Veridify Security

Product Overview

DOME™

Device Ownership Management and Enrollment

Onboarding and Ownership Management

For Globally Distributed Low-Resource Devices at the Edge of the IoT

DOME by Veridify™ is a zero-touch onboarding solution for the IoT. It delivers in-field ownership management, including 'transfer of ownership' between entities, mutual authentication, and firmware/data updates with no pervasive cloud/network connection required.

DOME benefits include a root-of-trust, creating a blockchain pedigree for each device. Implemented in software or hardware, DOME provides secure authentication, key/firmware updates, data collection, and optional proof-of-possession functions. With DOME, a device does not need to connect to the cloud or a network. The device only needs to connect to its owner. The owner only needs to connect to the cloud to enable the ownership transfer function.

DOME's provisioning enables secure device onboarding, even for those with no user interface, and allows the owner to securely authenticate to the device and prove ownership before the device allows any configuration. Once a device is "owned," the owner can set any necessary provisioning data, including providing new owner credentials or other owner-based identity information. This process reduces the time and workload to onboard a device.

DOME is uniquely suited for a broad range of markets including industrial IoT, smart grid, automotive, medical devices and others where trusted ownership, identity, authentication, and data protection at the edge of the IoT are a must.

DOME by Veridify™ A Device Ownership Management and Enrollment™ Platform

Overview

Flexible ownership management and authentication solution for globally distributed, low-resource devices at the edge of the IoT.

Key Benefits

- ***Transfer Ownership in the Field and Securely Connect to a Device with No Network or Cloud Connection:*** Proof-of-ownership rooted in the device.
- ***Root-of-Trust:*** Unique lifetime pedigree for each device in a blockchain.
- ***Manage/upgrade Firmware in Edge Devices:*** Owners can push updates to their devices and managed device will verify and install the update.
- ***Works with the Smallest IoT Device:*** Requires only 8K of ROM to implement on a deployed processor.
- ***Scalable:*** On-boarding and chain-of-custody operations easily scale to millions of devices.
- ***Software Solution:*** Can be integrated into programmable devices reducing costs and speeding time to market.
- ***Zero Touch:*** Enables the secure installation of devices, even for those with no user interface.

Smart Meter Use Case

Processor Manufacturer (PM) — *Meter Manufacturer (MM)* — *Utility/Power Company (Utility)*

Any entity in the supply chain can implement DOME and initiate secure management of a processor. In this use case, the Processor Manufacturer (PM) is the initiating node in DOME. It creates the initial blockchain block for the processor's pedigree document, rooted in the processor. When the PM sells and ships a processor to the Meter Manufacturer (MM), the PM updates the blockchain for that processor with the MM's credentials and returns the updated credential to the MM. This updated credential is used by the MM to prove its ownership status to the processor, giving it access to securely update keys, passwords, and firmware. The MM is now ready to build and securely configure the meter.

When the MM is ready to sell and ship a meter containing a DOME-protected processor to a Utility, the MM adds the Utility's credential to the processor's blockchain, and the updated credential is passed back to the Utility. Once the Utility receives the meter and is ready to install it, the Utility simply presents the updated credential to the meter, who confirms the credential, and verifies the Utility as its new owner. The Utility is now ready to securely collect data from the meter and support protected in-field third-party maintenance.

Markets

- Industrial Process Controls
- Smart Buildings
- Utilities and Smart Grid
- Embedded Medical Devices
- Automotive

Applications and Functions

- Zero-Touch Deployment & Onboarding
- Authentication
- Identification
- Data Protection
- Secure Boot
- Secure Firmware Update
- Command Validation
- Anti-counterfeiting

Free Security Consultation

Our experts will provide an initial security consultation and show you how DOME can be used to maintain a chain of secure ownership, identification and authentication for all of your IoT devices. Contact us at info@veridify.com

Easy to Get Started

With our hosted or virtual options, manufacturers and owners can easily implement DOME on pre-existing processors and devices. Contact us at dome@veridify.com

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Veridify Security

Corporate Headquarters:
100 Beard Sawmill Road, Suite 350
Shelton, Connecticut, 06484 USA

Silicon Valley Office:
75 East Santa Clara Street
San Jose, California, 95113 USA

1-888-272-1977
www.Veridify.com/DOME
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