Bittium

R&D services for IoT & Telecom

Bittium provides professional design and development services from technology consultation to commercial wireless product designs. Bittium's competitiveness in these markets is based on strong technology and security expertise, and an established reputation for reliability and quality.

Trusted R&D partner

Bittium has an extensive track record in designing, implementing, verifying and managing the development of innovative, purpose-built wireless devices which meet customer-specific needs. The understanding of industry-specific requirements, strong expertise in productization and the whole product lifecycle with state of the art processes and tools enables high-quality product development with end-to-end security solutions.

Ensuring efficiency

Customers can accelerate their product development and lower their development costs with Bittium. The combination of Bittium's existing technology platforms and R&D service offering can often result in a plug-n-play experience.

Projects executed timely and with high quality have always been our way of working. Bittium's ability to adapt to a customer's processes and technologies ensures optimal solutions for time-to-market and

expenses. Bittium is certified by the following standards ISO 9001, ISO 14001, AQAP 2110 ed.3, and ISO 13485 (coming by Aug 2017).

Meeting the most demanding needs

Bittium has a broad range of experience in working multi-national projects across the globe and in various wireless, industrial, medical and telecom sectors. Bittium's engineering projects range from small, proof-of-concept projects to full-blown product designs. Bittium's engineering resources can be scaled and selected to meet the exact requirements of a project, whether it be small or large.

Bittium's in-house resources don't just include the engineers. Bittium maintains the latest in state of the art design tools, including both the electrical and mechanical domains. As well, in house test equipment and RF chambers allow Bittium to validate designs quickly and efficiently.

Value for Bittium's Customer

With over 30 years of experience of wireless technologies, Bittium is a trusted Nordic design and development partner offering its customers the latest technology expertise in wireless device, network element and IoT solutions.

› **E2E capability** – In-house capability to design and integrate the base station, mobile device and cloud based solutions

› **Market leader** – in outsourced macro/small cell R&D services, with state-of-the-art base station competences.

› **Processes, quality & environment** – certified management system.

› **Quality, reliability, visibility** – transparent lean and agile way of working.

› **Development of customer-specified wearable products faster and with lower costs** – Bittium has been developing wearable products since 2009 and has strong expertise and knowledge of the latest sensor and wearable technologies.

› **Cost efficient radio solutions** – Bittium has been developing new and innovative antenna solutions with optimal radio technology selection for multiple domains.

FOR MORE INFORMATION, PLEASE CONTACT:
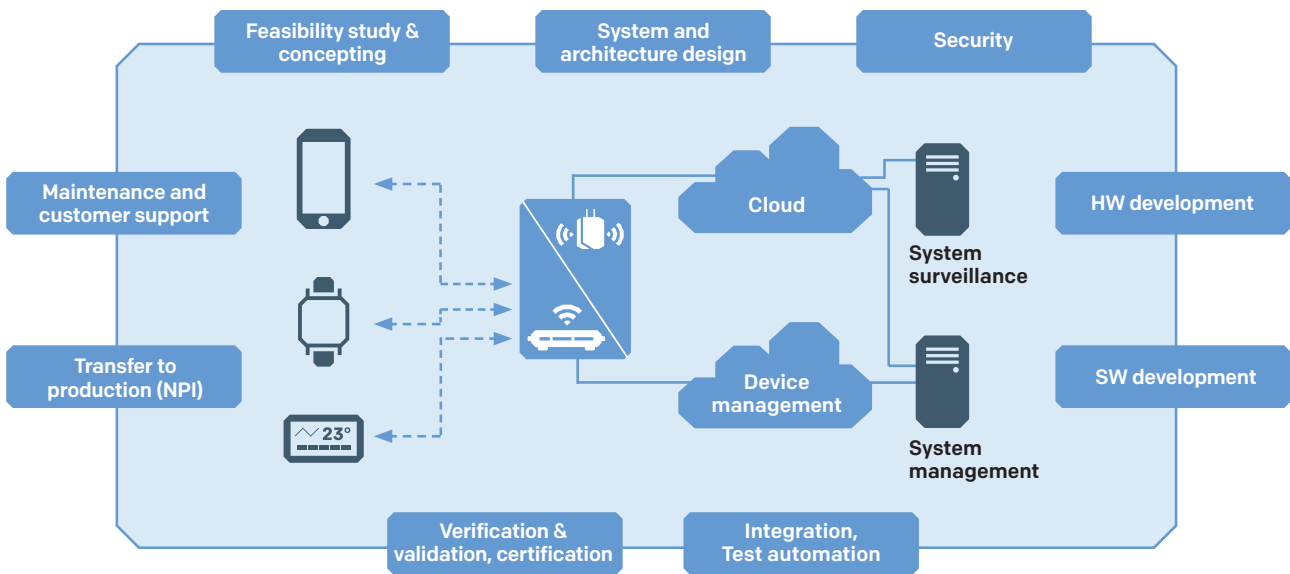**sales1global@bittium.com**

R&D services
for IoT & Telecom

Unique competence

Bittium's services range from turnkey solutions to diverse R&D design services for Core Network, 2G, 3G, 4G, and emerging 5G technologies. Bittium offers services with flexible business models, including time and material, fixed price and risk/reward. Over 500 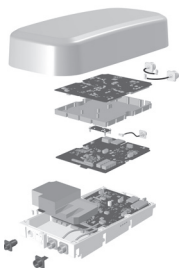experienced and dedicated R&D engineers are at your service globally, with strong competence in the following areas: system design, security, software, hardware, radio frequency, antenna, mechanical design, product verification & validation, and operations.

Development and consulting services

Feasibility study & concepting	System and architecture design	Security
Maintenance and customer support	Cloud	HW development
	System surveillance	
Transfer to production (NPI)	Device management	SW development
	System management	
Verification & validation, certification	Integration, Test automation	

End-to-end project capability: Devices, Network/cloud Solutions, Application Systems

Selected Bittium Products and Services

Base Station R&D Services
Bittium offers 3G/4G/5G base station development and frequency variant development services for OEM's globally.

Bittium Tough Mobile™
A secure and strong LTE smartphone, designed and built for demanding Mobile Security and Public Safety markets. Designed and manufactured in Finland.

DevOps Services
Bittium provides DevOps services for companies that are seeking to increase the speed, quality and transparency of their own product development.

Wearable & IoT Product Antenna Design
Bittium provides design, simulation, and validation services for the most challenging IoT and wearable product designs, including WiFi, Bluetooth, GPS, and LTE.

Wearable Reference Design
Bittium's multi-sensor wearable reference design is a cost-effective way to develop new products and services e.g. in preventive healthcare.

Example ID of a possible commercial product based on Bittium wearable platform

Bittium • Tutkijantie 8, FI-90590 Oulu, Finland • Tel. +358 40 344 2000 • **www.bittium.com**