



———— CIVIL ————
INFRASTRUCTURE
—— PLATFORM ——

Let's Get IEC 62443-4 Conformance Certification

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What is IEC 62443-4

What is IEC 62443-4?



- It was created by the [International Society for Automation \(ISA\)](#) and publicly released as [American National Standards Institute \(ANSI\)](#) documents.
- It describes the specific product development and technical requirements of control system products
 - **ISA-62443-4-1**
 - It contains the requirements for the development of secure IACS products and solutions.
 - **ISA-62443-4-2**
 - It contains detailed technical requirements for IACS components level

What is IEC 62443-4 Conformance Certification?

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ISASecure® Certifications

The ISA Security Compliance Institute (ISCI), a not-for-profit automation controls industry consortium, manages the ISASecure™ conformance certification program. ISASecure independently certifies industrial automation and control (IAC) products and systems to ensure that they are robust against network attacks and free from known vulnerabilities.

ISCI also offers an ISASecure organization process certification for product development organizations. The Security Development Lifecycle Assurance (SDLA) certification promotes security development lifecycle practices intended to improve the quality of security in IAC systems.

The ISASecure™ designation is earned by industrial control suppliers for products that demonstrate adherence to industry consensus cyber security specifications for security characteristics and supplier development practices.

The ISASecure program is based upon the IAC security lifecycle as defined in ISA/IEC 62443. At this time, the scope of the ISASecure certifications includes assessment of off-the-shelf IAC products and IAC product development security lifecycle practices.

ISASecure does not offer assessments for integrator site engineering practices or asset owner operations and maintenance practices. ISASecure certifies off-the-shelf systems; not the site engineered / deployed systems.

ISCI offers three certifications with four security assurance levels (SAL) in alignment with ISA/IEC 62443.

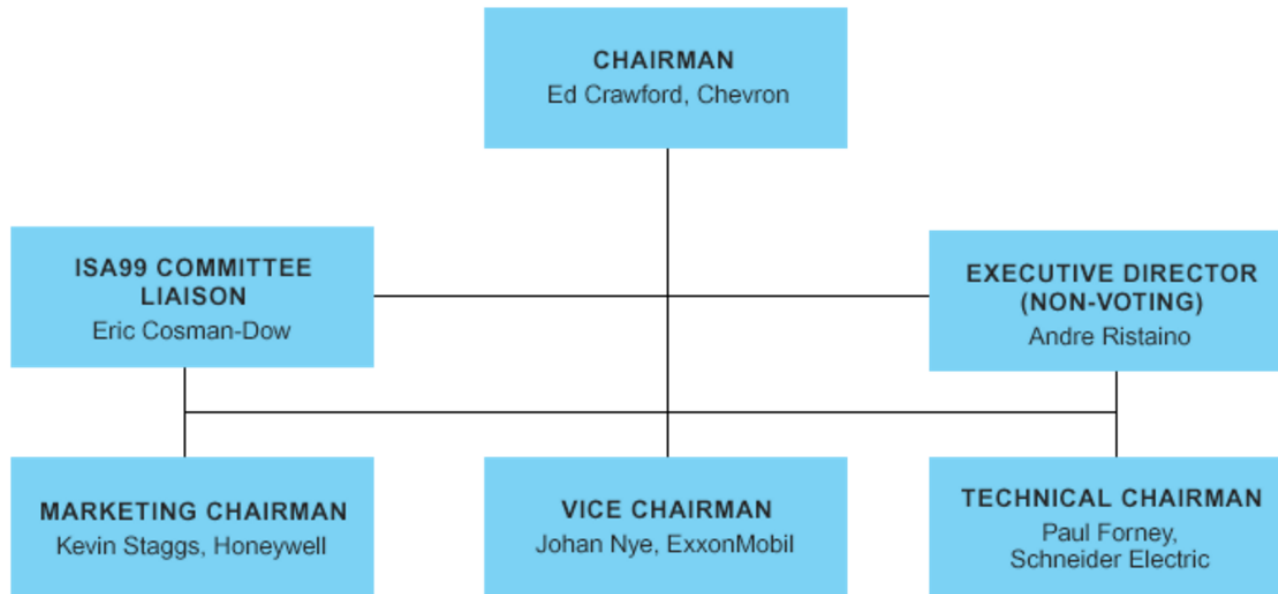
1. ISASecure Embedded Device Security Assurance (EDSA) Certification
2. ISASecure System Security Assurance (SSA) Certification
3. ISASecure Security Development Lifecycle Assurance (SDLA) Certification

[src: http://isasecure.org](http://isasecure.org)

ISA Security Compliance Institute - Mission



- ISASecure provides the highest level of assurance possible for the cyber security of industrial automation control systems



src: <http://isasecure.org>

The different between IEC 62443-4 and Conformance Certification



	IEC 62443-4	IEC 62443-4 Conformance Certification
Organization	 src: https://www.isa.org	 an ISA organization src: http://isasecure.org
Output	Define IEC-62443-4 specification	Define ISASecure® Certifications (Conformance Certification), based on IEC-62443-4 specification
Certificate Program	For human	For product

Note: The spec. of conformance certification is quite different from IEC-62443-4 specification. For example, there are “four” security levels defined in IEC-62443-4 specification; however, the conformance certification offers “three” certification levels.

IEC 62443-4

Conformance Certification

IEC 62443 - Certification



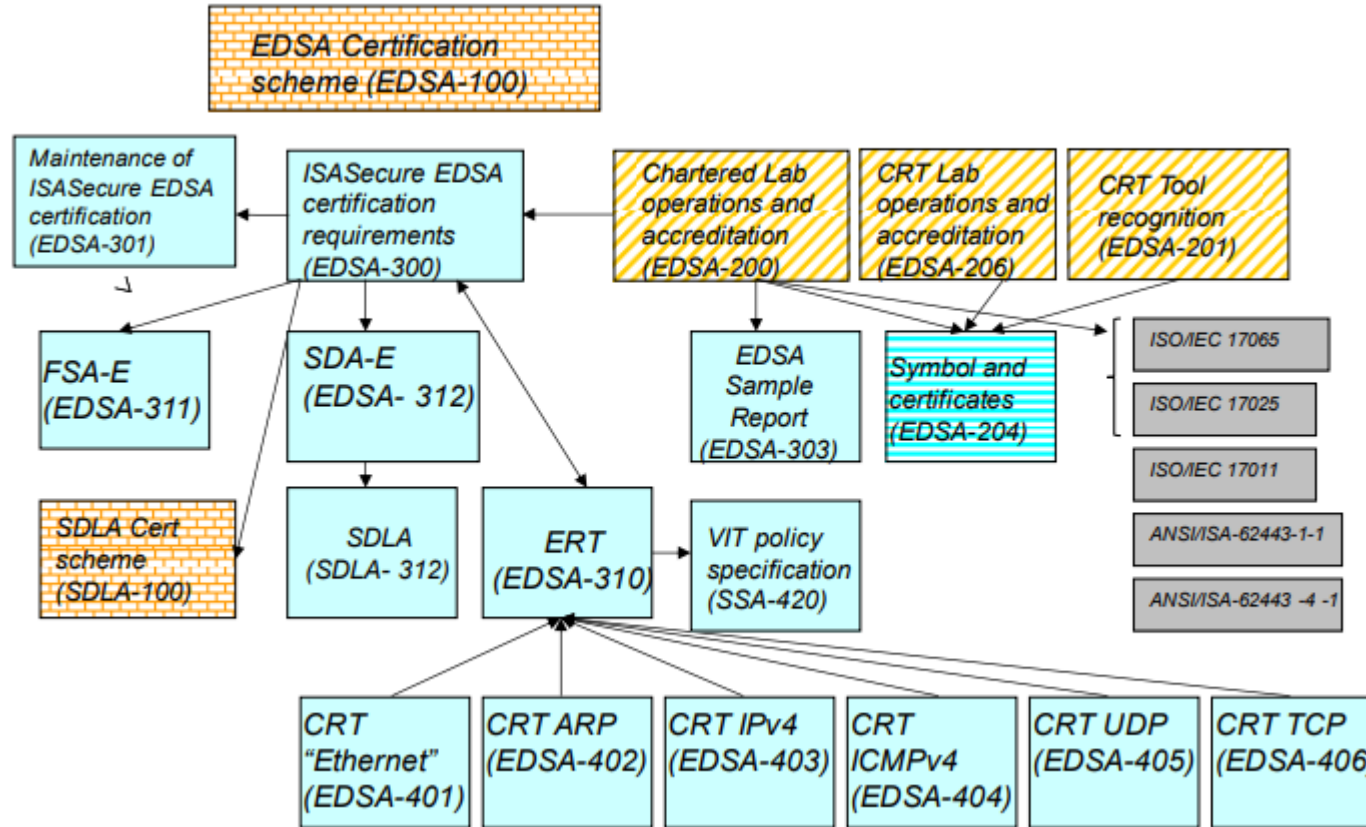
- **IEC 62443 - EDSA Certification**
 - Embedded Device Security Assurance (EDSA)
- IEC 62443 - SSA Certification
 - System Security Assurance (SSA)
- IEC 62443 - SDLA Certification
 - Security Development Lifecycle Assurance (SDLA)

IEC 62443 - EDSA Certification



- Functional Security Assessment (FSA)
- Security Development Artifacts for Embedded Devices (SDLPA)
- Requirements for Embedded Device Robustness Testing (CRT)
- Vulnerability Identification Test (VIT) Policy Specification
- Security Development Lifecycle Assessment (SDA)

IEC 62443 - EDSA Documents



src: [http://www.isasecure.org/en-US/Documents/Authentication-Required-Specifications/EDSA-2-1-0/EDSA-100-Certification-scheme\(v3_3\)](http://www.isasecure.org/en-US/Documents/Authentication-Required-Specifications/EDSA-2-1-0/EDSA-100-Certification-scheme(v3_3))

EDSA Conformance Scheme Fees








EDSA Certification Registration Fee - Member (billed when passed)	\$7,500
EDSA Certification Registration Maintenance Fee - Member (billed when passed)	\$2,500
EDSA Certification Registration Fee - non-Member (billed when passed)	\$12,500
EDSA Certification Registration Maintenance Fee - non-Member (billed when passed)	\$3,000

src: <http://www.isasecure.org/en-US/Certification/IEC-62443-EDSA-Certification>

ISASecure Certified Devices

ISASecure Certified Devices



Picture	Supplier	Type	Model	Version	Level	Certification Date
	Beijing Consen Technologies	Safety Related Programmable Electronic System	TSxPlus V1.0	CM01-A-V001	EDSA 2.0.0 Level 1	7/7/2017
	HIMA Paul Hildebrandt GmbH	Safety Related Programmable Electronic System	HIMAX X	CPU 01 FW Version 8.8 & COM 01 FW Version 9.2	EDSA 2.0.0 Level 1	7/6/2017
	Honeywell Process Solutions	PLC	ControlEdge PLC	R140	EDSA 2.0.0 Level 2	7/3/2017
	Schneider Electric	Safety Related Programmable Electronic System	TRICONEX Communication Module TCM	4351 A/B/AB & 4352 A/B/AB	EDSA 2010.1 Level 1	6/9/2017
	TOSHIBA CORPORATION	DCS Controller	CIEMAC-DS/nv (TOSDIC-CIE DS/nv) Unified Controller nv Series type2	FN812S:V01.01, PU821S:V01.CF, SA911:V01.34	EDSA 2010.1 Level 1	2/8/2017

[src: http://isasecure.org/en-US/End-Users/ISASecure-Certified-Devices.aspx](http://isasecure.org/en-US/End-Users/ISASecure-Certified-Devices.aspx)

Accredited ISASecure Certification Bodies

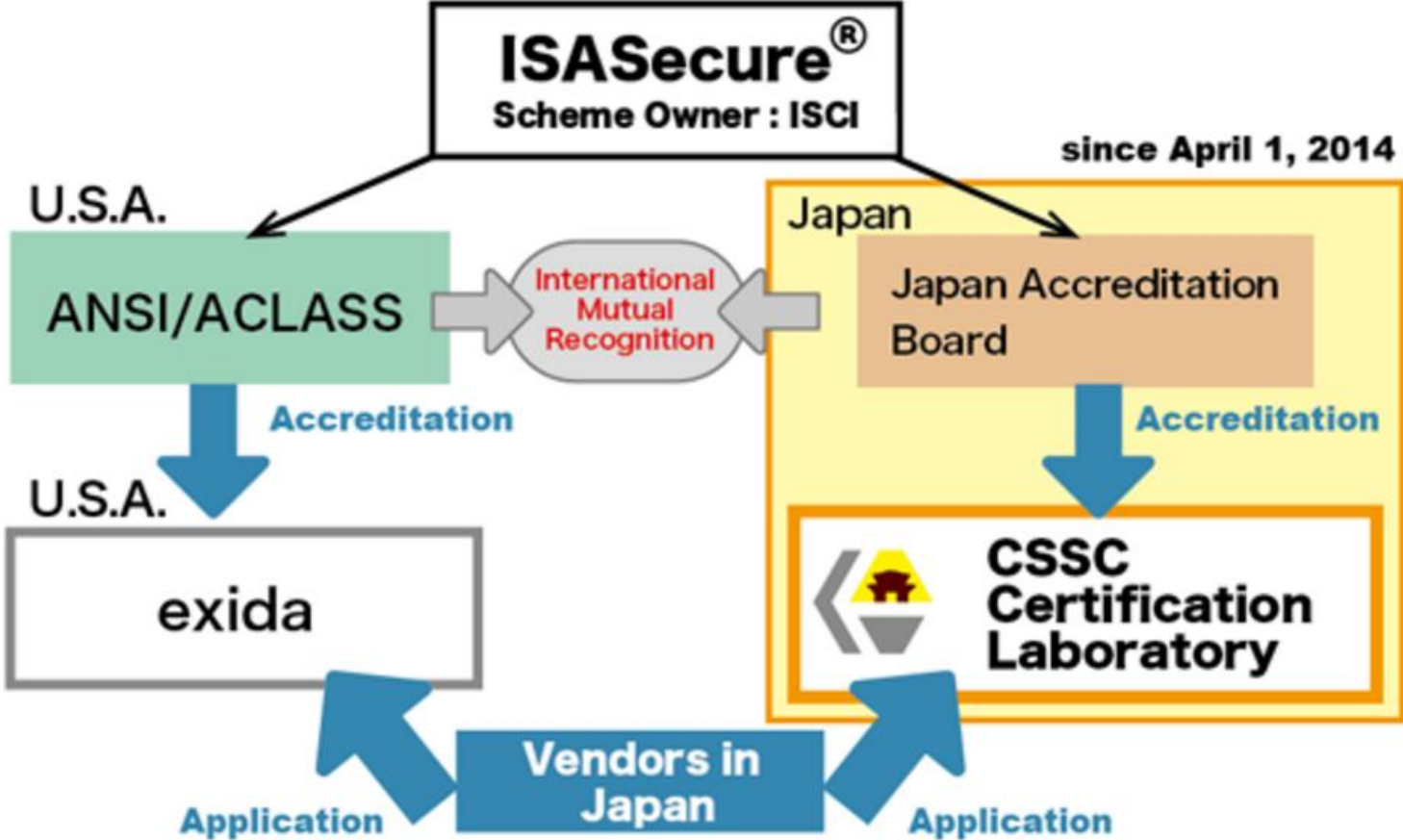
Accredited ISASecure Certification Bodies

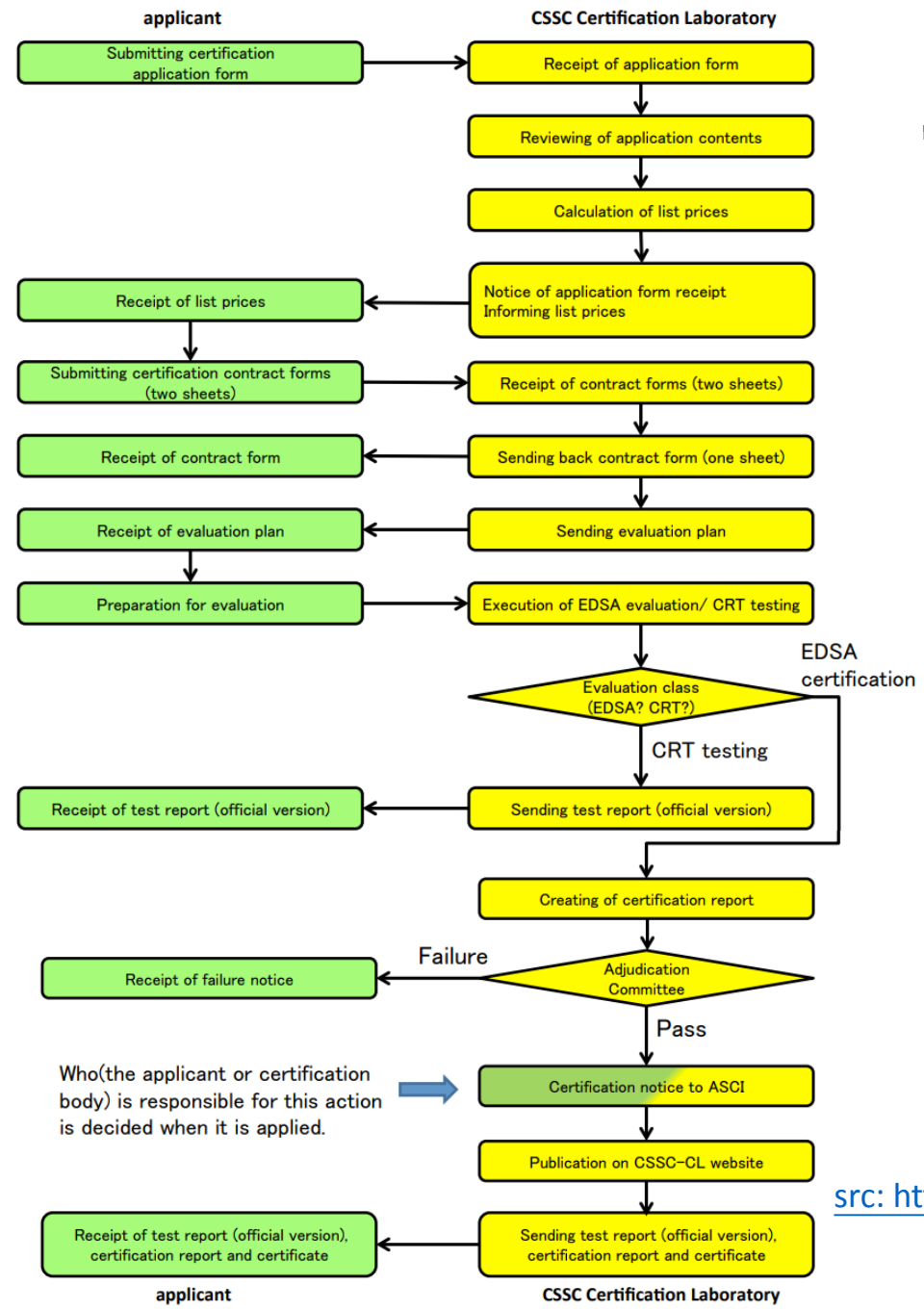


Laboratory	Location
	<ul style="list-style-type: none">• Japan
	<ul style="list-style-type: none">• USA• Germany• United Kingdom• Asia Pacific – Singapore
	<ul style="list-style-type: none">• Germany

src: <http://isasecure.org/en-US/End-Users/ISASecure-Certified-Devices.aspx>

Control System Security Center Certification Laboratory, Japan





[src: http://www.cssc-cl.org/en/about_edsa/procedures.html](http://www.cssc-cl.org/en/about_edsa/procedures.html)



Thank you!

References



- [1] [https://en.wikipedia.org/wiki/Cyber_security_standards#ISA/IEC-62443_\(formerly_ISA-99\)](https://en.wikipedia.org/wiki/Cyber_security_standards#ISA/IEC-62443_(formerly_ISA-99))
- [2] <https://www.isa.org/isa99/>
- [3] <http://isasecure.org>
- [4] <http://www.isasecure.org/en-US/Certification/IEC-62443-EDSA-Certification>