SPECIFICATION
OF
IC CARD ACCEPTOR

Model No.: ICA-616

Revision: 1.1

Issue Date: OCT. 25, 2007

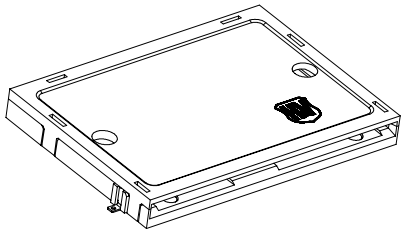

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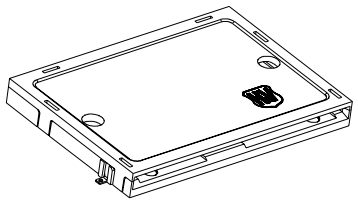
TABLE OF CONTENTS

1. INTRODUCTION

General:

The ICA-616 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 their 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.
- EMV Compliant.
- RoHS Directive 2002/95/EC Compliant.

Applications:

- Access Control Terminals.
- Terminal Identification module.
- Set-Top-Box.
- 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	Description
Dimension		56.10L x 40.00W x 6.20H mm
Weight		Approx. 13.0 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 Type (with post)
Durability		100,000 cycles min.

2.2 Electrical Characteristics: According to Standard IEC512

Items	Standard	Description
2.2.1 Data Contacts		
Number of Contacts		8 pins
Contact resistance	IEC512-2-2a	50 mΩ typical, 100 mΩ max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 MΩ / 500 V DC
Rated voltage		50 V max.
Rated current		1 A max.
Dielectric withstanding voltage	IEC512-2-4a	500 V AC rms 1 min. (sea level)
2.2.2 Card Detector & Switch		
Switch type		Sealed
Operation		Normally Open
Contact resistance	IEC512-2-2a	50 mΩ typical, 100 mΩ max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 MΩ / 500 V DC
Rated voltage		50 V max.
Rated current		1 A max.
Dielectric withstanding voltage	IEC512-2-4a	500 V AC rms 1 min. (sea level)

2.3 Mechanical Characteristics:

Items	Standard	Description
Card Insertion force		1N ~ 10N
Card Withdrawal force		1N ~ 10N
Contact force		0.2N ~ 0.6N
Contact location	ISO 7816 part 2	
Data Contacts		
Material		Phosphor bronze
Plating		Gold over Nickel
Card Present Switch		
Material		Phosphor bronze
Plating		Gold over Nickel
Insulation material		Thermoplastic, UL 94V-0

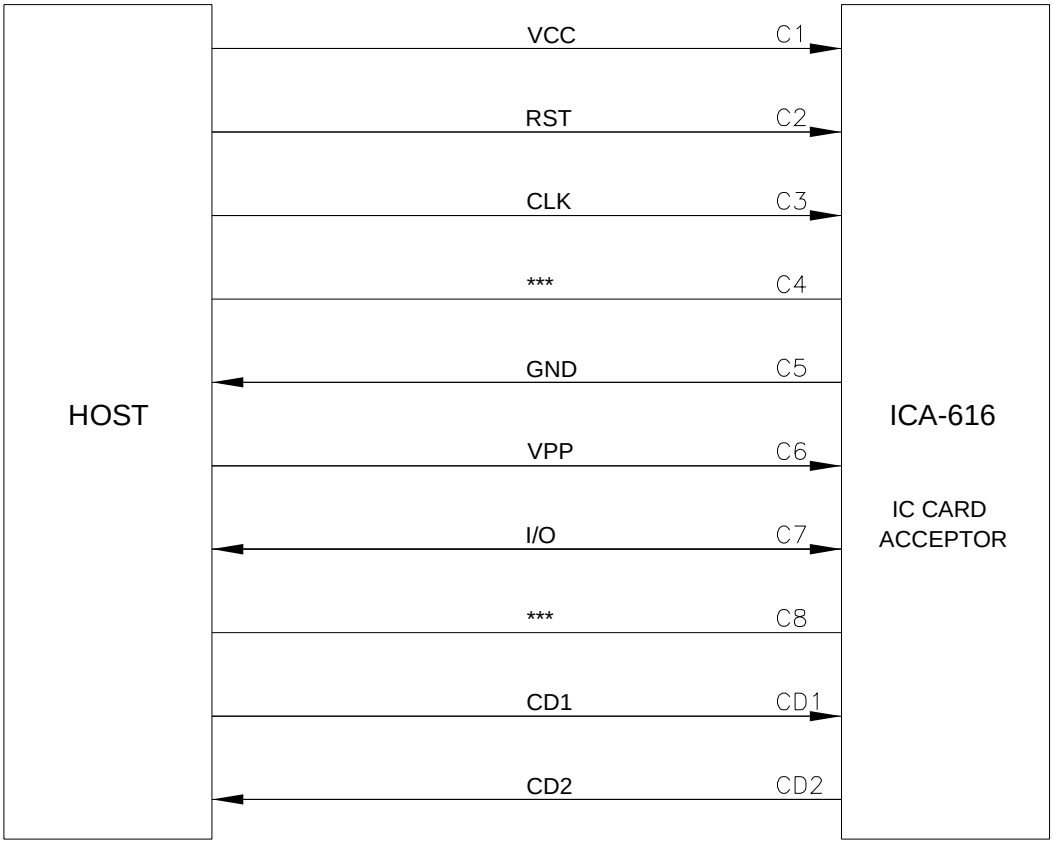
2.4 **Solderability:** According to Standard IEC68

Items	Standard	Description
Wave	IEC-68-2-20	Not applicable
IR reflow		Not applicable
Manual soldering	IEC-68-2-20	360°C, 3 sec. Max.

2.5 **Environmental Characteristics:** According to Standard IEC68

Items	Standard	Description
Operating temperature		- 40°C ~ + 85°C
Operating humidity		10 % ~ 95 % RH
Storage temperature		- 40°C ~ + 85°C
Storage humidity		10 % ~ 95 % RH

3. INTERFACE

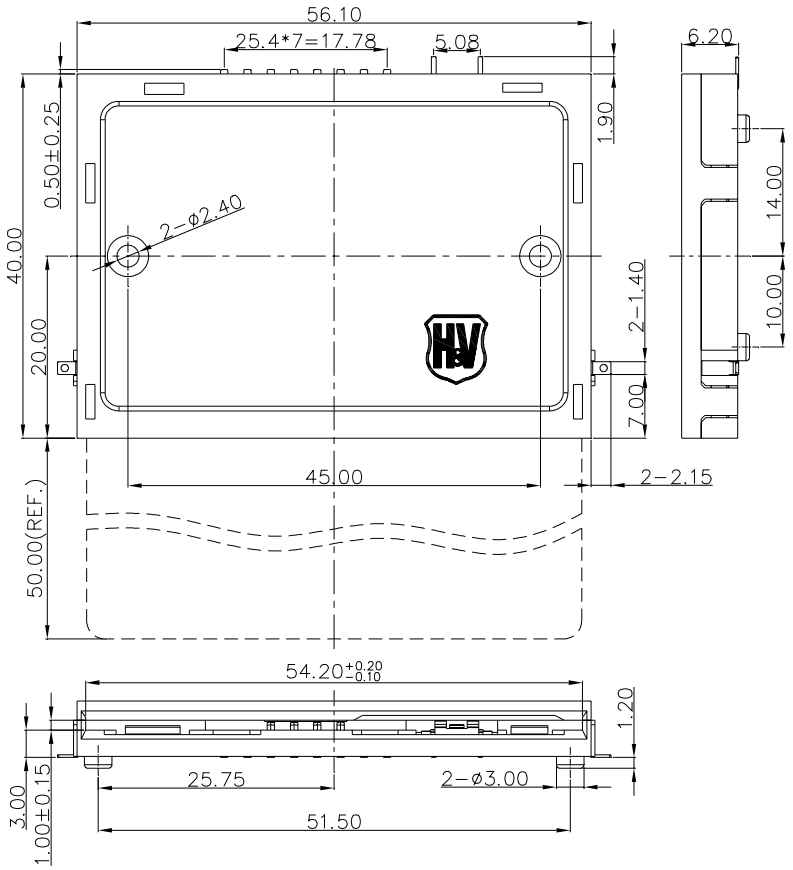


3.1 Signals

Signal interface connections for ICA-616 are shown below.

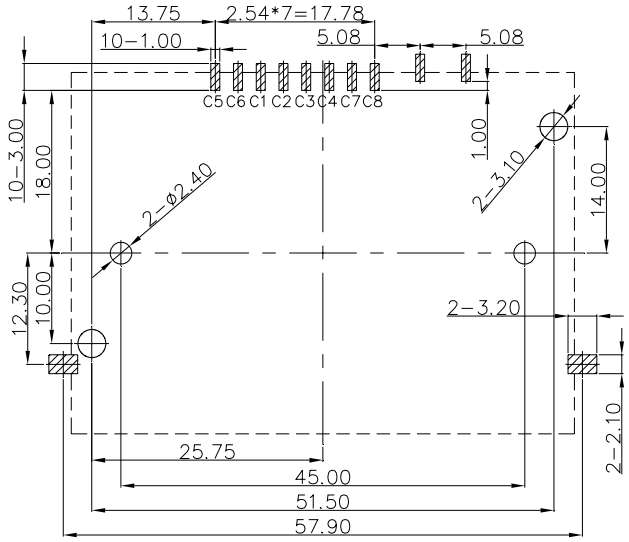
Contact No.	Assignment	Description	Remark
C1	VCC	Power Voltage	
C2	RST	Reset Signal	
C3	CLK	Clocking Signal	
C4	***	Reserved for feature use	
C5	GND	Power and Signal Ground	
C6	VPP	Programming Voltage	
C7	I/O	Serial Data input/output	
C8	***	Reserved for feature use	
CD1	CD1	Switch contact 1 of card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

4. MECHANICAL OUTLINE DRAWING



Unit: mm; Tolerances: ±0.15 mm

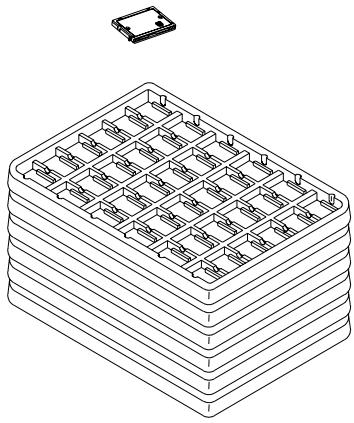
Figure 4.1 Mechanical Outline dimension



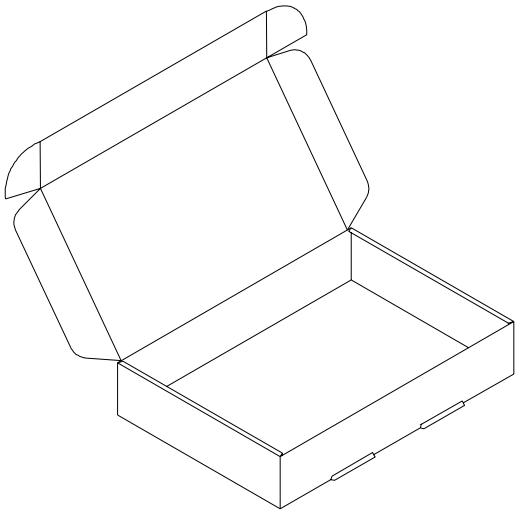
Unit: mm; Tolerances: ±0.05 mm

Figure 4.2 Reference dimension for PCB layout

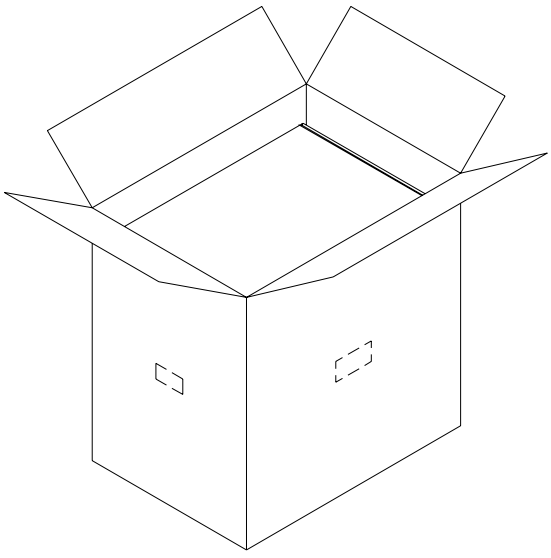
APPENDIX A: PACKING INFORMATION



Q'TY: 36 PCs per tray
Meas.: 44.0L x 32.0W x 2.0H CM



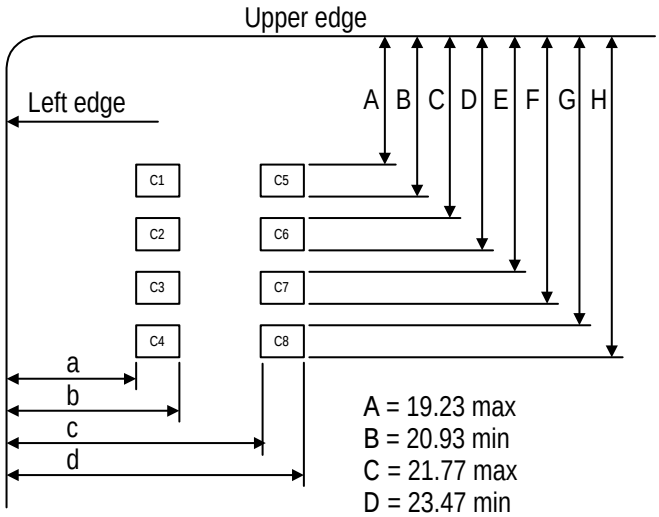
N.W.: 2.27 KGS
G.W.: 3.16 KGS
Q'TY: 180 PCs per box
(5 trays set in order
plus one empty tray)
Meas.: 46.0L x 32.0W x 8.8H CM



N.W.: 11.34 KGS
G.W.: 16.80 KGS
Q'TY: 900 PCs per carton
(5 boxes set in order)
Meas.: 48.0L x 35.0W x 47.5H CM

APPENDIX B: CARD SPECIFICATION (ISO 7816 Part 2)

Dimensions in millimeters (mm)

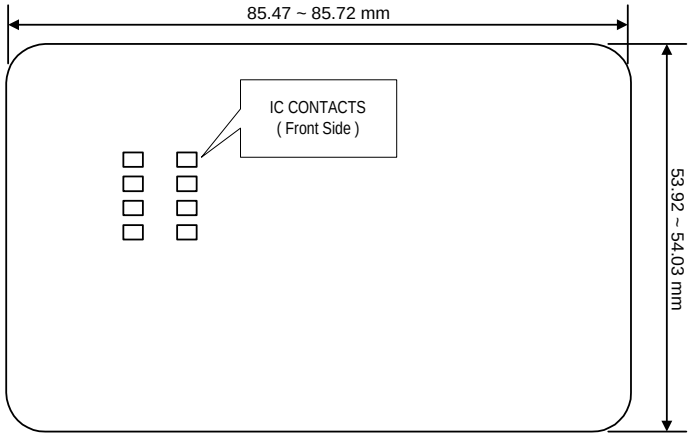


a = 10.25 max
b = 12.25 min
c = 17.87 max
d = 19.87 min

A = 19.23 max
B = 20.93 min
C = 21.77 max
D = 23.47 min
E = 24.31 max
F = 26.01 min
G = 26.85 max
H = 28.55 min

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

Dimensions in millimeters (mm)



Thickness: 0.76 +/- 0.08 mm