Newsletter September, 2019 ICR





Hot Issue

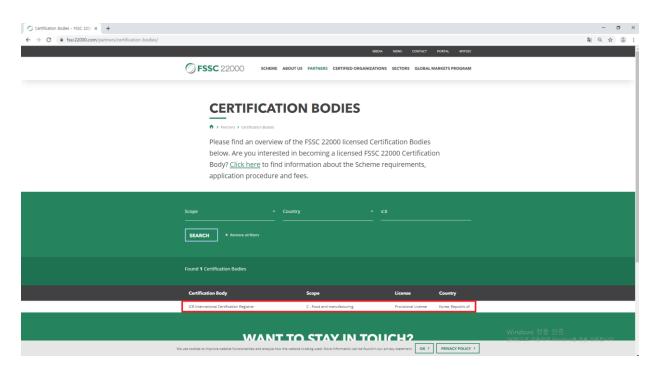
- 1. FSSC 22000 V.5
- 2. Ex Certification seminar 2019
- 3. New Automotive Chamber
- 4. Autonomous driving communication technology "C-V2X"



FSSC 22000 V.5



- ICR acquired a provisional license from the FSSC Foundation in 15th August 2019.
- FSSC 22000 is a food safety management system recognized by Global Food Safety Initiative(GFSI), and has a high global reputation in the field of food safety.
- Certification audit for FSSC 22000 V.5 is available during the provisional license period; and the initial accreditation audit will be performed by KAB in October to acquire a full license.
- As acquiring the full license, the certificates, that are issued during the provisional license period, will be transferred and issued to official certificates.
- The license status of ICR can be confirmed on the FSSC Foundation website.



Ex Certification seminar 2019



The Industrial Safety Certification Team of ICR Ltd. Product Certification Div. will hold **free training** for **Ex equipment manufacturers' customers.**

Through this Ex certification seminar, we will provide educational services to those who have difficulty in certification to help them obtain Ex certification.

we are hoping for your interest and participation. Please refer to the **seminar flyer** for more details.

■ **Date :** November 20, 2019(10:00 am ~ 17:00 pm)

■ **Seminar manager:** Product Certification Div. Jae-Ik, Yun

■ Tel: 02-6351-9005

■ E-mail: yji@icrqa.com

Ex Certification seminar 2019



Ex certification seminar 2019

hosted by ICR Ltd.

Seminar overview

I T i t l e : ICR Ltd. Ex certification seminar

■ Venue : Seminar room of 5 floor(main building)

Date: Nomember 20(wednseday) 2019, 10:00 am ~ 17:00 pm

I Detail: Introduce Ex certifications (ATEX, IECEx, KCs, etc) and Ex type of protection

Capacity: A maximum of 30 persons

Entry fee : Free (after the seminar, give to some gift and certificate)

※ Depending on the limited number of people, the application may be a restriction.

(If you need to detail, please contact us as below)

Time table		
Time	Торіс	Lecture
10:00 ~ 11:00	Introduce ICR company and ATEX, IECEx, KCs certidications / Ex type of prtection / IEC 60079-0 General requirement	Dae-Song, Yang
11:00 ~ 12:00	IEC 60079-1,15 flameproof enclosure and combustible refrigerant equipment education	Jae-Ik, Yun
12:00 ~ 13:00	Lunch Time	6 floor(main building)
13:00 ~ 15:00	IEC 60079-11 intrinsic safety education and practical (small component, spark ignition test)	Ji-Hwan, Park
15:00 ~ 17:00	IEC 60079-10-1 classifitcation of areas – gas atmospheres	Kyung-Man, Kang



Contact us

Seminar manager : Product Certification Div. Jae-Ik, Yun

T e l : 02-6351-9005 / E-mail : yji@icrqa.com

New Automotive Chamber





ICR is ready to test on **two compact Anechoic Chamber** for **automotive devices**. so we hope you like our service.

New Automotive Chamber



(automotive devices test and certification)

- CISPR25
- Radiated Emission
- Conducted Emission Voltage Method
- Conducted Emission Current Method
- ISO 11452-2, ALSE Radiated Immunity
- ISO 11452-4, BCI Conducted Immunity
- ISO 11452-8, MFI Radiated Immunity
- ISO 7637-2, Transient Immunity/Emission Power line
- ISO 7637-3, Transient Immunity signal line
- ISO 10605, ESD
- ES96200-00, GSM/ Radio Frequency Immunity Test
- MIL-STD-461F RE101, MFE Radiated Emission

Autonomous driving communication technology "C-V2X"

Preparation and Commercialization

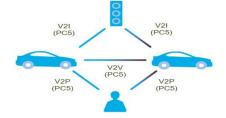
The C-V2X supports Qualcomm's C-V2X through the 9150 C-V2X chipset. 3GPP Release-14's PC5 technology is already ready for automotive manufacturers, Tier 1 suppliers, Tier 2 module manufacturers, automotive software developers, global telecommunications companies, test equipment suppliers, signaling suppliers, and telecommunications suppliers. It is supported in a wide range of ecosystems, including businesses and road operators.

■ Outstanding range and wireless performance

The C-V2X has evolved from overall technology, such as modulation and coding technologies used in LTE technology, and receiver performance.

The result is a wider range of communications (more than twice the line of sight (LOS)), improved non-line-of-sight (NLOS) performance, improved reliability (low packet error rates), high capacity, and superior congestion control performance. Shows superior performance over IEEE 802.11p technology.

V2V, V2I, and V2P operating in ITS bands (e.g. ITS 5.9 GHz) independent of cellular network



Short range (<1 kilometer), location, speed ... Implemented over "PC5 interface"

Source: https://m.post.naver.com/viewer/postView.nhn?volumeNo=15931471&memberNo=20717909

Autonomous driving communication technology "C-V2X"

Use cases at high speed

Unlike Wi-Fi technology, which is intended to replace wired Ethernet cable connections, cellular communication is designed with highspeed mobility in mind. In the case of 802.11p, there has been no improvement in the physical layer (PHY), so you need to implement advanced reception to operate at high speed. However, C-V2X direct communication is based on mobile communication, so it can be used in fast-moving cars. 3GPP Release-14 C-V2X direct communication is available in the 5.9 GHz band until the vehicle's relative speed is 500 km / h. The signal design of the C-V2X direct communication does not require advanced receiver implementation. In addition, this performance is possible even with minimal performance requirements. This is not possible with 801.11p.

■ C-V2X Diffusion Acceleration

This post will help you understand the differences between C-V2X and DSRC, and better understand the advantages of C-V2X.

The proliferation of the C-V2X is accelerating and is expected to begin mounting in vehicles early next year. Stay tuned for more information on C-V2X.



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