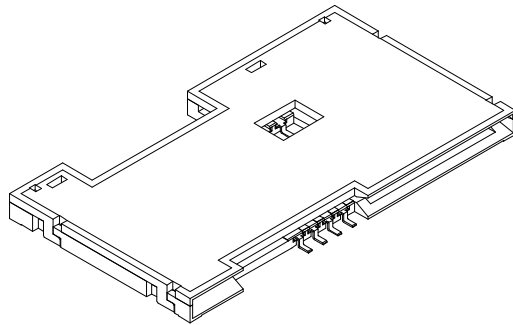


**SPECIFICATION
OF
IC CARD ACCEPTOR**

Model No.: ICA-607
Revision: 1.0
Issue Date: Oct.15, 2001



HAMBURG INDUSTRIES CO., LTD.

6FL., No.12, Lane 270, Sec. 3, Pei Shen Rd.,
Shen Keng Hsiang, Taipei Hsien, Taiwan 222
TEL : 886 - 2 - 2662 8882 FAX : 886 - 2 - 2662 7201~2
E-Mail :taipei@hamburg.com.tw
URL: <http://www.hamburg.com.tw>

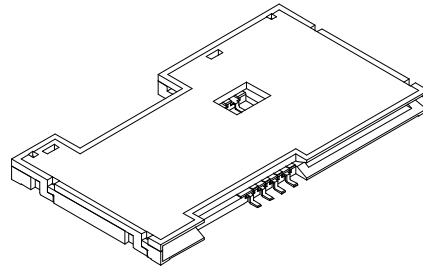
TABLE OF CONTENTS

<u>ARTICLE</u>	<u>PAGE</u>
1 INTRODUCTION.....	1
General	1
Features.....	1
Applications.....	1
2 TECHNICAL CHARACTERISTICS	2
2.1 General Characteristics.....	2
2.2 Electrical Characteristics	2
2.3 Mechanical Characteristics	2
2.4 Solderability.....	3
2.5 Environmental Characteristics	3
3 INTERFACE.....	4
3.1 Signals.....	4
4 MECHANICAL OUTLINE DRAWING	5
APPENDIX A : PACKING INFORMATION.....	6
APPENDIX B : CARD SPECIFICATION (ISO7816 Part 2)	7
APPENDIX C : IC CARD CONTACT LOCATION (ISO7816 Part 2)	8

1. INTRODUCTION

General :

The ICA-607 is an interface device for ISO based IC CARD or SMART card. It is designed for high performance and flexibility to give prospective customers a quick applications of the individual devices in there product series, and to facilitate selection if the device it decides that are best-suited to intended target applications.



Features :

- ◆ ISO 7816 Standard IC Card or SMART Card. ^(note)
- ◆ Compact Physical Size for Multi-Purpose Application.
- ◆ Module Type IC Contact Compatible with CP8. ^(note)
- ◆ High Reliability Low-Friction Contact Extension operation Life of Contact.
- ◆ Friction Contact Technology.
- ◆ Low Profile.
- ◆ Meet EMV 96 V3.1.1 standard.

Applications :

- ◆ Access Control Terminals.
- ◆ Terminal Identification module.
- ◆ Telecommunication.
- ◆ Vending Machines.
- ◆ Other Identification recognition.

Note: All trademarks mentioned herein are the property of their respective companies.

2. TECHNICAL CHARACTERISTICS

2.1 General Characteristics :

Items	Standard	Descriptions
Dimensions		56.0L x 31.1W x 3.65 H mm
Weight		5.5 g \pm 0.5 g
Card size	ISO 7816 part 2	85.6 x 54 x 0.76 mm
Contact principle		Friction technology
Operating position		Shaft up / Down / Horizontal
Mounting System		SMT
Durability		100,000 cycles min.

2.2 Electrical Characteristics : According to Standard IEC512

Items	Standard	Descriptions
2.2.1 Data Contacts		
Number of contacts (Optional)		6, 8 pins
Contact resistance	IEC512-2-2a	50 m Ω typical, 100 m Ω max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 M Ω / 500 VDC
Rated voltage		< 50 V
Rated current		1 A max. , 10 μ A min.
Dielectric withstanding voltage	IEC512-2-4a	500 VAC RMS 1min. (sea level)
2.2.2 Card Detector & Switch		
Switch type		Blade
Operation		Normal Open
Contact resistance	IEC512-2-2a	50 m Ω typical, 100 m Ω max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 M Ω / 500 VDC
Rated voltage		< 50 V
Rated current		1 A max., 10 μ A min.
Dielectric withstanding voltage	IEC512-2-4a	500 VAC RMS 1min. (sea level)

2.3 Mechanical Characteristics :

Items	Standard	Descriptions
Card Insertion force		3N max.
Card Withdrawal force		2N max.
Contact force		0.2N ~ 0.6N
Contact location	ISO 7816 part 2	
Data Contacts		
Material		Phosphor bronze
Plating		Gold or Pd over Nickel
Card Detector & Switch		
Material		Phosphor bronze
Plating		Gold or Pd over Nickel
Insulation material		Thermoplastic, UL 94V-0

2.4 Solderability : According to Standard IEC68

Items	Standard	Descriptions
Wave		Not applicable
Vapor phase		215°C, 30 sec. Max.
IR re-flow		230°C, 10-15 sec. Max.
Manual	IEC68-2-20	360°C, 3 sec. Max.

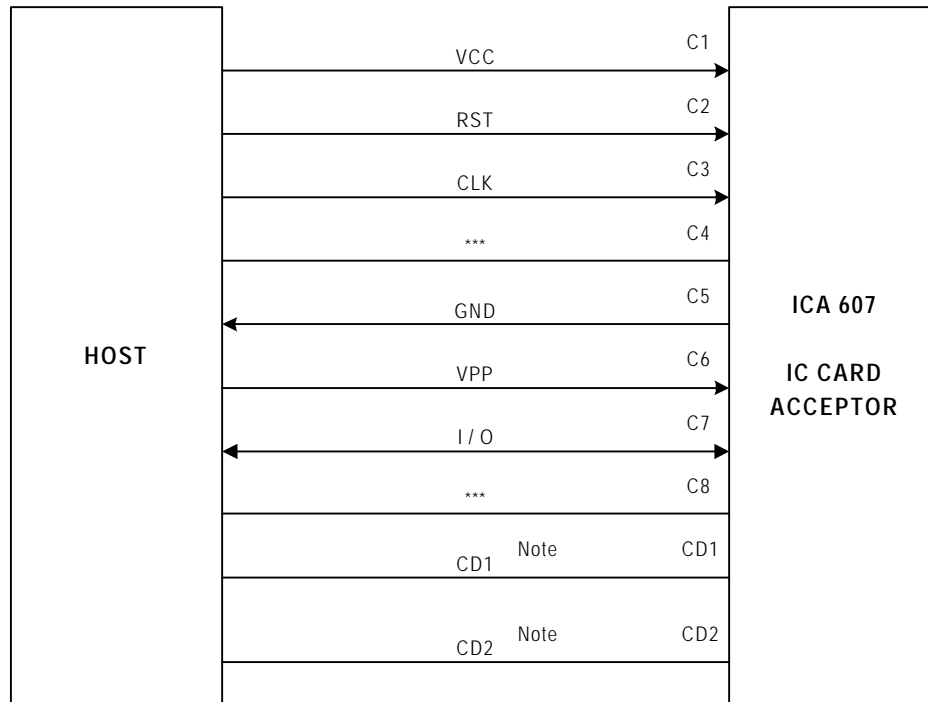
2.5 Environmental Characteristics : According to Standard IEC68

Items	Standard	Descriptions
Operating temperature		- 40°C ~ + 85°C
Operating humidity		10 % ~ 95 % RH
Storage temperature		- 40°C ~ + 85°C
Storage humidity		10 % ~ 95 % RH
Thermal shock	IEC68-2-14	- 40°C ~ + 85°C, 5 cycles
Damp heat	IEC68-2-6	40°C, 90% RH, 500HR.
Random vibration	See Note 1	No discontinuities of 1us or longer
Mechanical shock	See Note 2	No discontinuities of 1us or longer
Salt-mist	IEC68-2-11	35°C, 5% , NaCl , 48HR.

Note 1. Subject samples mated to ISO 7810 PVC Smart Cards to 10-500 HZ. 20 minutes in each of 3 mutually perpendicular planes.

Note 2. Subject mated samples to 10G's half-sine shock pulse of 11 ms duration. 3 shock in each direction applied along 3 mutually perpendicular planes, expect 4 G's shock pulses in direction of card withdrawal, 18 total shock.

3. INTERFACE



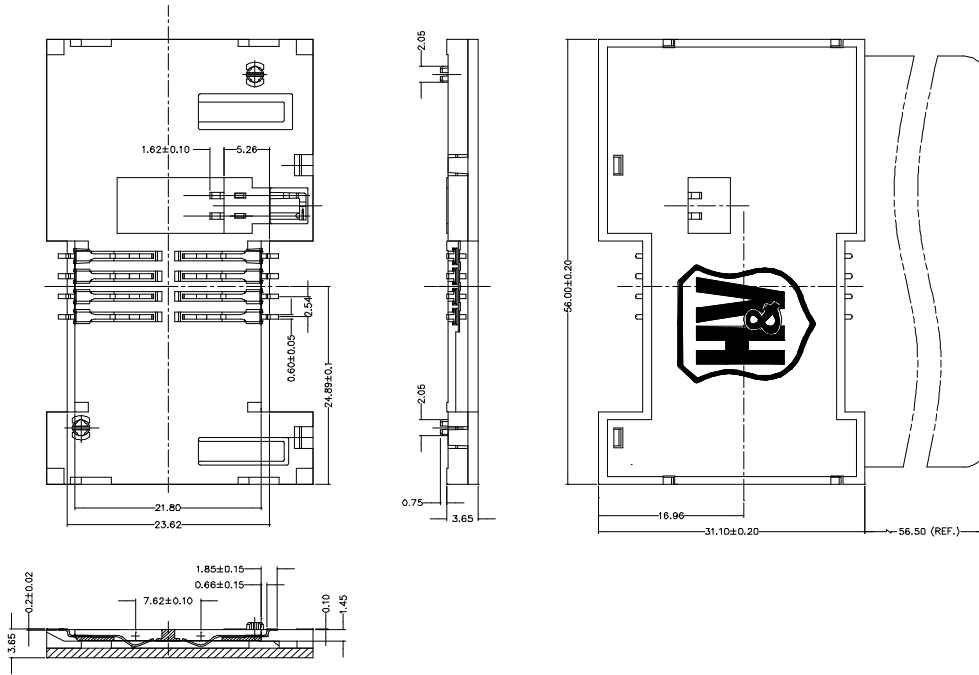
Note:
For more details please refer to section
2.2.2 Card Detector & Switch.

3.1 Signals

Signal interface connections for ICA-607 are shown below.

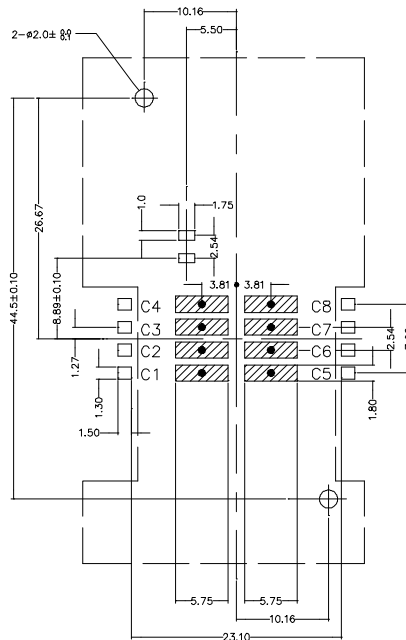
Contact No.	Assignment	Description	Remark
C1	Vcc	Power Voltage	
C2	RST	Reset Signal	
C3	CLK	Clocking Signal	
C4	***	Reserved for feature use	
C5	GND	Power and Signal Ground	
C6	Vpp	Programming Voltage	
C7	I/O	Serial Data input/output	
C8	***	Reserved for feature use	
CD1	CD1	Switch contact 1 of card detector	
CD2	CD2	Switch contact 2 of card detector	

4. MECHANICAL OUTLINE DRAWING



Unit : mm Tolerances: +/- 0.10mm

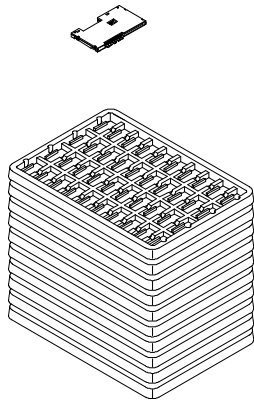
Figure 4.1 Mechanical Outline dimension. (ISO 8)



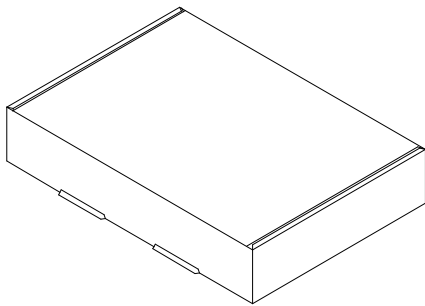
Unit : mm Tolerances: +/- 0.10mm

Figure 4.2 Reference dimension for PCB layout. (ISO 8)

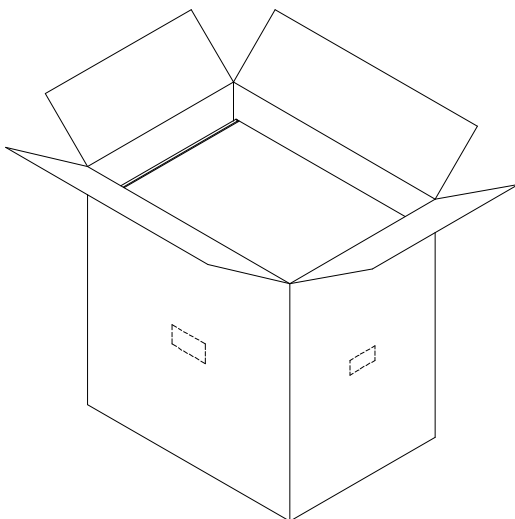
APPENDIX A : PACKING INFORMATION



Q'TY: 40 PCs per tray
MEAS.: 44.0L x 32.0W x 1.3H CM



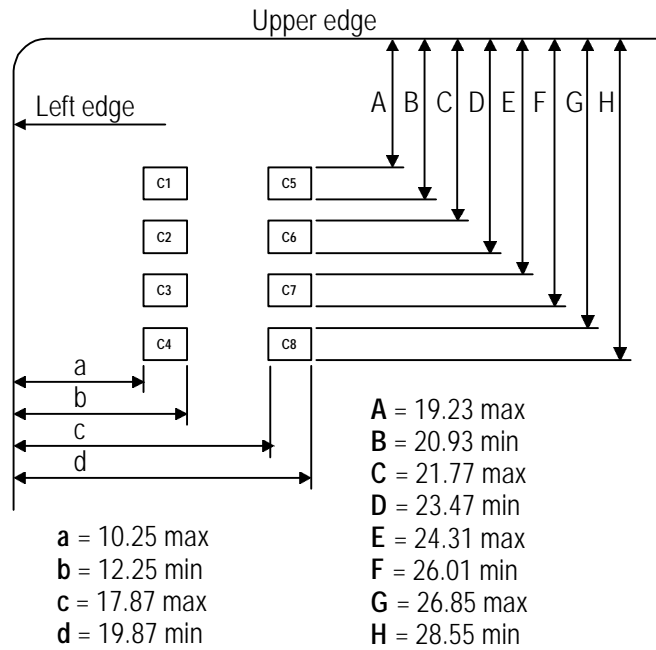
N.W.: 2.2 KGS
G.W.: 3.8 KGS
Q'TY: 360 PCs per box
(9 trays set in order plus a empty)
MEAS.: 46.0L x 32.5W x 8.8H CM



N.W.: 11.0 KGS
G.W.: 20.0 KGS
Q'TY: 1800 PCs per carton
(5 boxes set in order)
MEAS.: 48.0L x 35.0W x 48.0H CM

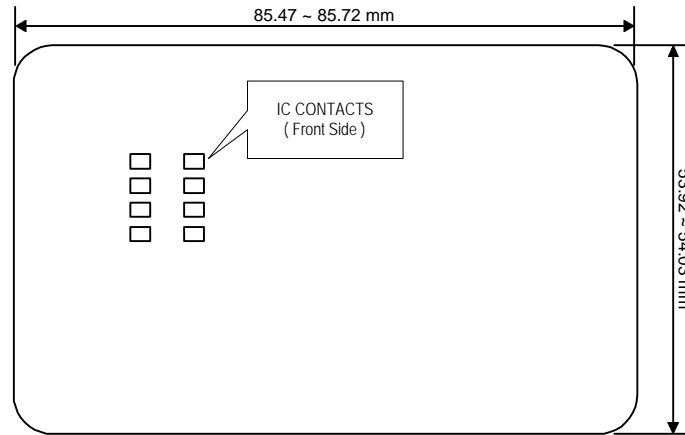
APPENDIX B : CARD SPECIFICATION (ISO 7816 Part 2)

Dimensions in millimeters (mm)



APPENDIX C : IC CARD CONTACT LOCATION (ISO 7816 Part 2)

Dimensions in millimeters (mm)



Thickness: 0.76 +/- 0.08 mm