Name of Accreditation Program	JCSS Accreditation Program		
Accreditation Identification	JCSS 0192 Calibration		
Name of Conformity Assessment Body	Measurement Engineering Department, Nissan Creative Services Co., Ltd.		
Name of Legal Entity	Nissan Creative Services Co., Ltd. JCN 4020001007831		
Inquiry Point	Measurement Engineering Section TEL: +81-46-282-8305 FAX: +81-46-282-8301		

*JCN: Japan Corporate Number



Certificate of Accreditation

International Accreditation Japan (IAJapan) hereby accredits the following conformity assessment body as a calibration laboratory of Japan Calibration Service System.

Accreditation Identification:	JCSS 0192 Calibration			
Name of Conformity Assessment Body:	Measurement Engineering Department, Nissan Creative Services Co., Ltd.			
Name of Legal Entity:	Nissan Creative Services Co., Ltd.			
Location of Conformity Assessment Body :	Nissan Technical Center 560-2 Okatsukoku, Atsugi-shi, Kanagawa, 243-0192, JAPAN			
Scope of Accreditation:	Accreditation: Length, Acceleration, Electricity (Direct Current & Low Frequency), (as the following pages)			
Accreditation Requirement :	ISO/IEC 17025:2017* * The relevant accreditation requirements described in the Accreditation Scheme Document for JCSS are also applied.			
Effective Date of Accreditation :	2024-03-22			
Expiry Date of Accreditation:	2028-03-21			
Date of Initial Accreditation:	1997-12-10			

ISHIGE Hiromi

ISHIGE Hiromi Chief Executive, International Accreditation Japan (IAJapan) National Institute of Technology and Evaluation

⁻ International Accreditation Japan (IAJapan) is a laboratory accreditation body which has signed MRAs of ILAC (International Laboratory Accreditation Cooperation) and APAC (Asia Pacific Accreditation Cooperation).

⁻ MRA requirements are, in addition to relevant international standards and guides, requirements for participation in proficiency testing programs, surveillance and reassessment, and the policy for the traceability of measurement for MRA purpose.

⁻ This laboratory fulfills ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation means this laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

⁻ The latest accreditation information is publicly available on IAJapan Website as an accreditation certificate.

<u>General Field of Calibration: Length</u> <u>Date of Initial Accreditation of the Field: 1997-12-10</u> <u>Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility</u> <u>Calibration and Measurement Capabilities</u>

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Length Measuring Instrument	Gauge Blocks (Comparison method)	From 0.5 mm up to 100 mm	0.10 μm
	Dial gauges	Up to 50 mm	2.3 μm
		Up to 80 mm	2.4 μm
		Up to 100 mm	2.6 μm
	Micrometers	Up to 25 mm	2 μm
	Calipers	Up to 300 mm	0.02 mm

#All Calibration Procedures are in-house procedures developed by this laboratory.

Laboratory's permanent facility/On-site Calibration: On-site Calibration

Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range Expanded Uncerta (Level of Confide Approximately 95	
Length Measuring Instrument	Micrometers	Up to 25 mm	2 μm
	Calipers	Up to 300 mm	0.02 mm

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration: Acceleration

Date of Initial Accreditation of the Field: 2017-12-21

Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
Vibration Acceleration Measuring Equipment, etc.	Accelerometer (Charge Sensitivity)	80 Hz	2.0 %
		100 Hz	2.0 %
		160 Hz	2.0 %
	Accelerometer (Voltage Sensitivity)	80 Hz	2.0 %
		100 Hz	2.0 %
		160 Hz	2.0 %
	Accelerometer (Voltage ratio Sensitivity)	80 Hz	2.0 %
		100 Hz	2.0 %
		160 Hz	2.0 %

#All Calibration Procedures are in-house procedures developed by this laboratory.

<u>General Field of Calibration: Electricity (Direct Current & Low Frequency)</u> <u>Date of Initial Accreditation of the Field: 2007-05-24</u> <u>Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility</u> <u>Calibration and Measurement Capabilities</u>

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)
		100 mV	21 ppm
		1 V	9.0 ppm
	DC Voltage Source	10 V	7.0 ppm
		100 V	10 ppm
		1000 V	17 ppm
		From 30 mV less than 100 mV	0.014 %
		100 mV	22 ppm
		More than 100 mV up to 300 mV	0.0076 %
		More than 0.3 V less than 1 V	0.0054 %
	DC Voltage Measuring Equipment	1 V	9.0 ppm
		More than 1 V up to 3 V	0.0045 %
		More than 3 V less than 10 V	0.0055 %
		10 V	7.0 ppm
Direct Current & Low		More than 10 V up to 30 V	0.0046 %
Frequency Measuring		More than 30 V less than 100 V	0.0058 %
Equipment, etc.	DC Voltage Measuring Equipment	100 V	10 ppm
		More than 100 V up to 300 V	0.0049 %
		More than 300 V less than 1000 V	0.0051 %
		1000 V	17 ppm
		From 30 μ A up to 300 μ A	0.068 μΑ
		More than 300 μ A up to 3 mA	0.00057 mA
	DC Current Measuring Equipment	More than 3 mA up to 30 mA	0.0052 mA
		More than 30 mA up to 300 mA	0.069 mA
		More than 300 mA less than 3 A	0.0017 A
		From 3 A up to 10 A	0.0064 A
		More than 10 A up to 100 A	0.14 A
		More than 100 A up to 200 A	0.26 A
		More than 200 A up to 500 A	0.76 A
		More than 500 A up to 1000 A	1.8 A

			R	From 0 μV up to 21 003 μV	8 μV
				(From 0 $^{\circ}$ C up to 1760 $^{\circ}$ C)	
			K	From - 5 891 μV	
				up to 54 819 µV	29 µV
				(From -200 °C up to 1370 °C)	
		I hermocouple	Е	From - 9 718 µV	
		re Junction		up to 75 621 µV	35 µV
Direct Current & Low	Temperature			(From -250 °C up to 990 °C)	
Frequency Measuring	Indicator		J	From - 8 095 µV	
Equipment, etc.				up to 68 980 µV	32 µV
				(From -210 °C up to 1190 °C)	
			Т	From - 6 180 µV	
	Platinum Resistand Thermon			up to 20 255 µV	27 µV
				(From -250 °C up to 390 °C)	
		Platinum Resistance Thermometer Sensor	Pt100	From 18.52 Ω up to 375.70 Ω (From -200 °C up to 800 °C)	0.07Ω

#All Calibration Procedures are in-house procedures developed by this laboratory.