

INDOOR WIRELESS DONE RIGHT

Wide Spectrum. Protocol Agnostic. Cost Effective.

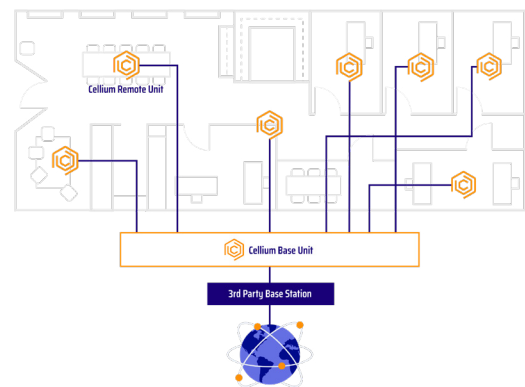
Cellium brings to market a patented technology designed to revolutionize indoor wireless connectivity.

Our intelligent SoC is the world's first to optimally distribute any sub-7 GHz wireless protocol to address the current and future needs of In-Building Wireless (IBW) connectivity. It is compatible with all existing indoor wireless technologies, including the latest cellular 5G, WiFi 6/6E, and IoT networks.

INTRODUCING A DISRUPTIVE

Indoor Wireless Coverage System

Our end-to-end system is comprised of a Cellium Base Unit that distributes the analog RF signal to various Cellium Remote Units mounted in the indoor space. The analog RF signal is distributed to the Remote Units over existing in-wall copper cables such as CATx or Coax. The Base Unit has antenna ports to connect to the RF interface of any third-party Signal Source or WiFi Access Point with a standard RF cable.



ADDRESSING

Indoor Wireless Coverage Challenges

Spectrum

The latest Cellular and WiFi communication protocols are designed to transmit wide bandwidth, on high frequencies and high modulation rates that require high SNR and low latency. Furthermore, each Cellular cell or Wi-Fi Access Point occupies larger parts of the available spectrum, dramatically increasing congestion and dropping the SNR/SIR, resulting in rate drop and low spectrum efficiency in dense indoor deployments.

Coverage

Intense wireless spectrum utilization has forced regulators to allocate new frequencies for 5G and WiFi 6/6E standards in higher mid-band spectrum. These frequencies suffer high penetration loss that significantly drop the SNR and consequently shorten the system coverage. Current indoor systems have significant high cost in order to distribute this signal and achieve high performance and throughput.

Deployment

In order to meet the technical requirements of high frequency and high bandwidth radio technologies, traditional indoor cellular coverage deployments require significant investment in infrastructure such as RF cables, fibers, radios, and installations for each new technology. Furthermore, most deployments are not future-proof and requires a rip-and-replace to support new bands and protocols.

Cost

Cellular 5G and WiFi 6/6E SoC consist of MIMO and higher modulation rates that require much higher processing power compared to older cellular or WiFi technology SOCs. The number of RF chains are doubled or quadrupled to keep up with the latest advances in wireless technologies, increasing the system cost.

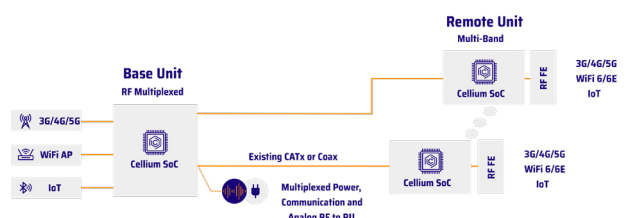
A NEW APPROACH TO

Indoor Wireless Connectivity

Our patented technology and SoC convert radio signals emanating from a signal source, such as Cellular small cell / RU, WiFi AP, or IoT hub at the Base Unit cable edge; and distribute it over existing in-wall CATx Ethernet copper or coaxial cables. The cables carry the wireless signals in the analog domain to multiple radio Remote Units which can be installed in every room and space within the indoor area to reconvert and transmit the signal.

System Block Diagram

A wireless protocol agnostic RF technology that handles MIMO signals with no handover or management required.



Benefits

A disruptive technology that significantly enhances the performance of indoor Cellular, WiFi and IoT wireless networks at a fraction of the cost, utilizing existing in-wall Ethernet or Coax cables as part of the wireless network.



- 3x** Bandwidth
- 50%** Power Consumption
- 75%** Physical Size
- 25%** System Cost
- 10%** Latency



- Any Band Up to 7GHz
- Automatic Cable Adaptation
- Simple RF planning & Installation
- No inter-cell interference (Robustness)
- No Handover between RUs

Leadership



Dror Jerushalmi
CEO

Dror attained over 30 years' high-level management and international business development and marketing experience in the hi-tech sector. Prior to joining Cellium, Dror co-founded and led Valens as its CEO for over 13 years. Valens is a leading fabless semiconductor company whose HDBaseT technology has been adopted as a standard for connectivity in the audio-video and automotive markets. Prior to Valens, Dror assumed marketing and business development managerial roles in different companies.



Oz Liv
CO-FOUNDER & PRESIDENT

Prior to founding Cellium, Oz served as the Head of the elite R&D Unit of the IDF which specializes in computerized systems and wireless technologies. Since 1998, he was involved in the management of several hi-tech start-ups, served as a venture partner in a leading Israeli VC firm, and founded GoNET Systems in 2003.



Roy Kinamon
CO-FOUNDER & COO

Roy brings to Cellium over 20 years of communications engineering development experience and responsible for leading all product development and engineering. Prior to founding Cellium, Roy was VP R&D and VP marketing at GoNet systems, an outdoor WiFi company. He also managed the Israel Design Center for STMicroelectronics (NASDAQ: STM), leading over 50 engineers developing STM's xDSL chipset solutions.



Eran Bello
CMO & CBDO

Eran has extensive knowledge in Telecom and IT technologies, with over 20 years' experience in product, marketing and business. Eran is known as a serial 'mover and shaker' of open-RAN and NFV digital transformation. Prior to joining Cellium, Eran led marketing and business at ASOCS and served in executive positions in companies including Mellanox (acquired by Nvidia), Anobit (acquired by Apple), Runcom, Microsemi and PowerDsine. He also served five years in the elite R&D Unit of the IDF.



Gil Bahat
CFO

Gil leads the company's finances, bringing with him more than a decade of local and global finance and managerial experience. Previous experience includes: CFO at Zeekit and Somp Digital Labs TLV; VP Finance at OryxVision and Cynerio. Senior Controller at BiolineRX (NASDAQ: BLRX), and audit manager at PwC Israel where he led audit teams, as well as advised companies in various stages, from establishment through M&A's and IPO's, both local and abroad.



Sharon Ashkenazi
VP R&D

Sharon brings over 25 years of communications engineering development and management experience. Prior to joining Cellium, Sharon served as VP engineering at Gonet systems, an outdoor WiFi company. Prior to that he was a founding team member of Congruency, a VoIP startup acquired by Telrad Networks (TLRD). Before that Sharon served in an elite R&D unit of the IDF developing a unique communication and security systems.

The Company

Cellium is a multidisciplinary technology company focused on providing indoor wireless connectivity solutions that support backward compatibility, as well as the latest current and future generation technologies, to future-proof investment of cellular, WiFi and IoT networks essential to the enterprise, retail, education, healthcare, hospitality, venue, and other market segments.

Our SoC enables the distribution of a wide sub-7GHz RF spectrum between a base unit and multiple distributed radio units over standard CATx Ethernet or Coax cables in the most efficient, high performance, and cost effective way; overcoming the challenges neutral hosts, integrators, and end-users face in traditional DAS and DRS deployments.