



Bittium offering

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Bittium

Bittium in a nutshell

Secure Mobile Communications



- Bittium Tough Mobile product family
- Secure connectivity and mobile working
- Special devices

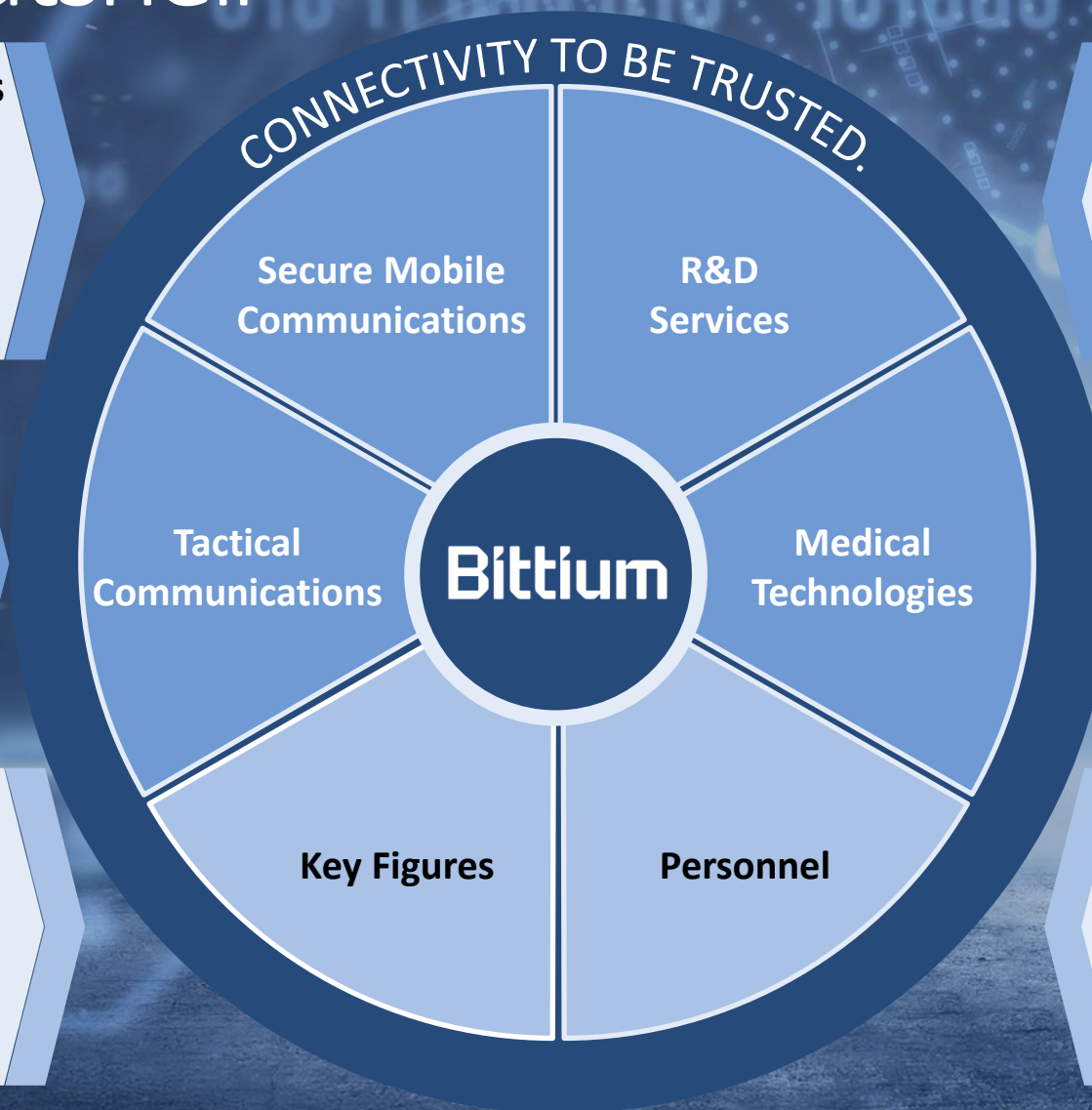
Tactical Communications



- Military radio and communications solutions

Key figures in 2020:

- Net sales: 78.4M€
- Operating profit: 2.1M€
- R&D investments: 22.7M€
- Listed on Nasdaq Helsinki (BITTI).



R&D Services

- R&D services and technology expertise in wireless devices
- Network infrastructure
- IoT solutions



Medical Technologies:

- Medical devices
- Platforms for biosignals' monitoring services and analysis



Personnel:

- Approx. 650 employees, from which approx. 560 engineers
- Headquarters in Oulu
- Offices in Finland, Germany, US, Mexico and Singapore

Bittium Cellular and Communication know-how



Cellular expertise

- Bittium has over 25 years of experience from cellular radio design both in network and in terminals.
 - 200+ R&D projects for radio elements in NMT, 2G, 3G, 4G, 5G and WLAN
 - 100+ R&D projects for different handsets, several turnkey mobile phones in 2G, 3G, 4G and satellite
- Bittium has extensive experience with LTE technology
 - Designs done based on chipset e.g. Bittium Tough Mobile™ smartphone, designs based on cellular module e.g. Industrial Gateway design, hybrid designs done e.g. LTE/Satellite phones
- Excellent R&D and verification test laboratory capacity
 - R&D measurement equipment for both RF and protocol testing and development
 - In-house EMC and antenna test laboratories
 - Local partners for additional test capacity and capability

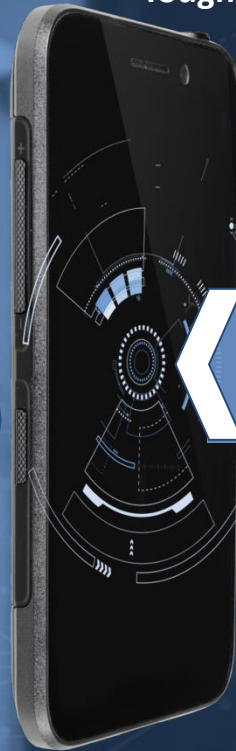


Bittium Tough Mobile™ Product Family

Ultra secure smartphones

- ✓ Bittium Tough Mobile product family for the highest security requirements
- ✓ Multilayered security integrated in hardware and source code
- ✓ Trusted design and manufacturing in Finland

Bittium
Tough Mobile



Bittium
Tough Mobile 2



END-TO-END MOBILE SECURITY

Secure data transfer

- ✓ Bittium Secure Suite™ – complete solution for secure communications with Bittium Tough Mobile smartphones
- ✓ Analytics of mobile networks and devices complements secure mobile communications

Mobile devices with Satellite connectivity - Mexsat

- Mexsat is a Mexican government program that provides satellite communication services over Mexico and its patrimonial seas, including the Gulf of Mexico and the Pacific Ocean. Mobile devices are developed by Bittium.
- For the Mexsat program Bittium has developed three different types of Android™ based L-band mobile devices:
 - Satellite-terrestrial Smartphone
 - Satellite-terrestrial Rugged Enhanced
 - Satellite Rugged Basic
- The satellite-terrestrial phones can be operated in both the satellite network and the terrestrial network. The users do not have to carry two separate devices with them, and establishing communications through either network is quick and easy.



Bittium Medical know-how



Product Offering

Bittium Faros™

ECG Devices for Cardiac Monitoring



Bittium BrainStatus™

EEG Monitoring System



Bittium NeurOne™

TESLA EEG System



Bittium HolterPlus™

Remote Cardiac Monitoring Solution



Bittium Respiro™

Home Sleep Apnea Testing Solution



Bittium MedicalSuite™

Remote Monitoring Service Platform



Solutions Offering

Cardiology

Holter Monitoring

For short-term (12h to 48h) and for long-term (up to 8 days per battery charge) ECG measurements

Cardiac Event Monitoring

For recording heart activity only during episodes of abnormal heartbeat

Mobile Cardiac Telemetry

For real-time outpatient monitoring

Neurology

EEG Monitoring at ICU & ER

For Fast and easy Continuous EEG

Neuroscientific Research

A high-end EEG System for standard EEG/ERP studies for clinical and research use.

Sleep Apnea Analysis

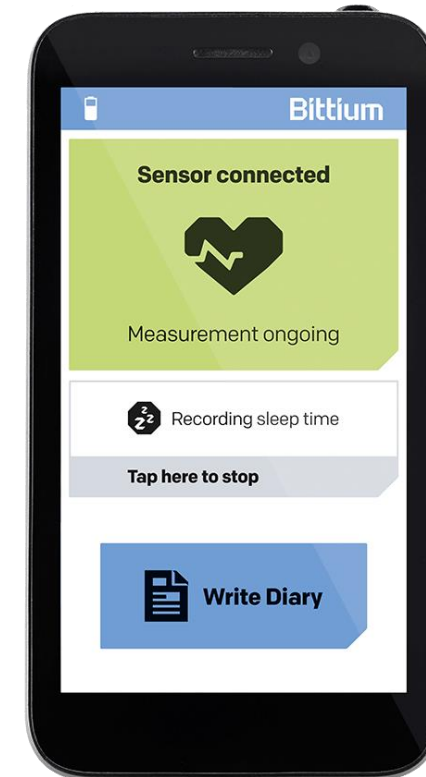
Online and Offline Home Sleep Apnea Testing Systems

for analysing sleep-related breathing disorders

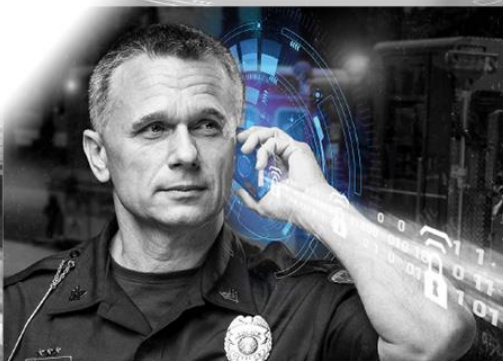
Remote Data & Service Management for comprehensive diagnostics services through one digital channel

Mobile Device Functionality for Patient

- Single purpose device built to withstand and be simple to use with high security
- Hands-on instructions and support to recording period directly from application
- Digital diary for symptoms, activity and sleep
- Continuous automatic data transfer to platform service for remote analyzing



Bittium services



Areas of Expertise



System & Architecture
Design



Electronics
Design



Mechanics
Design



Wireless
Design



Software
Design



Testing, Laboratories,
Verification



Digitalization
Services



Transparent, Lean and
Agile Way of Working

Complete Set of R&D Services

We provide professional R&D ENGINEERING SERVICES and TECHNOLOGY EXPERTISE in the areas of wireless devices, network infrastructure, and IoT solutions.

We can help at every stage, from technology consulting and concept strategy, through to turnkey product and service development.





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