UltraLink™-GX80 family is designed not just to support but to transform next-generation network deployments. With configurations supporting up to 15 Gbps symmetric throughput, this E-Band product series represents a compelling solution for mobile backhaul, enterprise access, fixed wireless access, and rural broadband initiatives. More

than just a leap in performance, it offers to the operator a strategic advantage by slashing both capital expenditures (CAPEX) and operational expenditures (OPEX) without compromising performance nor reliability.

SUPERIOR THROUGHPUT AND ROBUST LINK PERFORMANCE

The UltraLink™-GX80 family is a paradigm shift in wireless transport, engineered to deliver exceptional capacity with uncompromising service availability. These solutions are purpose-built to satisfy the soaring data consumption trends characteristic of modern digital applications and services. Key to this capability is the support for up to 15 Gbps symmetric throughput, delivering ultra-high-speed connectivity across a variety of deployment scenarios—from dense urban centers to remote backbone sites.

The UltraLink™-GX80 (10 Gbps) model utilizes state-of-the-art radio technologies that boast 70.6 dB system gain, enabling longer link distances up to 3.6 km with 99.99% availability. This capacity is achieved without the need for redundant or chained links, eliminating complexity

ARTICLE

while enhancing service robustness. Furthermore, the UltraLink™-GX80 Advanced (15 Gbps) achieves extended throughput using fewer units, optimizing both spectrum efficiency and equipment footprint.

Additionally, integrated Multiprotocol Label Switching (MPLS) capabilities enable seamless compatibility with existing and future network architectures. This built-in functionality helps reduce dependency on external CSR hardware, streamlining operations and enhancing flexibility.

UNRIVALED TCO SAVINGS

While performance is critical, the economic realities of infrastructure investment often define the feasibility of technology adoption. Here, the UltraLink™-GX80 family demonstrates exceptional value. Through intelligent design and reduced equipment complexity, the system slashes costs across multiple fronts:

» Installation Costs

Up to 70% lower compared to traditional multi-band configurations.

» Material Requirements

65% fewer components due to the simplified radio and single-polarized antenna design.

» Spectrum Leasing Costs

Reduced by up to 75%, thanks to superior spectral efficiency.

» Power Consumption

Up to 80% less energy use compared to competitive solutions for delivering similar capacity and MPLS functionality.

» Site Rental and Planning

As much as 45% lower costs, made possible by a reduced need for additional infrastructure.

For example, a conventional 10 Gbps setup might require dual-band E-Band and 18 GHz XPIC microwave links, and dual-polarized antennas. In contrast, the UltraLink™-GX80

achieves the same capacity with only two E-Band radios and two single-polarized antennas—halving the installation effort and minimizing spatial and structural requirements.

ELIMINATING INEFFICIENCIES WITH HIGH POWER DESIGN

Historically, achieving 10 Gbps over extended distances necessitated chained links—doubling hardware, cabling, and power needs. The UltraLink™-GX80 model eliminates this redundancy by delivering robust 10 Gbps links with a single link configuration. The result is a 50% reduction in installation, materials, and planning needs, alongside a 75% cut in power usage and a 45% drop in site rental costs. This capability is particularly advantageous for urban / suburban or hard-to-reach deployments where the costs and logistics of intermediate repeater sites are significant.

MAXIMIZING CAPACITY EFFICIENTLY WITH THE ULTRALINK™-GX80 ADVANCED MODEL

Operators seeking unmatched capacity will find the UltraLink™-GX80 Advanced model ideally suited for high-density, high-demand scenarios. Capable of delivering 15 Gbps symmetric throughput, this model sets a new benchmark in wireless transport efficiency. With just one radio and a single 60 cm antenna, it rivals competitors' setups requiring multiple radios and larger, more complex antenna arrays.

Cost savings are similarly impressive:

- » 80% lower power consumption compared to multi-radio setups for delivering similar capacity and MPLS functionality.
- » 50% savings on installation, materials, and spectrum leasing.
- » 25% reduction in site rental costs.

BENEFITS

with UltraLink-GX80 family



-70%
installation
cost



-65%
material
required



-75%
spectrum
lease



-80%
power
requirements



-45%
site rental &
planning cost

This model is particularly suited to urban environments, where available tower space and spectrum costs are at a premium. Its lean configuration not only reduces overhead but also enhances deployment agility.

SLICING DOWN CAPITAL EXPENDITURE

UltraLink™-GX80 family, with its leading System Gain, provides major advantages over competitive E-Band solutions. This results in less equipment required to provide high-speed and reliable connectivity, that allows Operators to spend less for obtaining the same service.

- » **Longer Reach:** UltraLink™-GX80 can deliver 10 Gbps service with 99.99% capacity availability further than any other E-Band solution. Thus, with a single link Operators can deliver service, whereas competitive solutions would require 2 links daisy-chained to provide the same service.
- » **Use E-Band instead of Dual Band:** UltraLink™-GX80 has the system gain and capacity to provide the same service with a single E-Band link, where competitive solutions would require Dual Band, E-Band and traditional Microwave combination. Operators can benefit by not investing in traditional Microwave equipment and special Dual Band antennas.
- » **Achieve 15 Gbps with a Single Link:** UltraLink™-GX80 Advanced can deliver 15 Gbps through a single 1+0 link, due to the high special efficiency of the UltraLink™-GX80 family. Competitive solutions limit their capacity to 10 Gbps over a single 1+0 link, so two parallel competitive links would be needed to provide what UltraLink™-GX80 Advanced can offer with a single 1+0 link.

Furthermore, the product family supports Hybrid L2/L3 support with embedded MPLS functionality, eliminating the need for Cell Site Router equipment at each site.

DRIVING OPERATIONAL EFFICIENCY AND SUSTAINABILITY

In addition to capital savings, the Intracom Telecom's E-Band radio family delivers substantial operational advantages. These enhancements are central to building sustainable, future-proof networks.

- » **Energy Efficiency:** The UltraLink™-GX80 Advanced consumes just 2.1 kWh/day, compared to 10 kWh/day in traditional systems for delivering similar capacity and MPLS functionality. This not only lowers energy costs by approximately 80%, but also contributes significantly to carbon footprint reduction.

In a rapidly evolving connectivity landscape, the UltraLink™-GX80 family is not just a product—it's a strategic enabler of network excellence

- » **Simplified Installation:** The use of fewer components translates to quicker deployments, reduced labor costs, and minimal truck rolls.
- » **Compact Solution Design:** Space-saving hardware configurations avoids costly tower reinforcements and enable easier integration into constrained environments.

These attributes make the UltraLink™-GX80 family a key enabler of green, agile, and scalable network operations.

READY FOR THE FUTURE: SCALABLE AND AGILE

Perhaps one of the most strategic benefits of the UltraLink™-GX80 family is its forward-looking design. With software-defined features and native MPLS support, operators can adapt their infrastructure as service demands evolve—without expensive hardware upgrades or overhauls. This future-proofing ensures investment protection and extends the lifecycle value of the equipment.

CONCLUSION: A SMART INVESTMENT FOR MODERN NETWORKS

Intracom Telecom's UltraLink™-GX80 family delivers results that translate directly to the bottom line. By delivering industry-leading throughput, operational simplicity, and dramatic cost efficiencies, it enables network operators to accelerate service rollouts, improve customer satisfaction, and reduce churn—all while lowering the cost per bit delivered. The combination of CAPEX and OPEX savings enables a faster return on investment and improved long-term profitability.

In a rapidly evolving connectivity landscape, the UltraLink™-GX80 family is not just a product—it's a strategic enabler of network excellence. Whether it's 5G mobile backhaul, enterprise networking, or transport network, UltraLink™-GX80 family provides a robust and cost-effective foundation for digital service delivery. ■

ETSI'S SDG OPENOP: HIGHLIGHTS FROM THE JULY KICK-OFF MEETING

DR. VASILEIOS THEODOROU
Head of Research Collaboration

In July 2025, a significant milestone for the telecommunications industry was reached with the successful kick-off meeting of the ETSI Software Development Group OpenOP (SDG OpenOP) by a strong coalition of founding members, led by Intracom Telecom. The event marked the formal start of an ambitious initiative aimed at delivering a reference open-source implementation of the GSMA Operator Platform—a technology set to transform the way telecom capabilities are exposed and consumed across industries and paving the way towards 6G innovation.

For Intracom Telecom, the meeting was more than a procedural launch. It was a clear demonstration of the company's leadership, vision, and commitment to shaping the future of next-generation communication systems. Represented by Dr. Vasileios Theodorou, Convenor and appointed Chair of OpenOP, Intracom Telecom stood at the forefront of this collaborative effort, steering discussions, setting priorities, and affirming its position as a key driver of innovation within the European and global telecom ecosystem.

OPENOP: BRIDGING A CRITICAL GAP IN THE TELCO CLOUD

The OpenOP initiative, hosted by the European Telecommunications Standards Institute (ETSI) where Intracom Telecom is a proud full member, was

conceived to address a critical gap in the telecommunications ecosystem. On the one hand, the GSMA defines requirements for the Operator Platform, outlining the functions and features needed to expose telco capabilities such as edge computing, quality of service (QoS) controls, and location-based services. On the other hand, the Linux Foundation's CAMARA project develops APIs to interface with these capabilities in an application developer-friendly manner, making them accessible and usable across sectors and industries.

However, what was missing until now was a practical, vendor-neutral, open-source reference implementation of the Operator Platform to foster and catalyze innovation across communities of operators, developers, researchers and service providers. OpenOP fills this void by providing a unifying framework where research organizations, SMEs, and telecom players can test, experiment, and co-develop solutions. By doing so, OpenOP enables innovation in vertical industries such as automotive, healthcare, and manufacturing, as well as stronger collaboration across research ecosystems, particularly within European 6G research initiatives. At the same time, OpenOP creates opportunities for SMEs and testbeds to access advanced telecom capabilities without vendor lock-in. This unique positioning makes OpenOP a cornerstone for the evolution of the Telco Cloud and a catalyst for Europe's leadership in 6G innovation.

FROM SUNRISE-6G TO ETSI SDG OPENOP

OpenOP seeds were planted by the SUNRISE-6G Horizon Europe project, the flagship Smart Networks and Services Joint Undertaking (SNS JU) project focused on building a pan-European federated infrastructure for 6G experimentation, where Intracom Telecom is also playing a pivotal role. Building on this momentum, ETSI formally launched the SDG OpenOP in April 2025, with a strong consortium of founding members drawn from both industry and academia, including Intracom Telecom, Industrial Systems Institute | Athena Research Center, Motorola Mobility, OTE AE (Hellenic Telecommunications Organization), EURECOM GIE, Orange Romania, Fraunhofer FOKUS and i2CAT Foundation. This balanced group reflects the multi-stakeholder spirit of OpenOP, ensuring broad representation across telecom operators, equipment vendors, research institutes, and vertical-focused innovation centers.

THE KICK-OFF MEETING: SETTING THE STAGE

The kick-off plenary meeting, held in July 2025, brought together all founding members and participants to lay the groundwork for OpenOP's development roadmap. Over several sessions, participants approved the organizational structure, established working groups, and defined the near-term objectives of the initiative. Key outcomes of the meeting included the formal approval of organizational procedures to ensure transparent, efficient collaboration, as well as the formation of the Leadership Group, tasked with steering strategic decisions and providing oversight. The appointment of Mr. Michael Makidis from Intracom Telecom as



Technical Chair of OpenOP, complemented by Intracom Telecom engineers in various module development leadership roles, further underscores the company's strategic influence and leveraging of software engineering excellence and experience towards high-quality outcomes and impact. The meeting agenda also included the planning of the first code releases, setting the pace for a rapid delivery cycle that aligns with the needs of both operators and developers, in addition to the scheduling of future plenaries and technical workshops to maintain momentum, disseminate the project's activities and ensure cross-fertilization of ideas.

Throughout the discussions, Intracom Telecom's role was crucial. As Convenor and Chair, Dr. Theodorou guided debates, coordinated inputs, and ensured consensus was reached on the strategic directions, balancing technical depth with diplomatic leadership. By convening and leading the initiative, Intracom Telecom is not only participating in the standardization process but actively influencing it. This positions the company at the core of global conversations around telco cloud and 6G. Moreover, Intracom Telecom's involvement reaffirms its dedication to supporting European leadership in advanced communications as OpenOP strengthens Europe's technological sovereignty by ensuring that open-source solutions for telecom are developed and hosted within European frameworks.

Leadership in such a high-profile ETSI initiative elevates Intracom Telecom's brand on the global stage, highlighting the company as a trusted partner for both industry peers and academic stakeholders, while at the same time opening pathways to collaborations with vertical industries, SMEs, and operators worldwide, generating tangible opportunities for product innovation and market expansion.

RECOGNITION AT HOME

The significance of this impactful initiative did not go unnoticed in Greece. The kick-off meeting of OpenOP received coverage from national media outlets, including Naftemporiki and ERT News), underscoring both the importance of the initiative and the recognition of Intracom Telecom's leadership within its home country, participating a cluster of Greek organizations with recognized footprint in global 6G research and innovation activities. This media spotlight reflects a growing awareness in Greece of the nation's contributions to global telecommunications and 6G innovation that will define the coming decades.

LOOKING AHEAD

With the kick-off successfully behind it, OpenOP is now entering its development phase. The immediate focus lies on delivering the first code releases, which will serve as building blocks for experimentation and adoption. The next months will also see the continuation of working group activities, where technical experts from all project members will contribute to shaping modules, defining interoperability frameworks, and validating use cases. Intracom Telecom will continue to play a leading role in coordinating these activities, ensuring that the group's efforts remain aligned with the broader goals of 6G innovation and vertical integration, creating a fertile ground for new services in areas like immersive media, smart mobility, telemedicine, and Industry 4.0.

CONCLUSION

The kick-off meeting of ETSI SDG OpenOP in July 2025 marked the start of a transformative journey for the telecommunications industry. At the heart of this journey stands Intracom Telecom, whose leadership, technical expertise, and vision have been instrumental in shaping the project's foundations. From guiding organizational decisions to receiving recognition in the national media, Intracom Telecom has demonstrated that it is not only a participant but a true leader in defining the future of the telco cloud and 6G ecosystems. As the project advances, the company's involvement in OpenOP will continue to drive innovation, strengthen European leadership, and create opportunities that extend well beyond telecommunications. For Intracom Telecom employees, customers, and partners alike, this is a moment to celebrate and a future to look forward to with confidence. ■



BEYOND FIBER: HOW PARTNERSHIPS ARE POWERING THE FUTURE OF BROADBAND

ALEXANDROS TARNARIS

Group Corporate Communications Director

In the race to close the digital divide, broadband is no longer a luxury; it's essential infrastructure. Across the U.S., providers are expanding service, boosting performance, and pursuing funding through programs such as BEAD. While fiber remains a cornerstone of high-speed connectivity, the costs and time associated with its rollout have made fixed wireless and wireless transport technologies more attractive and practical for many use cases. For many service providers these latest alternatives to fiber are enabling a wireless-first strategy, one that prioritizes scalable, spectrum-efficient technologies to accelerate broadband access, particularly in areas where fiber is costly, slow to deploy, or geographically challenging. Yet, cutting-edge technology alone does not guarantee success. Real success depends on the ecosystem that delivers it, bringing together the right mix of innovation, expertise, and operational support.

THE POWER OF COLLABORATION

Broadband deployment is a team effort. Technology vendors drive platform innovation, creating systems that are high-performance, carrier-grade, and compliant with U.S. regulations and environmental considerations. Master distributors such as Winncom Technologies play a critical role in adapting those solutions for regional markets. Their knowledge of permitting, logistics, and local network realities helps reduce barriers and deployment time.

Carriers, meanwhile, are installing and maintaining networks in the field, often in underserved or difficult-to-reach areas. The synergy among these players is what makes high-performance networks possible. When aligned, they can reduce lead times, optimize planning, and improve total project efficiency. What used to take months can now be achieved in weeks, and what was once cost-prohibitive is becoming increasingly viable.

Collaboration is the cornerstone of broadband expansion, where partnerships unite technology, expertise, and execution to deliver lasting connectivity and opportunity

WIRELESS TECHNOLOGIES THAT SCALE

Fixed Wireless Access (FWA) and wireless transport technologies such as E-Band are proving themselves as scalable, cost-effective complements — or even alternatives — to fiber. MmWave FWA systems operating in the 28 GHz and 29/31 and 39 GHz bands are enabling high-speed access to MDUs, small businesses, and residential neighborhoods, particularly in dense areas. Line-of-sight and interference challenges still exist, but advances in radio hardware, beamforming, and network design are making these obstacles more manageable. FWA can now reliably deliver multi-gigabit performance over long distances, even in complex RF environments.

Middle-mile connectivity also has evolved. E-Band radios offer fiber-like speeds with low latency, serving as essential links between distributed access points and the core network. Their performance helps operators meet demanding service level requirements while keeping capital expenditures under control. Companies such as Intracom Telecom have engineered advanced FWA and E-Band solutions that combine long-range capabilities, multi-gigabit throughput, and spectrum efficiency. The focus on deployment agility and total cost of ownership makes these platforms particularly well suited to time-sensitive or budget-constrained expansion efforts.

FUTURE-READY AND FLEXIBLE

Modern broadband networks need to deliver more than just speed — they must be adaptable to ever-changing demands. A wireless-first architecture built on scalable, modular platforms provides the foundation for seamless capacity upgrades, diversified service offerings, and smooth integration of emerging technologies like 5G, all without the need for costly and disruptive infrastructure rebuilds. These networks are designed to last, evolving step-by-step as subscriber needs and technology environments change, rather than requiring complete replacement. Moreover, the strength of vendor-distributor-operator partnerships plays a critical role in this adaptability. By aligning innovation, local expertise, and operational execution, these collaborations ensure that networks are deployed efficiently and built to handle future growth. This proactive approach not only accelerates initial rollouts but also future-proofs broadband infrastructure, enabling providers to quickly respond to new market opportunities, regulatory changes, and increasing data demands without missing a beat.

ALIGNING FOR IMPACT

Today's broadband challenge is as much about coordination as it is about connectivity. Providers pursuing BEAD funding or expanding into underserved markets can't do it alone; they need aligned partners who bring the right technology, local expertise, and operational efficiency. Together, these collaborations are making broadband deployment faster, smarter, and more scalable. More importantly, they're delivering real opportunity to the communities that need it most. ■

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