



## Revision History

Revision	Date	Author	Description
A	Jan.05.2018	T.Segawa	Initial Document
B	Mar.23.2018	T.Segawa	CE mark is deleted. UL authorization is added. Image size is changed. RFID operation method is added.
C	May.15.2018	T.Segawa	FCC notice is added.

## Revision History

Revision	Description	Page	Before	After
B	CE mark is deleted.	2	CE mark RoHS directive (2011/65/EU) EMC directive (2014/30/EU) RE directive (2014/53/EU)	RoHS directive (2011/65/EU)
	UL authorization is added.	2	--	UL62368-1
	Image size is changed.	3	Image Resolution:600 dpi Image Size: Top image 2880 x 2160pixels Bottom image 3600 x 2160 pixels	Image Resolution:600 / 300 dpi Image Size: Top image 2160 x 1656 pixels Bottom image 3120 x 2160 pixels
	RFID operation method is added.	3	--	RFID operation: Touch operation
C	FCC notice is added.	7	--	<b><u>NOTICE</u></b> This equipment has been tested .....

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## 1. Product overview

Model Name: ISI300 – 0231

This Multi ID Scanner is a device for imaging both sides of a document on a single machine, and has functions of RFID communication, OCR, bar code reading.

OCR function is suitable for ID3 passport and ID1 card defined by ISO/IEC 7501 (ICAO Doc.9303) standards.

The RFID communication function conforms to ISO/IEC 14443 standard.

The types of readable bar code are CODE 39, CODE 128, EAN/JAN and PDF417. Conforming standard are ISO/IEC 15420, 16388, 15417 and 15438.

A front camera is mounted on the surface of this device, and it can be used for various purposes such as reading a bar code on the mobile and take a face image of a person operating the device.

## 2. Basic function

### 2-1.Imaging

ISI300-0231 has a camera to take both top and bottom side pictures of the document. A mechanical shutter switches the optical path of the top and the bottom images.

### 2-2.Lighting color

The type of light source incorporated is white color, infrared light, and ultraviolet light.

### 2-3.RFID communication

RFID communication is provided by touch operation.

Passport RFID communication is handled according to the Basic access control BAC rules specified in ICAO Doc 9303.

### 2-4.Extended port

There are two extended USB2.0 ports on the back of this scanner.

These ports are used for optional NFC contactless reader, camera module, swipe card reader, etc.

### 2-5.Front camera

USB interface is connected as the combine device with the main camera.

### 2-6.Temperature control fan

An air conditioning fan is provided so that the temperature inside the scanner does not heat up.

### 2-7.Operator Indicators

This scanner has 4 lamps and one buzzer.

The device driver controls these according to scanner status.

### 2-8.Optional module bay

This scanner has top mount bay for another camera.

## 3. Conformity Standards and Directives

RoHS directive (2011/65/EU)

FCC 47CFR Part 15

UL62368-1

#### 4. Specifications

##### 4-1.Imaging

Effective image area: Top image 90 x 70 mm  
Bottom image 130 x 90 mm

Image Resolution: 600 / 300 dpi

Image color: 24 bit Full color and 256 gray scales

Light Source: RGB mixed color LED, Infrared LED and Ultraviolet LED

Image Size: Top image 2160 x 1656 pixels  
Bottom image 3120 x 2160 pixels

##### 4-2.RFID

RFID operation: Touch operation

Number of antenna: 2 places

Type of mode: Type A, Type B

Bit rate: 106, 212, 424 kbit/sec

##### 4-3.Interface Connector and Cable

Interface: USB2.0 High Speed / Mating Connector: USB-Type B

Extension: USB2.0 High Speed / Mating Connector: USB-Type A

##### 4-4.Host OS

Application OS: Windows 7, 8.1,10 (-32 bit / -64bit)

##### 4-5.Power source

Voltage: DC+15V

Power source: Use the attached AC adapter

Input voltage: AC100V-240V\_50/60Hz

Input current: 1.45A

Energy efficiency: DoE level VI and over

*Note: Do not insert or pull out the DC plug after AC plug is connected*

##### 4-6.Medium Thickness and Opacity

ID3: Conforms for ICAO Doc.9303

ID1: Thickness: 0.15 to 0.9 mm

Opacity: 7% at 940nm wave length

##### 4-7.Operator Indicators

Indication Lamp: "SCAN", "RFID", "Ready", "POWER" total 4 Lamps

Buzzer:

##### 4-8.Frame Ground

The Frame Ground is connected to the USB shell.

##### 4-9.Weight

3.1 kg \*main body(including of media guide and Shading shield cover (Standard type))

##### 4-10.Appearance

Outside Drawing: T16A035A01

## 5. Environment condition

## 5-1. Operating condition

Temperature: 5 to 45 degrees C  
Humidity: 20 to 80%RH \* Non condensing  
Wet bulb temperature: Less than 30 degrees C  
Environment lighting: Less than 1,000 lx

*note: If environment lighting is over 1,000 lx then use the optional shading shield.  
note: Don't place the scanner in any place where it will be subjected to direct sunlight.*

## 5-2. Storage and transit condition

Temperature: -15 to 60 degrees C  
Humidity: 20 to 80%RH

## 5-3. Attitude

Horizontal Attitude (Within +/- 5 degrees)

## 6. Reliability

## 6-1. Vibration test

Range of frequency: 5 ~ 50Hz  
Acceleration: 2 m/s<sup>2</sup> (0.2G) \*tentative  
Sweep method: Logarithmic sweep, 2minites/1 octave  
X.Y.Z. each direction: 30 minutes.  
No functional error is found after vibration test.

## 6-2. Shock Durability test

Acceleration: 294 m/s<sup>2</sup> (30 G) \*tentative  
Impressed time: 11 ms  
Z direction One time.  
No functional error is found after shock durability test.

## 6-3. Dielectric Strength

The Frame Ground is connected to the signal ground in this scanner.  
So, it does not regulate.

## 6-4. Insulation Resistance

The Frame Ground is connected to the signal ground in this scanner.  
So, it does not regulate.

## 6-5. Electrostatic Discharge test

Contact discharge voltage: +/- 4 kV  
Air discharge voltage: +/- 8 kV  
No error that cannot be automatically recovered when the static electricity is discharged during operation.

Indirect discharge voltage: +/- 10 kV  
No breakdown after discharge to the target plate that is located at 10cm above the scanner.  
Refer to IEC/EN 61000-4-2



**6-6. Radiated, Radio-Frequency, Electromagnetic Field**

Electric field: +/- 3 V/m  
No degradation of performance.

Refer to IEC/EN 61000-4-3

**6-7. Electromagnetic Fast Transient Burst Immunity**

Voltage: +/- 0.5 kV at USB port  
+/- 1.0 kV at AC adaptor input  
Frequency 5 kHz

No degradation of performance after the test.  
During the test, degradation of performance is allowed.

Refer to IEC/EN 61000-4-4

**6-8. Surge Immunity**

Voltage: +/- 0.5kV at USB port  
+/- 1.0kV at AC adaptor input

No degradation of performance after the test.  
During the test, degradation of performance is allowed.

Refer to IEC/EN 61000-4-5

**6-9. Radio-Frequency continues conductor Immunity**

Voltage: 3 V  
No degradation of performance.

Refer to IEC/EN 61000-4-6

**6-10. Power-Frequency magnetic field Immunity**

Magnetic field: 1 A/m

No degradation of performance after the test.  
During the test, degradation of performance is allowed.

Refer to IEC/EN 61000-4-8

**6-11. Radiated Electric Field Emissions**

EN55032 Class B  
FCC 47CFR Part 15, Subpart C Class B

**6-12. MTBF**

70,000 hour

## 6-13.Lifetime goal

The shorter condition of one million transaction or 7 years.

## 6-14.Lifetime of LED for lighting

500Hr at 25 degrees C environment

Note: estimation: Proper for Approximately 9million pass: 500hr x 60min x 60sec / 2 (sec/pass)

The product life will be terminated by transaction times before LED lifetime.

This LED life is higher than transaction reliability enough.

## 7. Maintenance

## 7-1.Cleaning

The glass face is to be kept clean using a cleaning card at daily maintenance.

Wipe it off with a wiper dampened with water.

Do not use the solvent. It may cause discoloration or deformation.

## 7-2.Calibration of an Image

Image calibration is not normally necessary as it is done before factory shipment.

However continuous use may cause deterioration in image quality due to an increase in uneven illumination.

In such a case, please calibrate again. Refer to the user manual for how to do it.

## 8. Accessories

White reference Card

USB cable

AC adapter

Media guide

Shading shield cover (Standard type)

## 9. Option Order

White reference Card:

Parts No. S63A547A01

AC adapter:

Parts No. S63A548A01

Media guide:

Parts No. S63A549A01

Shading shield cover (Standard type):

Parts No. S63A550A01

Note) under developing

Shading shield cover (Full shield type):

Parts No. S63A551A01

NFC contactless reader (EMV approved):

Parts No. S63A552A01

Bracket for NFC contactless reader:

Parts No. S63A553A01

Bracket for camera module:

Parts No. S63A554A01

**NOTICE**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- 
- Accessory AC adaptor and interface cable with ferrite core must be used for connection to host computers and peripherals in order to meet FCC emission limits.

**FCC WARNING**

Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Radio Frequency Exposure Compliance**

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles des radioélectriques (RF) de la FCC lignes directrices d'exposition et d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée conforme sans évaluation du débit d'absorption spécifique (DAS).

**End of Document**

