

# ONEKEY 360°

Comprehensive Product  
Cybersecurity & Compliance

ONEKEY

WHITEPAPER

# EXECUTIVE SUMMARY

## Who should read?

**Reading Time:** Approximate reading time 15 minutes.

**This whitepaper targets, Head of Product Cybersecurity, Product Owner, Compliance Professionals and Head of Development of manufacturers of connected devices.**

Smart product manufacturers face the challenges of rapidly evolving digital threats and increasing regulatory requirements, creating a complex and enormous pressure to secure their devices while complying with stringent standards. This is where ONEKEY 360° steps in, offering a solution that blends cutting-edge cybersecurity automation with expert oversight to provide a comprehensive security and compliance framework.

At the heart of ONEKEY 360° is its ability to automate critical cybersecurity tasks—vulnerability assessments, compliance checks, and Software Bill of Materials (SBOM) generation—saving companies time and resources while ensuring thoroughness. But it doesn't stop there. The platform continuously monitors devices for new threats, delivering real-time alerts and actionable insights. Compliance is also front and center, with support for regulations like the Cyber Resilience Act (CRA), IEC 62443 and many others, making it easier for companies to meet evolving global standards.

Yet, what truly sets ONEKEY 360° apart is the integration of human expertise. From tailored security consulting to manual penetration testing, the platform goes beyond automation to address complex security challenges that require a nuanced, human touch. Whether it's interpreting vulnerabilities or navigating multi-standard regulatory environments, the ONEKEY team is there to guide companies every step of the way.

By streamlining security, reducing costs, and delivering expert-driven solutions, ONEKEY 360° empowers organizations to proactively protect their devices, reduce regulatory risk, and focus on innovation—knowing their cybersecurity is in expert hands.



# ONEKEY 360°

## Comprehensive Cybersecurity and Compliance Solution

### 1. Initial Engagement and Requirements Definition

**Client Organization:** As the first step in the ONEKEY 360 journey, the client engages with our expert team to outline their security and compliance requirements. This process includes identifying specific regulatory standards that apply to the client's IoT/IIoT/OT devices, ensuring a tailored approach right from the start.

**ONEKEY 360 Team:** Our team collaborates closely with the client to thoroughly understand their compliance needs and security objectives. Leveraging our expertise, we craft a customized security and compliance analysis plan, defining the scope and implementation strategy to address both security vulnerabilities and regulatory compliance within the ONEKEY 360 framework.



## 2. Service Setup and Integration

**Client Organization:** As part of the ONEKEY 360 service, the client works alongside our team to seamlessly integrate our platform into their existing development environment, ensuring a smooth transition.

**ONEKEY 360 Platform:** The ONEKEY 360 platform is then meticulously configured to automate security analysis, compliance checks, and ongoing monitoring. Our Customer Success team ensures that the setup aligns perfectly with the client's compliance needs, covering key regulations such as the Cyber Resilience Act (CRA), IEC62443, UNR155, and other pertinent standards.

## 3. Automated Security and Compliance Analysis

**Client Organization:** Utilizing the ONEKEY 360 platform, the client submits their device firmware for a comprehensive, automated analysis.

**ONEKEY 360 Platform:** The platform conducts an exhaustive security analysis, generating a detailed Software Bill of Materials (SBOM) and identifying potential vulnerabilities. Simultaneously, it performs compliance checks against predefined standards, reporting any nonconformities. Results are delivered in an intuitive, user-friendly format, encompassing both vulnerability assessments and compliance statuses.

## 4. Expert Consultation and Support

**Client Organization:** Upon receiving the analysis results, which provide in-depth insights into security vulnerabilities and compliance gaps, the client can engage further with the ONEKEY 360 team for expert interpretation and strategy development.

**ONEKEY 360 Team:** Our experts are on hand to assist the client in understanding the significance of identified vulnerabilities and any compliance issues. We provide tailored recommendations for mitigation strategies, guidance on rectifying compliance deficiencies, and advice on enhancing the overall security and regulatory posture of the client's devices. This ensures that security risks are effectively managed while meeting all relevant compliance requirements within the ONEKEY 360 ecosystem.

## 5. Ongoing Monitoring, Compliance Updates, and Professional Services (Optional)

**Client Organization:** As part of the ONEKEY 360 service, clients may opt for continuous monitoring of their devices to identify new vulnerabilities and receive updates on compliance status. Additional professional services are also available to further enhance security and compliance.



**ONEKEY 360 Platform & Team:** The ONEKEY 360 platform provides real-time alerts for emerging vulnerabilities and changes in compliance status as regulations evolve. Our Managed Service team is always ready to assist with further customization, training, or integration services, ensuring that the client's security and compliance processes are continuously optimized.

## 6. Continuous Improvement, Proactive Management and Manual Testing

**ONEKEY 360 Service Offering:** Our team offers sustained support, helping clients proactively manage security risks and maintain compliance. This continuous engagement ensures that IoT/OT devices within the ONEKEY 360 framework remain secure and compliant over time, significantly reducing the risk of regulatory penalties and ensuring peace of mind.

To complement the automated processes, ONEKEY 360 also provides manual vulnerability management through penetration testing and compliance consulting. This service covers components that cannot be analyzed by automated means, such as entire architectures, third-party components, cloud services, mobile companion apps, and hardware systems. This comprehensive approach ensures that all facets of the client's infrastructure are thoroughly evaluated for security vulnerabilities and compliance with relevant standards.

**Manual Vulnerability & Penetration Testing:** For systems and components that cannot be automatically analyzed by the platform, our expert team conducts manual penetration testing. This includes a thorough evaluation of Cloud services, third-party components, and hardware systems. The process simulates real-world attack scenarios to identify potential vulnerabilities within your entire architecture, ensuring that these external and complex elements are secure against sophisticated threats.

**Compliance Consulting:** Our consultants provide in-depth compliance assessments for complex architectures and third-party components, including Cloud services and hardware systems. We evaluate these elements against a range of regulatory standards, such as IEC 62443, Cyber Resilience Act (CRA), Radio Equipment Directive (RED), and others relevant to your industry. Our team offers tailored advice to ensure your entire infrastructure meets these stringent compliance requirements, helping you navigate the complexities of multi-standard regulatory environments.

By combining automated webservices with expert's know how and individual services, we provide a 360° holistic security and compliance solution, addressing both automated and non-automated aspects of your environment. This ensures that your organization's security posture is robust, comprehensive, and fully compliant with industry regulations.



# ONEKEY 360°: PRODUCT CYBERSECURITY & COMPLIANCE AS A SERVICE

ONEKEY 360 is a holistic security solution powered by the ONEKEY platform, designed to automate security analysis and ensure compliance for connected IoT, IIoT, and OT devices and infrastructure. This offering is the foundation of a proactive security strategy, seamlessly combining advanced technology with expert human oversight to safeguard your digital ecosystem.

## The Human Edge in Security: Why Expertise Matters

In today's rapidly evolving security landscape, relying solely on automated tools is not sufficient to protect your Internet of Things (IoT) and Operational Technology (OT) infrastructure. While automation provides significant advancements, the complex nature of security analysis requires often the nuanced understanding that only human expertise can offer. ONEKEY 360 addresses this critical need for many organizations by merging state-of-the-art technology with specialized knowledge to tackle even the most complex security challenges.

ONEKEY 360 is designed to overcome the following key challenges that traditional in-house security methods often fail to address:

- 1. Lack of Expertise:** Security analysis of IoT/OT devices is intricate and demands specialized knowledge. Without ONEKEY 360, organizations face the daunting task of hiring and training in-house security experts, a process that is both costly and time-consuming. ONEKEY 360 brings expert knowledge directly to your team, eliminating this burden.
- 2. Incomplete Analysis:** Manually analysing device firmware for vulnerabilities can be tedious and prone to errors. Critical vulnerabilities, especially zero-day attacks, can easily be overlooked, leaving your devices exposed. ONEKEY 360 automates this process, ensuring thorough and accurate analysis, reducing the risk of missed vulnerabilities.
- 3. Compliance Challenges:** Keeping pace with the ever-evolving security standards for IoT/OT devices is a significant challenge. ONEKEY 360 automates compliance checks, ensuring that your devices meet the latest regulations and standards without the hassle of manual updates.

4. **Hidden Costs:** Managing security analysis in-house can incur significant expenses, including investments in security tools, training, and additional staff. ONEKEY 360 offers a cost-effective solution by providing comprehensive security services that include all necessary tools and expertise, saving you money in the long run.
5. **Slower Response Times:** When a vulnerability is discovered, the manual process of identifying and deploying a fix can be slow, leaving your devices vulnerable for an extended period. ONEKEY 360 accelerates detection and response times, minimizing exposure and enhancing your overall security posture.
6. **Reactive Security Posture:** Without the proactive measures provided by ONEKEY 360, organizations often find themselves in a reactive mode, scrambling to address security issues after they arise. ONEKEY 360 promotes a proactive approach, identifying and mitigating vulnerabilities before they can be exploited.
7. **Limited Visibility:** Monitoring your devices manually for vulnerabilities is a challenging and often incomplete task. With ONEKEY 360, you benefit from 24/7 monitoring and real-time alerts, ensuring that any signs of an attack or ongoing compromise are detected and addressed immediately.
8. **Integration Challenges:** Integrating security analysis tools with your existing development and security workflows can be complex and time-consuming. ONEKEY 360 streamlines this integration, allowing you to focus on your core operations while we handle the intricacies of security.



# ONEKEY 360: THE HUMAN EXPERTISE BEHIND A HOLISTIC CYBERSECURITY SOLUTION



## Expert Support

ONEKEY 360 offers unparalleled access to top cybersecurity knowledge, providing guidance and insights that go beyond automated analysis. The knowledge and experts are available at your fingertips, providing insights and advice to help you quickly and effectively mitigate vulnerabilities. With ONEKEY 360, you benefit from our expert's knowledge that helps you to:

1. **Understand the Severity of Vulnerabilities:** Gain a clear understanding of the risks posed by vulnerabilities discovered in your device's firmware.
2. **Receive Tailored Mitigation Strategies:** Get customized recommendations on how to address identified vulnerabilities, ensuring your devices are secure.
3. **Enhance Your Security Posture:** Receive guidance on improving the overall security and compliance posture of your devices and infrastructure.

## Requirement Definition & Implementation

ONEKEY 360 is designed with ease of use in mind, starting with a thorough requirement definition phase led by our top cybersecurity experts. During this phase, we provide valuable insights and support by:

1. **Collaborating to Define Security Requirements:** Work together with our experts to define your specific security needs.
2. **Designing a Customized Analysis Plan:** We create a tailored plan for analyzing your devices and infrastructure.
3. **Developing a Detailed Implementation Strategy:** Our experts develop a comprehensive scope of work and implementation plan to ensure your security goals are met.



## Augmented Professional Services

ONEKEY 360 goes beyond core analysis, offering a range of professional services that enhance your cybersecurity and compliance efforts. These services include:

**Service Setup & Integration:** Our specialists assist with setting up and integrating ONEKEY 360 with your existing tools and workflows, ensuring a seamless experience.

**Staff Training:** We provide training to your team, empowering them to use the platform effectively and interpret results with confidence.

**Service Customization:** ONEKEY 360 can be tailored to meet your specific needs, ensuring that your security strategy is aligned with your organization's goals.

**Comprehensive Vulnerability Testing:** Manual penetration testing on entire architectures, cloud services, third-party components, and hardware systems identifies security vulnerabilities not covered by automated analysis.

**Regulatory Compliance Consulting:** In-depth compliance assessments for complex architectures and third-party components ensure adherence to standards such as IEC 62443, Cyber Resilience Act (CRA), and Radio Equipment Directive (RED).

**Tailored Security Solutions:** We provide customized advice and solutions to enhance the security and compliance posture of your entire infrastructure, addressing both automated and manual aspects.

**Holistic Security Approach:** By integrating manual testing and consulting services, ONEKEY 360 ensures a robust, comprehensive, and fully compliant security strategy for your organization.

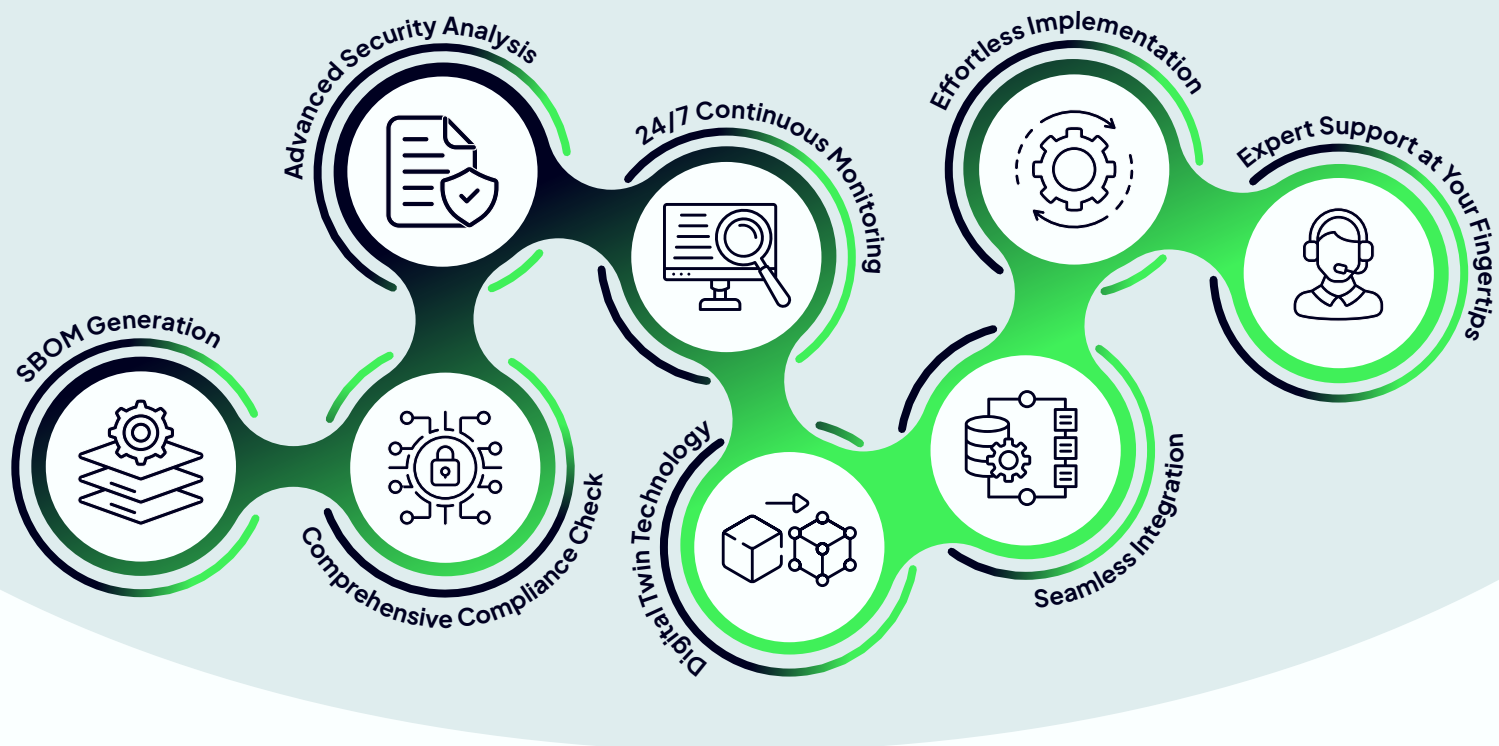
### **Initial Setup & Support:**

ONEKEY 360 is user-friendly, with an initial setup process fully supported by our Customer Success team. This team ensures a smooth start, helping you get the most out of ONEKEY 360 from day one and addressing any questions you may have.

### **Cost-Effective, Expert-Driven Solution:**

ONEKEY 360 is a highly cost-effective solution that empowers organizations lacking the resources, skills, or expertise to achieve and maintain cutting-edge product cybersecurity and compliance. Our experts work alongside your development and product teams to implement new processes or optimize existing ones, sharing their knowledge to enhance process





## Key features of ONEKEY 360

### SBOM Generation

With ONEKEY 360, you can automatically generate a complete Software Bill of Materials (SBOM) directly from the binary firmware image of your device. This provides you with a detailed inventory of all software components used in your device, including their versions and licenses. By having a clear and comprehensive SBOM, you gain full visibility into your software supply chain, enabling better management of open-source components and ensuring compliance with licensing requirements.

### Advanced Security Analysis

ONEKEY 360 conducts an in-depth security analysis of your device's firmware, identifying zero-day vulnerabilities, outdated components, insecure coding practices, and cryptographic weaknesses. This thorough analysis helps you uncover and address potential security risks before they can be exploited, significantly enhancing the resilience of your devices. By proactively identifying these vulnerabilities, you can mitigate risks quickly and protect your devices against emerging threats.

### Comprehensive Compliance Check

Ensuring that your devices comply with national and international security standards is critical. ONEKEY 360 performs a meticulous compliance check of your device's firmware, assessing its adherence to standards such as IEC62443, UNR155, and the OWASP TOP 10 for IoT. This automated compliance verification not only simplifies the audit process but also provides peace of mind that your devices meet industry regulations, reducing the risk of non-compliance penalties and improving your marketability.



### **24/7 Continuous Monitoring**

ONEKEY 360 offers continuous, round-the-clock monitoring of your device's firmware, keeping a vigilant eye out for new vulnerabilities. If any issues are detected, you are immediately alerted, allowing you to take swift action. This real-time monitoring ensures that your devices remain secure even as new threats emerge, providing ongoing protection and reducing the likelihood of security breaches.

### **Digital Twin Technology**

Leverage the power of digital twin technology with ONEKEY 360, which creates a cybersecurity related digital replica of your device's firmware. This allows for further security analysis without requiring access to the source code, physical device, or network connection. By using a digital twin, you can conduct extensive binary testing and analysis ensuring that your devices are secure without disrupting your operations.

### **Seamless Integration**

ONEKEY 360 seamlessly integrates with your existing development and security tools, streamlining the security analysis process. This integration reduces the complexity of managing multiple tools and ensures that security is embedded throughout your development lifecycle. By integrating with your current workflows, ONEKEY 360 enhances your security posture without requiring significant changes to your processes.

### **Effortless Implementation**

ONEKEY 360 is designed for ease of use, requiring no upfront investment in hardware or software. This means you can quickly and easily implement ONEKEY 360 into your existing environment, minimizing downtime and allowing you to focus on your core business activities. The simplicity of implementation ensures that even organizations with limited technical resources can benefit from robust cybersecurity protection.

### **Expert Support at Your Fingertips**

ONEKEY 360 provides access to a team of cybersecurity experts who are ready to assist you in understanding the results of your security analysis. These experts offer personalized guidance and recommend effective mitigation strategies, ensuring that you can address vulnerabilities swiftly and confidently. With ONEKEY 360, you are never alone in your cybersecurity journey—our experts are here to support you every step of the way, adding significant value to your security efforts.

# ONEKEY 360: THE ULTIMATE CYBERSECURITY SOLUTION FOR YOUR IOT AND OT DEVICES

## 1. Hybrid Approach: Automation + Expert Knowledge

With ONEKEY 360, you get the best of both worlds—a powerful combination of automated security analysis and top-tier cybersecurity expertise. This hybrid approach ensures that you achieve faster, more efficient, and comprehensive results compared to solutions that rely solely on manual consulting or automation. The integration of human expertise with cutting-edge technology allows us to address complex security challenges with precision, providing you with a superior, end-to-end security solution.

## 2. Enhanced Security

Protect your IoT and OT devices more effectively with ONEKEY 360. Our advanced automated tools, coupled with expert insights, allow you to identify and fix vulnerabilities faster—before they can be exploited by attackers. By leveraging automation, we can complete detailed analyses in minutes rather than days or weeks, significantly reducing the risk of breaches and ensuring your devices remain secure at all times.

## 3. Cost Efficiency

ONEKEY 360 offers a cost-effective solution that saves you both time and money. Our automated security analysis process delivers rapid results without compromising quality, allowing you to allocate resources more efficiently. By combining automation with expert oversight, we minimize the need for expensive, dedicated in-house resources, enabling you to maintain a high level of security without breaking the bank.

## 4. Simplified Compliance

Navigating the complexities of regulatory compliance has never been easier with ONEKEY 360. Our platform not only automates compliance checks, ensuring your devices meet all relevant security standards with minimal effort, but also provides expert guidance to help you understand and adhere to complex regulatory requirements. This seamless approach simplifies the compliance process, allowing you to focus on innovation while we handle the intricacies of regulatory adherence.





## 5. Augmented Expertise

ONEKEY 360 bridges the gap in your in-house cybersecurity expertise. Our team of dedicated professionals stays ahead of the latest threats and mitigation strategies, bringing the most current knowledge to your security practices. Whether you lack specialized skills or simply need to bolster your existing team, ONEKEY 360 ensures that your devices are protected with the highest level of expertise available.

## 6. Peace of Mind

With ONEKEY 360, you can rest easy knowing that your devices are secure. Our holistic approach, which combines cutting-edge technology with expert support, ensures that all your security needs are fully covered. This comprehensive protection provides you with the confidence and peace of mind that your organization's digital assets are safeguarded against threats, allowing you to focus on what you do best—growing your business.

# ABOUT ONEKEY

ONEKEY is the leading European specialist in Product Cybersecurity & Compliance Management. The unique combination of an automated Product Cybersecurity & Compliance Platform (PCCP) with expert knowledge and consulting services provides fast and comprehensive analysis, support and management to improve product cybersecurity and compliance from product purchasing, design, development, production to end-of-life.

Critical vulnerabilities and compliance violations in device firmware are automatically identified in binary code by AI-based technology in minutes - without source code, device or network access. Proactively audit software supply chains with integrated software bill of materials (SBOM) generation. "Digital Cyber Twins" enable automated 24/7 post-release cybersecurity monitoring throughout the product lifecycle.

Integrated compliance checking already covers the upcoming EU Cyber Resilience Act and existing requirements according to IEC62443-4-2, EN303645, UNR155 and many others.

The Product Security Incident Response Team (PSIRT) is effectively supported by the integrated automatic prioritization of vulnerabilities, significantly reducing the time to remediation. Leading international companies in Asia, Europe and the Americas already benefit from the ONEKEY Product Cybersecurity & Compliance Platform and ONEKEY Cybersecurity Experts.

**Please visit us for more information at: [www.ONEKEY.com](http://www.ONEKEY.com)**



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