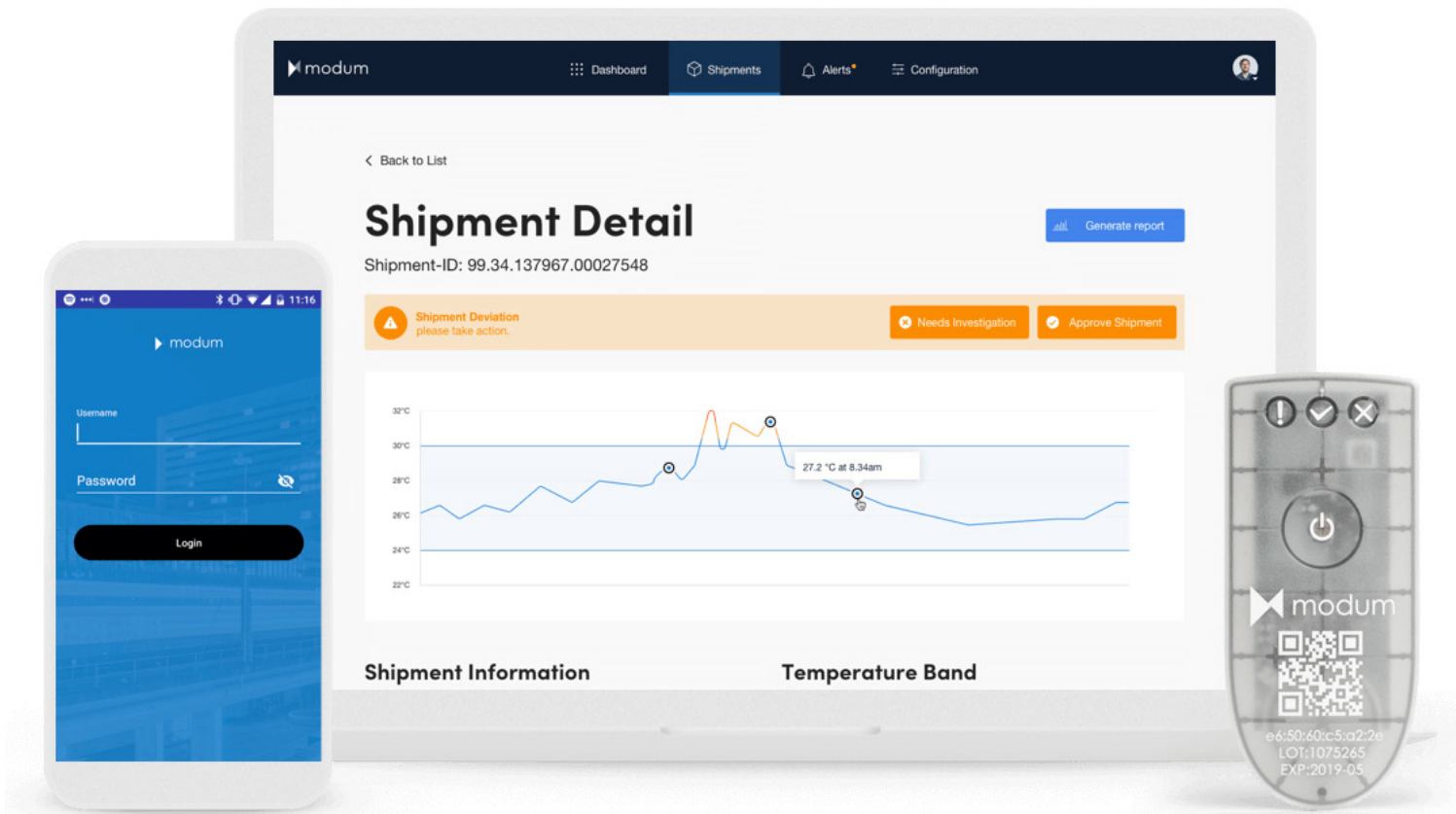


MODsense TM

An integrated and secure temperature monitoring solution.



Qualified for monitoring medicinal product distribution.



Fast, wireless logger pairing & readout, without opening shipments.



Audit-proof data management powered by blockchain.



On-sensor hardware security module & blockchain backend ensure data authenticity and integrity.

A user-friendly solution designed for high-volume, last-stage shipments.

MODsense TM, modum's Sensing & Monitoring solution, enables trusted temperature monitoring of last-stage shipments, where a high volume of shipments need to be reliably managed. It provides monitoring based on pre-defined requirements for each shipment with automatic performance and conformity evaluation.

MODsense TM allows user-friendly deviation management in a role-based web application. It offers instant notifications of temperature excursions and other events, such as motion, when the sensing device is read out wirelessly. The entire solution can be seamlessly integrated with existing workflows and enterprise management systems, such as SAP, and leverage a recorded trusted event for further process automation. It also integrates well with track-and-trace systems across supply chains, allowing automatic and reliable notifications at the time of shipment hand-over.



MODsense TM (generation 1)

Device Specifications

Dimensions L x W x H	95 x 43 x 10 mm
Weight	22 g
Casing	ABS / MABS, tamper-evident
Protection Class	IP 65, IP 67
Measured Parameters	Temperature in °C Acceleration-related events on demand
Measurement Accuracy	±0.5 °C within operating measurement range
Battery Type	Lithium / Manganese Dioxide (Li/MnO ₂) Coin Cell
Communication Interfaces	Range / typical transmission time: Bluetooth Low Energy (BLE): <10 m / <10 s Near Field Communication (NFC): <2 cm / <1 s
User Interface	3 LEDs: operating state, conformity with set conditions & error state 1 Button: activating, stopping
Device Traceability	Unique logger ID, QR-Tag on device
Data Traceability	Device-specific signature for data recorded by logger, Blockchain
Certifications	CE, EN12830, RoHS, WEEE

Operating Conditions

Operating Measurement Range	-20 °C to +70 °C
Storage Conditions	+5 °C to +30 °C
Maximum Battery Life in Measuring Mode	30 days (under ambient operating conditions)
Maximum Battery Shelf Life	1.5 years
Maximum Storable Measurements	25,000 measurements
Logger Expiration Date	Set and written on device
Repeatable Use	Unlimited within operating conditions

Measuring Parameters & Settings, Customizable for Each Shipment

Measurement Start Delay	0 to 60 minutes
Measuring Interval Range	1 to 60 minutes
Data Export Formats	PDF, CSV, Excel
Alarm Settings	Multi-level Cumulated temperature Shipment delay
Notifications	Email, SMS, Smart Contract API