Cybersecurity Certification Guide

A publication by

CSA
SINGAPORE

Cybersecurity
Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

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Global Cyber Landscape

The global cyber landscape has changed dramatically in recent years, with increasing awareness of the risks and threats faced by states, businesses, and individuals. Ransomware attacks, data breaches, and other cyber incidents have made the headlines as a stark reminder that cybersecurity must be taken seriously.

At the same time, people are keen to maximise the opportunities presented by the rapid advances in digitalisation and innovation. Singapore is embarking on an initiative to create a “Smart Nation”, and businesses and individuals are keen to harness the power of technology at work and play. Singapore’s Cybersecurity Strategy aims to create a resilient and trusted digital environment to facilitate that.

New technology products are constantly coming to market. CSA offers and supports the use of Certification Schemes to provide assurance to customers that the product has been objectively assessed to be more cyber secure, and has adopted a Security-by-Design approach throughout the product life cycle.

Opportunities for Certification

The speed of technology adoption continues to accelerate for both work and play, with new business models and market opportunities still being unlocked.

With greater digitalisation and connectivity comes increased emphasis on cybersecurity. While cybersecurity is a concern, it is also a market opportunity. Based on the IDC forecast made in March 2019, worldwide spending for cybersecurity is projected to reach $133.8 billion by 2022[1]; and the demand for higher-quality and secure products will continue to increase.

An internationally-recognised certification mark has become a necessity for local developers to expand their market reach globally.

CSA Cybersecurity Certification Centre operates the following schemes aimed at providing the security assurance that the product has undergone impartial examination and testing to ascertain that it is securely designed, implemented, and appropriate in mitigating the specified security threats.

The three schemes listed in this guide, catering to different market segments, are:

Cybersecurity Labelling Scheme (CLS), for labelling of network-connected consumer smart devices, to enable consumers to discern the security levels in the devices and make more informed purchase decisions;

Singapore Common Criteria Scheme (SCCS), for certification of commercial IT products targeting the international marketplace;

National IT Evaluation Scheme (NITES), for evaluation and certification of IT products that meets high assurance requirement for Singapore government agencies.

Through these schemes, companies are able to demonstrate the security of their product, benchmarked against international standards.

[1] "Worldwide Spending on Security Solutions Forecast to Reach $103.1 Billion in 2019, According to a New IDC Spending Guide", International Data Corporation (IDC) Press Release, 20 March 2019, http://www.idc.com/getdoc.jsp?containerId=prUS44935119

Cybersecurity Certification Centre

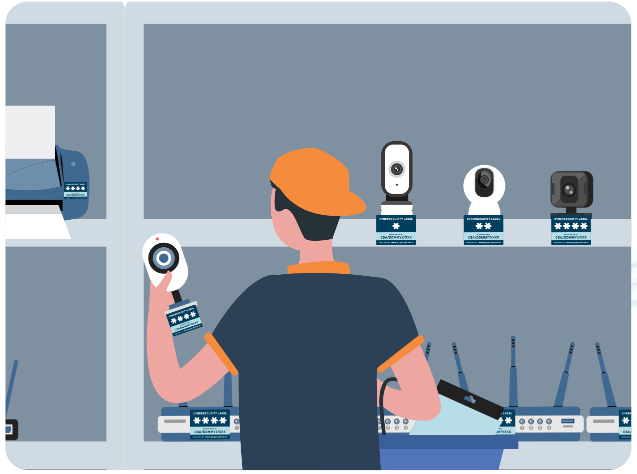
CYBER SECURITY AGENCY OF SINGAPORE

Cyber Security Agency of Singapore (CSA) is the national agency that provides dedicated and centralised oversight of national cybersecurity functions including strategy, international policy, R&D, outreach, system and industry development.

Under the ambit of CSA is the Cybersecurity Certification Centre (CCC) which focuses on the evaluation and certification of cybersecurity products.

The Smart Consumer Device

In recent years, there has been an exponential increase in the number of connected Internet of Things (IoT) devices in the world. It is estimated that there will be 75 billion IoT devices by 2025[2].



What's going on?

In the market, a large number of devices are being sold with poor cybersecurity provisions. Hackers generally look for the easiest systems to attack that will net the most damage and returns.

Information on the amount of security that is built into these devices is not made readily available by the developers. Thus, consumers are unable to make informed decisions towards purchasing more secure devices.

Amidst the growth in number of IoT products in the market, and in view of the short time-to-market and quick obsolescence, many consumer IoT products have been designed to optimise functionality and cost over security. As a result, many of them have little to no security features built-in. This poses cybersecurity risks such as the compromise of consumers' privacy and data. Compromised IoT devices can also be used by threat actors to form a botnet to launch Distributed Denial of Service attacks which could bring down Internet services. One example of this is the Mirai botnet attack in 2016 which were carried out via innocuous IoT devices, such as home routers and IP cameras. The attack left much of the internet inaccessible in the US East Coast.

[2] Internet of things (IoT) connected devices installed base worldwide from 2015 to 2025, Statista Forecast, 27 November 2016, https://www.statista.com/statistics/471264/iot-number-of-connected-devices-worldwide/

Cybersecurity Labelling Scheme

BY CYBER SECURITY AGENCY OF SINGAPORE

About CLS

As part of efforts to better secure Singapore's cyberspace, raise cyber hygiene levels ,and increase awareness of consumer IoT security, CSA introduced the Cybersecurity Labelling Scheme (CLS) for network-connected smart devices.

The CLS, which marks a first in the Asia-Pacific region, comprises different levels of cybersecurity ratings to provide an indication of the level of security embedded in the device.

This helps consumers to choose more secured devices and hence, to better protect themselves against basic cyber-attack.

For more information, please contact us at

https://go.gov.sg/csa-cls

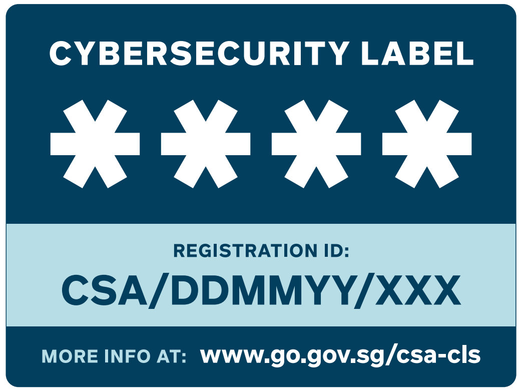
CLS: Benefits

For consumers:

- To make informed purchase decisions based on the security provisions of the smart devices

For developers:

- To differentiate products with recognised and improved security features



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MORE INFO AT: www.go.gov.sg/csa-cls