# Delivering Enhanced Security for Next Generation EV at Scale with SIMbae™

A global electric vehicle (EV) company is embarking on its vision to create the next generation motorcycles with products and experiences that merge the power and technology of electric vehicles and the exhilarating experience of driving a motorcycle. In the fast-paced landscape of electric vehicle manufacturing, assembly, and maintenance, it urgently identified a pressing need to safeguard against imminent security threats. It was imperative to securely store and manage proprietary keys, while ensuring flexibility for accessing critical applications like software diagnostic tools. A standardized solution is required to establish consistent key storage and ongoing management, all while upholding rigorous security protocols.

This critical requirement led to engaging Able Device, a company established by cellular communication experts with over 10 decades of combined experience in mobile device connectivity, IP, and tools. Able Device leverages the SIM/eSIMs/eUICCs for IoT to fortify defenses against potential threats, offering a confident and competent approach to safeguarding valuable assets.

# The Need for Robust Device Security at Scale

IoT devices are often designed based function and cost. Overlooking security can lead to disastrous consequences as different operating systems, applications, and components create potential backdoors for hackers. Trust must not be automatically granted to individuals, devices, or services seeking access.

An electric vehicle has the same requirement as any connected IoT device and at times more complex given its design and function. This company needed a trusted secure solution that can be implemented quickly.

Leveraging an existing standard component is a game changer in Able Device's ability to deliver a secure solution at scale and provides rapid ROI and cost savings to clients. The Subscriber Identity Module (SIM) is a high-security module with a micro-processor, clock, hardened memory, and multiple I/O ports. Its capabilities extend to securing access to devices, enterprise servers, and cloud providers.

Able Device's development of SIMbae, an innovative patented applet, fully maximizes the potential of the SIM/eSIM/eUICC in every connected device, ensuring enhanced device security.

# Delivering Universal SIM-Based Key Encryption with SIMbae

What was needed was a universal approach to securely store and manage keys as a security layer for applications needing access and other use cases. It needed strict security protocols to ensure that ongoing management of keys is impregnable.

SIMbae was identified as the ideal solution after evaluating different alternatives.

- **Universal:** SIMbae applet runs on the proven and universally available SIM/eSIM as the standards based security chip.

- **Propriety Security Credentials:** The devices can call functions related to cryptography TLS provisioned in SIMbae, allowing for the secure management of keys and certificates.

- **Lifecycle Management:** Keys & Certificates can be securely updated via standard over the air for ongoing lifecycle management and proactive threat mitigation.

- **Easy to Customize:** SIMbae enables developers to access the SIM-based secure element using a standards based interface, customizing security features for various use cases

With SIMbae, it eliminated the need for a proprietary security chip, saving Bill of Materials cost and is portable across different SIM types and vendors. The Able Device team is also working to comply with the GSMA IoT SAFE standards in its next release, providing key storage for TLS protocol and supporting proprietary security credentials for chip to cloud secure communications.

# The Value of Delivering Enhanced Security at Scale with SIMbae

### Robust Scalable Secure Solution

The perfect balance of having a universal approach to securely store and manage keys while following strict security protocols.

### Ease of Implementation

Ease of customization and standard OTA install means SIMbae can be deployed to motorcycles where they are and/or in the upfront design.

### Rapid ROI & Cost Savings

Avoid the hefty investment of secure proprietary hardware element for each device  and the cost and complexity of deployment and management.

# About Able Device

Able Device is a software company established by cellular communication experts with over 10 decades of combined experience in mobile device connectivity, IP, and tools. Our mission is to unlock innovation with the SIM for IoT and private networks. We revolutionize decision-making and automation at the edge, solving complex challenges in managing connected devices and networks.