

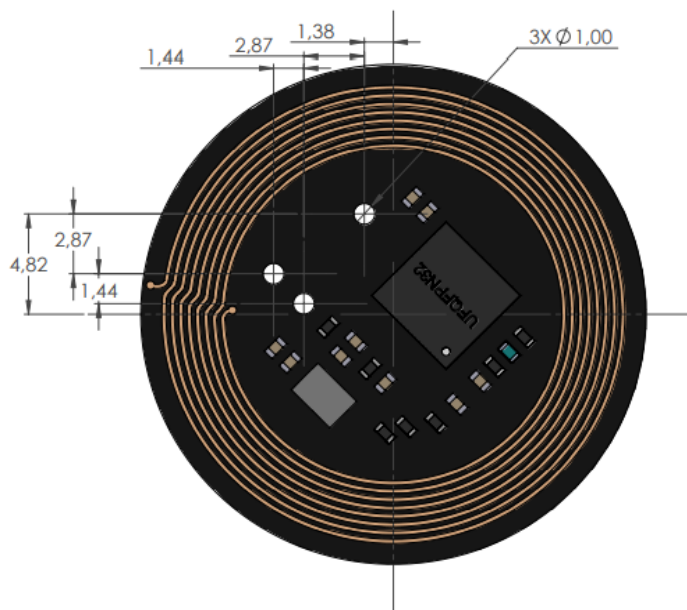
Elerium NFC tag

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1. Introduction

In the age of rampant counterfeiting, the Elerium NFC tag emerges as an integral component of the revolutionary Elerium System. With unmatched security features and state-of-the-art cryptography, this NFC tag stands at the forefront of product and asset authentication.



(Dimensions are in mm)



2. Key Features

Post-Quantum Cryptography:

Armed with Dilithium private keys, offering unparalleled security measures.

Asymmetric Cryptography Utilization:

Goes beyond standard NFC tags, resulting in enhanced protection against counterfeiting. Elerium conducts verification on-chip, which means there is no central point of failure unlike today's tags which rely on verification servers.

Compatibility:

Seamlessly interacts with the cross-platform lib-dqx React Native library and Companion App.

Feature	Description
Part number	DQ113
Dimensions (mm)	24 x 24 x 0.67
Standard reading range (mm)	15
Manufacturer	Beechat
Part of	Elerium system
Cryptographic primitive	Dilithium2 NIST Round 3
Cryptography type	Asymmetric
Counterfeit protection	Read-Out-Protection, Enhanced protection against counterfeiting via asymmetric cryptography
Compatibility	iOS, Android
Operating Voltage (V)	1.8
Rewrite Cycles	1 000 000



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Write Endurance	100 000
Operating Frequency (MHz)	13.56
ISO Standard	NFC-V (ISO 15693)
Shape	Circle
Weight	1g
PCB Material	Polyimide
Temperature Range	-40°C to +85°C
Environmental Conditions & Compliance	EU RoHS, Lead-Free, Halogen Free, CE/RED Compliant

3. SDK & server solution:

While the Elerium tag functions optimally as a standalone solution, allowing offline authentication, its capabilities amplify when paired with the comprehensive Elerium Server System:

lib-dqx React Native Library & Companion App:

Allows mobile applications to read and interact with the Elerium tag, making product authentication a breeze.

Elerium Server:

A RESTful key server of authentic public keys, simplifying and streamlining the product verification process. Managed & self-hosted options available.



4. Benefits:

- Robust Security: Crafted to withstand sophisticated counterfeit attempts.
- User-friendly: Designed for seamless interaction with companion apps.
- Future-ready: Geared for integration with upcoming system enhancements like IPFS.

5. Applications & Use Cases:

In today's interconnected world, the need for reliable, unclonable authentication touches numerous industries. The Elerium NFC Tag's advanced cryptographic features and integration capabilities with the Elerium Server System make it an essential tool for a diverse array of applications:

1. Aerospace & Defense:

- Authenticating Aircraft Parts: Ensure the integrity of components by tagging each part with Elerium tags. This aids in distinguishing genuine parts from counterfeits, promoting safety and long-term aircraft reliability.

2. Logistics & Building Security:

- Secure Door Lock Systems: Modern buildings and homes require advanced security measures. By incorporating Elerium NFC tags into door locks, our system ensures that key cards are truly unclonable, elevating security standards.



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3. Automotive:

- Car Door Security: Vehicle theft and break-ins are evolving with technology. Elerium tags can be integrated into car keys or keyless entry systems, ensuring that only genuine keys grant access.

4. Fashion/Art:

- Certifying Authenticity: From luxury handbags to exclusive sneakers, ensure that consumers receive genuine products. The Elerium tag can validate the authenticity of fashion items, providing peace of mind to both brands and their customers.

5. Healthcare & Pharmaceuticals:

- Drug Authentication: Counterfeit drugs pose serious health risks. With Elerium tags on pharmaceutical packaging, patients and healthcare providers can verify the authenticity of medications, ensuring safety and efficacy.

The versatility of the Elerium NFC Tag, coupled with its unparalleled security features, positions it as the cornerstone of modern authentication and anti-counterfeit measures across multiple industries.



6. Support and Warranty:

For queries related to the Elerium NFC Tag or the broader Elerium System, contact our support team at b2b@beechat.network

7. Conclusion:

The Elerium NFC Tag is not just a product; it's a commitment to authenticity. As an essential part of the Elerium System, it is set to redefine the way businesses protect and verify their products.

For more about the Elerium NFC Tag and the entire Elerium System, visit our official website or scan the QR code below.

