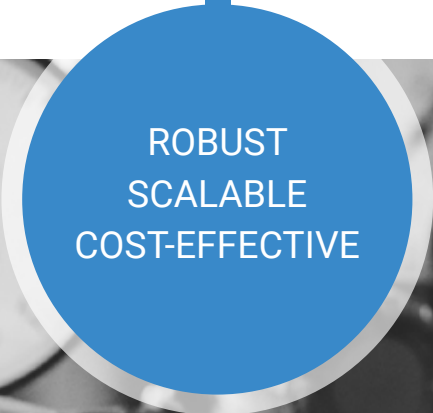



# BEHRTECH

## Smart Metering

Get Best-in-Class Wireless Connectivity with MIOTY™



ROBUST  
SCALABLE  
COST-EFFECTIVE



Enabling unprecedented two-way communication between utilities and consumers, smart meters remain among the most critical components in the emerging smart grid. By transmitting near real-time usage data of residential, commercial and industrial users, these IoT-enabled devices aid utilities in streamlining energy forecasting and distribution, stabilizing grid operations, and delivering a host of new service offerings.

In the general utility sector, smart meters are also instrumental in early detection and prevention of water leakages, thus greatly contributing to the improvement of water conservation and management.

## Unlock the Potential of Smart Metering with an Advanced Infrastructure

While effective connectivity is a vital building block for smart meters and Advanced Metering Infrastructure, existing technologies fall short. Wired solutions are undoubtedly a no-go considering the prohibitive commissioning and maintenance costs. Despite its ubiquity, cellular connectivity is constrained by high power consumption, ongoing network costs, and above all, inconsistent coverage in remote and underground locations. Multi-hopping mesh topology employed by short-range wireless technologies can inflate infrastructure costs and reduce battery efficiency, as unnecessary endpoints need to be added to achieve the desired range. Particularly, since each node itself acts as a router or access point, one breached node can lead to the disruption of a whole system, making these networks greatly susceptible to cyber-attacks.

Bringing a low power, wide area (LPWA) solution with enhanced robustness and system capacity into play, MIOTY™ is poised to become the new backbone for advanced metering infrastructure. Besides being geared for IoT devices requiring low data rates like smart meters, MIOTY satisfies a myriad of other critical network requirements.

Network Requirements	The MIOTY™ Advantage
<ul style="list-style-type: none"> <li>Reliable connectivity for indoor, underground &amp; remote smart meters</li> <li>Consistent network uptime</li> </ul>	<ul style="list-style-type: none"> <li>Robustness against physical and radio interference, deep indoor penetration</li> <li>Extensive, adaptable coverage to cover cellular “white spots” &amp; hard-to-reach locations</li> </ul>
<ul style="list-style-type: none"> <li>Security &amp; data privacy</li> </ul>	<ul style="list-style-type: none"> <li>Multi-layer security</li> <li>Private network offering full data control &amp; ownership</li> </ul>
<ul style="list-style-type: none"> <li>High scalability &amp; ease of network expansion to accommodate increasing number of smart meters</li> </ul>	<ul style="list-style-type: none"> <li>Huge network capacity: one single gateway can scale to handle 1.5 million messages/day</li> <li>Seamless integration of new end devices</li> </ul>
<ul style="list-style-type: none"> <li>Years of operation without battery replacement</li> </ul>	<ul style="list-style-type: none"> <li>High power efficiency supporting up to 20 years battery lifetime</li> </ul>
<ul style="list-style-type: none"> <li>Low total cost of ownership (TOC)</li> </ul>	<ul style="list-style-type: none"> <li>Low device costs, simple maintenance</li> <li>Low infrastructure requirement thanks to one-hop star topology combined with high range &amp; scalability</li> </ul>
<ul style="list-style-type: none"> <li>Flexibility and ease of installation</li> </ul>	<ul style="list-style-type: none"> <li>Worldwide standardized, vendor-neutral technology</li> <li>Simple, effortless network configuration and setup</li> </ul>

## Operational Impact

- Reduce operating costs with automated meter readings
- Balance electric loads and better manage demand fluctuations leveraging near real-time data on energy consumption and reverse flows
- Improve customer satisfaction through transparent and accurate billing
- Enable time-of-use dynamic pricing and demand shifting to control peak loads
- Remotely detect outages, meter tampering and energy thefts
- Facilitate integration of renewables into the grid and increase use of microgeneration to curb carbon emissions
- Quickly identify leaks to improve water efficiency and conservation

## Outlook: Augmenting Energy Management in Smart Buildings & Factories

Looking ahead, utilities as well as manufacturers and businesses can unlock the enormous potential of smart, digital metering capitalizing on the MIOTY technology. Beyond primary utility metering, MIOTY delivers dependable private networks for sub-metering in a vast array of industrial and commercial facilities. Securing reliable connectivity in structurally complex, geographically dispersed buildings and factories, the system provides granular power consumption data of discrete areas, systems and equipment (HVAC, lighting, plug loads, pumps, motors, etc.). Improved visibility into energy flows and use behavior helps facility operators identify waste sources, predict the remaining service life of equipment and optimize consumption planning, thereby enhancing efficiency while lowering costs.

## About BehrTech

Founded in 2018, Toronto-based BehrTech, is a worldwide licensee of MIOTY™, the leading wireless communication technology for the Internet of Things (IoT). The company is focused on commercializing, licensing, and supporting the MIOTY technology through partnerships with industry-leading technology providers, and the development of new MIOTY-based products and applications for the IIoT marketplace. BTI's first commercial product using this ETSI standard is the MIOTY 1.0 Starter Kit with Microsoft Azure, which was launched in April 2018 at Hannover Messe, Germany.

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