

OPERATIONS MANUAL

ENC-EBC-G-1000

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REVISION HISTORY

P/N

ECO Number	Date Code	Rev Level
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ORIGINATED	080717	A
08-168	090113	A.1

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Introduction

This manual is intended to provide the necessary information regarding configuration and usage of the ENC-EBC-G-1000 enclosure. WinSystems maintains a Technical Support Group to help answer questions regarding usage or programming of the board. For answers to questions not adequately addressed in this manual, contact Technical Support at (817) 274-7553, Monday through Friday, between 8 AM and 5 PM Central Standard Time (CST).

General Information

Features

Enclosure

- Low cost EBX SBC Enclosure
- Designed for easy assembly
- Accepts PC/104 modules
- Separate SBC mounting plate with standoffs
- Polyethylene grommet edging on mounting plate
- Up to 2 PC/104 modules can be mounted inside
- Custom configured end plates available
- Custom labeling available in moderate volumes
- Rugged 0.080" thick end plates
- End plate I/O connector cutouts provided
- RoHS compliant

Construction

- Heavy duty extruded aluminum construction
- Black Powder Coat Exterior finish
- Dimensions: 9.0"W x 9.5"D x 3.0"H

The ENC-EBC-G-1000 is a rugged enclosure designed to be used with the EBX-compatible single board computers (SBCs) and PC/104 expansion I/O modules. The enclosure is designed to mount in a variety of configurations. It is ideal for embedded applications requiring mounting inside NEMA boxes, OEM machinery, wiring closets, equipment rooms, and other areas where it is necessary to protect an EBX single board computer systems with PC/104 expansion boards.

Ordering Information

The ENC-EBC-G-1000 enclosure supports the EPIC SBC [EBC-855](#). WinSystems has standard end plates and cable sets for its EBX single board computers. The kit, part number KIT-HW-G-327-ENC-2 is the hardware kit for the ENC-EBC-G-1000 using the EBC-855.

WinSystems also offers custom end plates for customers needing 50 or more units.

Contact your WinSystems Applications Engineer for more information about custom units.

Construction

The ENC-EBC-G-1000 is made of lightweight, durable aluminum that will not rust. The exterior covers and end plates have a black powder coat that resists scratches and fingerprints. The standard end plates do not come with cables attached. WinSystems offers the cable set, part number [CBL-SET-327-G-ENC-2](#) to support the ENC-EBC-G-1000.

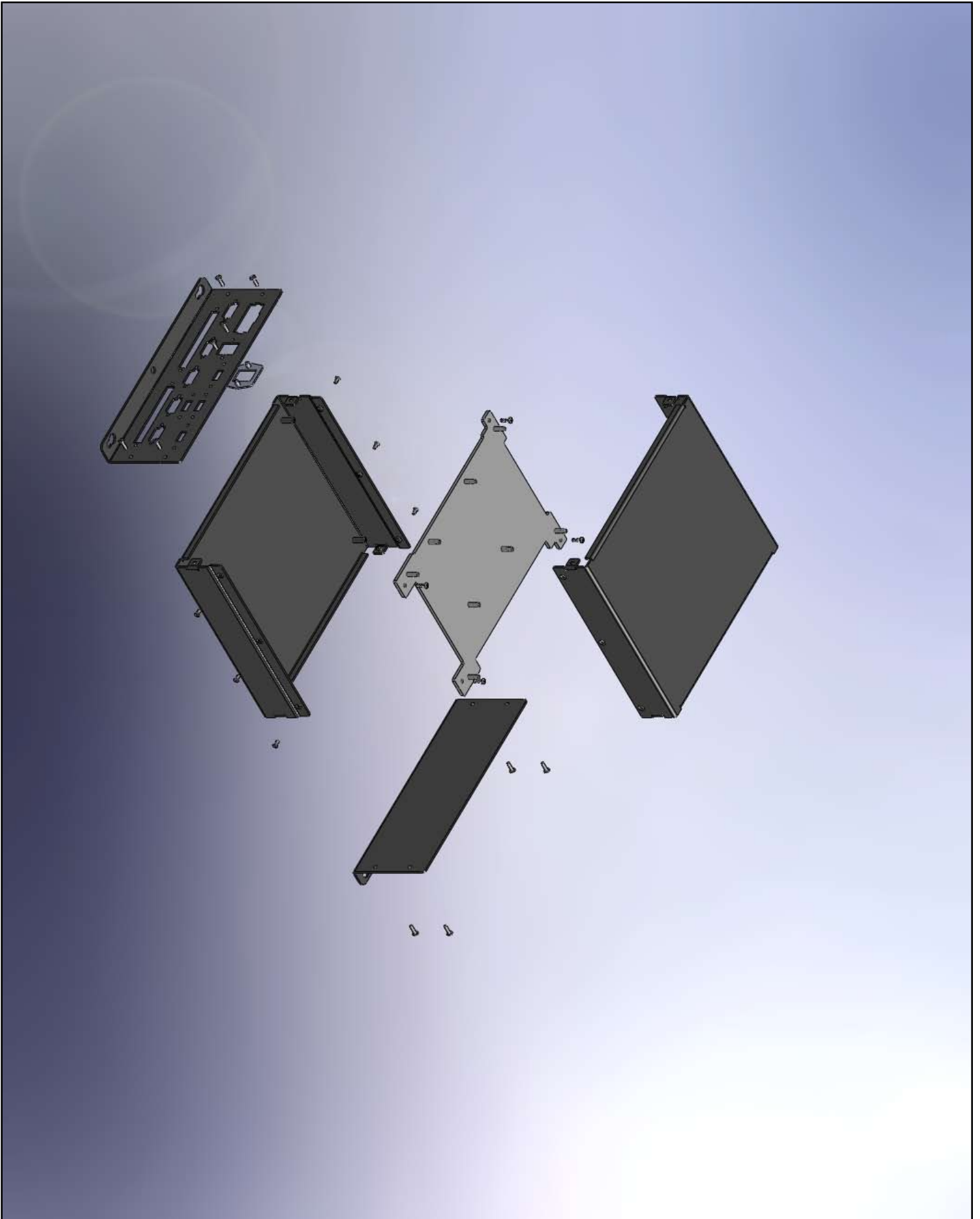
See the [Mechanical Drawing](#) section of this document for more information on specific dimensions of the ENC-EBC-G-1000.

Cables

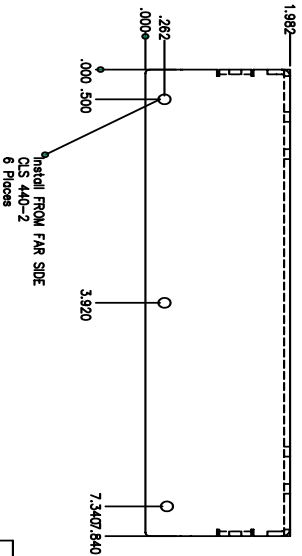
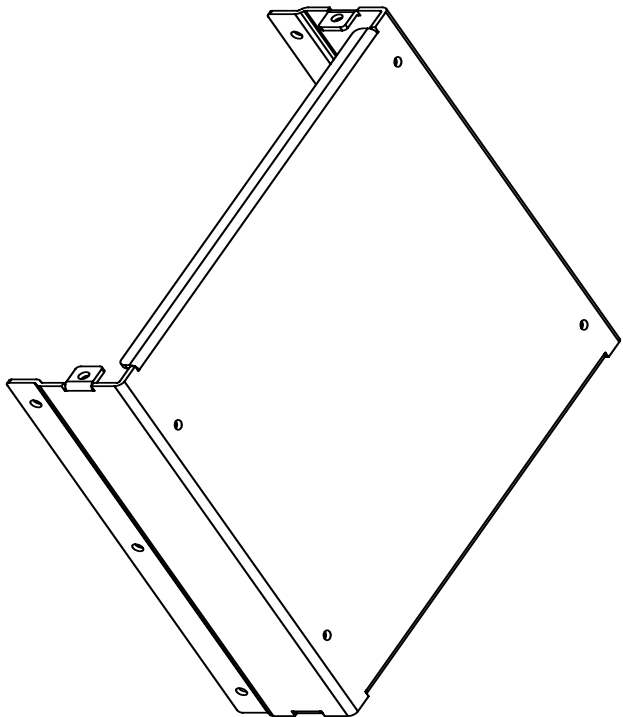
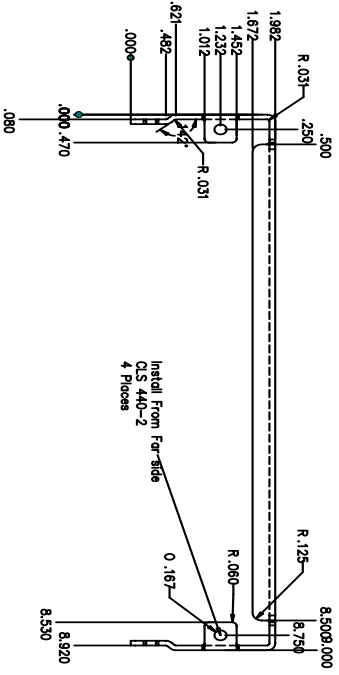
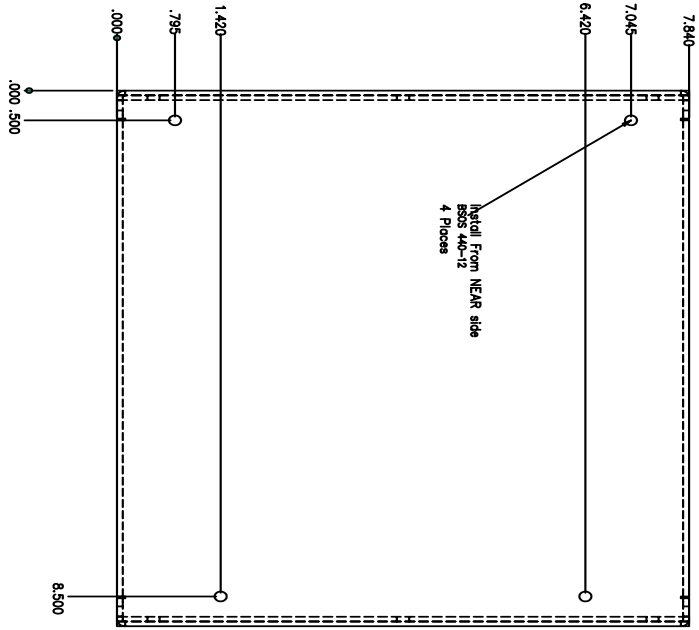
Part Number	Description
CBL-SET-G-327-ENC-2	ENC-EBC-G-1000 complete cable set for the EBC-855-G with hardware includes:
CBL-173-G-1-1.0	20-pin ribbon to two 9-pin male D connector adapter
CBL-234-G-1-0.916	14-pin ribbon to 15-pin D-sub CRT adapter
CBL-247-G-1-1.0	1-ft., Multi-I/O adapter
CBL-226-G-1-0.75	Ethernet extension cable
CBL-275-G-2-0.667	USB Cable (2 each)
CBL-317-G-2-1.5	External power supply cable w/o external termination
CBL-327-G-2-1.08	Digital I/O Cable (2 each)
CBL-341-G-1-0.437	Internal DC harness

Mechanical Drawing

Three Dimensional Assembly Model



Bottom Shell



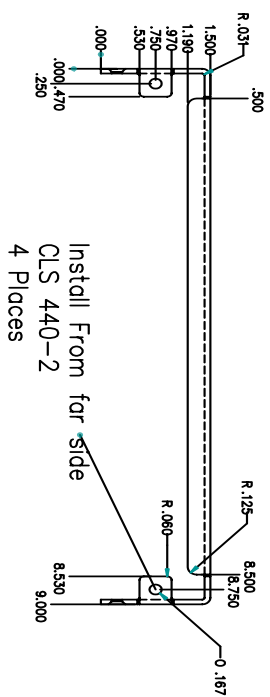
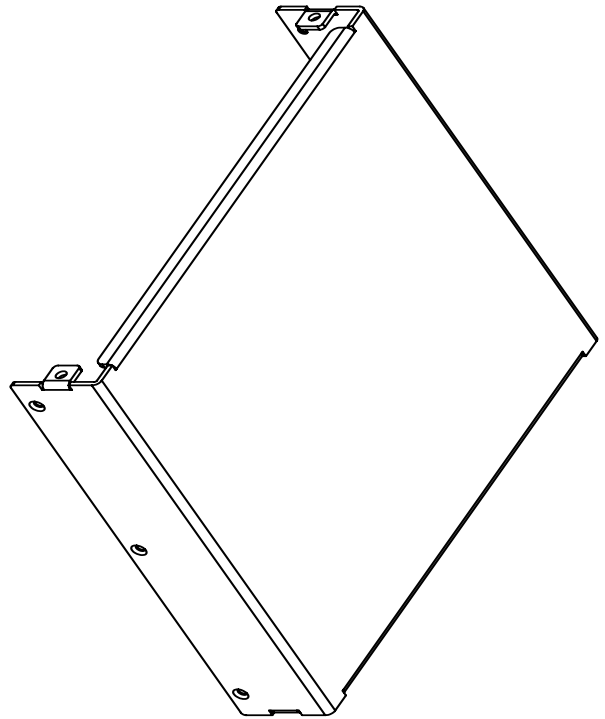
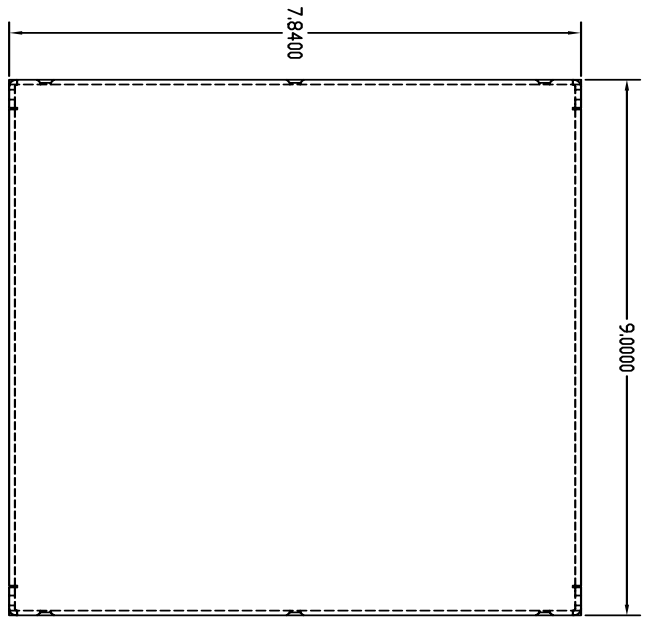
Notes
 (1) Material .080 5052 AL
 (2) Break & Cham all sharp edges
 Support "BLACKPOWDER" powder
 Part # RRS05172055

Rohs Compliance Notice: All Vendors providing quotations and/or materials to Winsystems, Inc., must supply a Rohs Directive "Certificate of Compliance", referencing the part number(s) of delivered items.
***ALL ALTERNATES MUST BE ELECTRICAL and MECHANICAL EQUIVALENTS to SPECIFIED PARTS, and must be ROHS COMPLIANT.**

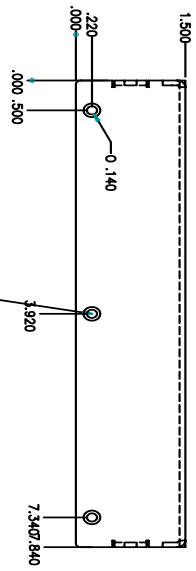
REVISION HISTORY		
REV	DESCRIPTION	DATE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS DECIMALS ANGLES ± 1/2°		CONTRACT NUMBER		Winsystems, Inc. "THE STD BUS AUTHORITY"	
MACHINE FINISH ✓		DRAWN BY:	DATE:	TITLE: BOTTOM SHELL	96015*
		CHECKER:	DATE:	ENC-EBC-1000	
		APPROVAL:	DATE:	DRAWING NUMBER:	
		DATE:	DATE:	G500-5003-101A	
REV	SIZE	CAGE/FSCH	SCALE	SHT 1	OF 1
A	D	1A027			

Top Shell



Install From far side
CLS 440-2
4 Places



CHK 82 DEG TO .230 DIA
1/40THr hole
6 places

- Notes
- (1) Material .080 5052 AL
 - (2) Deburr & break sharp edges
 - Dupont "BLACKRIDGE powder"
 - Part # RFB50512055

REVISION HISTORY		
REV	DESCRIPTION	DATE

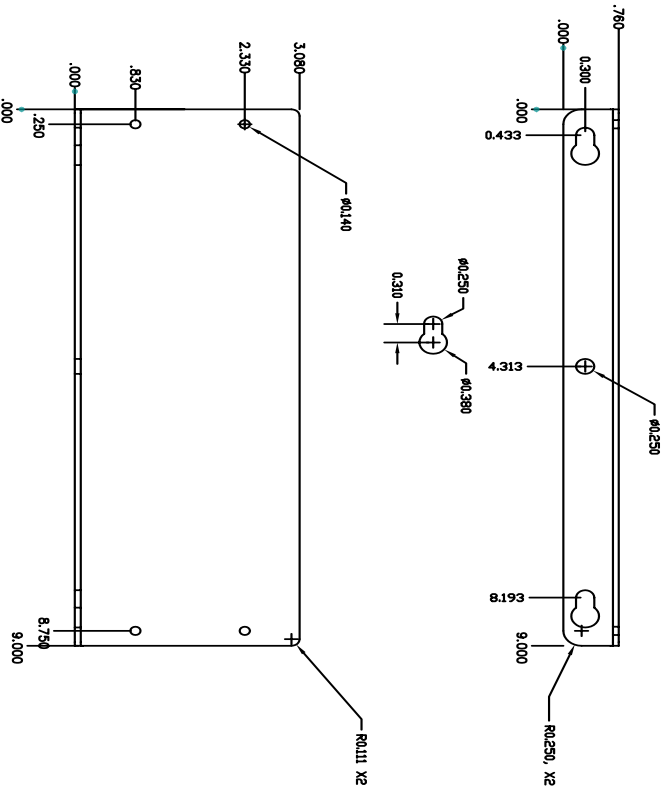
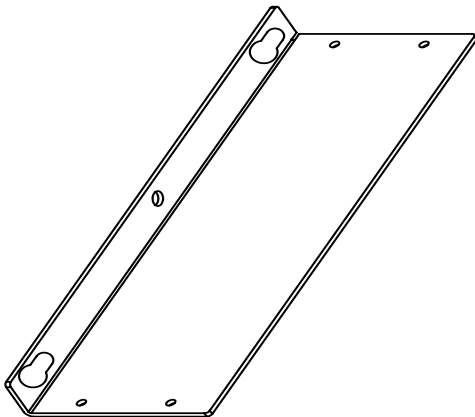
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS: ANGLES: ± 1/2°		MACHINE FINISH	
XX ± .03	XXX ± .010	✓	
DRAWN BY: _____		DATE: _____	
CHECKER: _____		DATE: _____	
APPROVAL: _____		DATE: _____	
DIST. APPROV. _____		DATE: _____	
REV	SIZE	DRAWING NUMBER	
A	D	ENC-EBC-1000	
CASE/F3CH 1A027		SCALE	
SHT 1 OF 1		5000-5003-100A	

WinSystems, Inc.
"THE STD BUS AUTHORITY"

400129

Endplate, Left, Blank

REVISION HISTORY		DATE	APPROVED
REV	DESCRIPTION	DATE	APPROVED
A	ISSUE	10.18.07	
B	REV # CHANGES RAISED MATCH REAM PLATE, DR. 213 HOLD (22.21.08)		



Notes

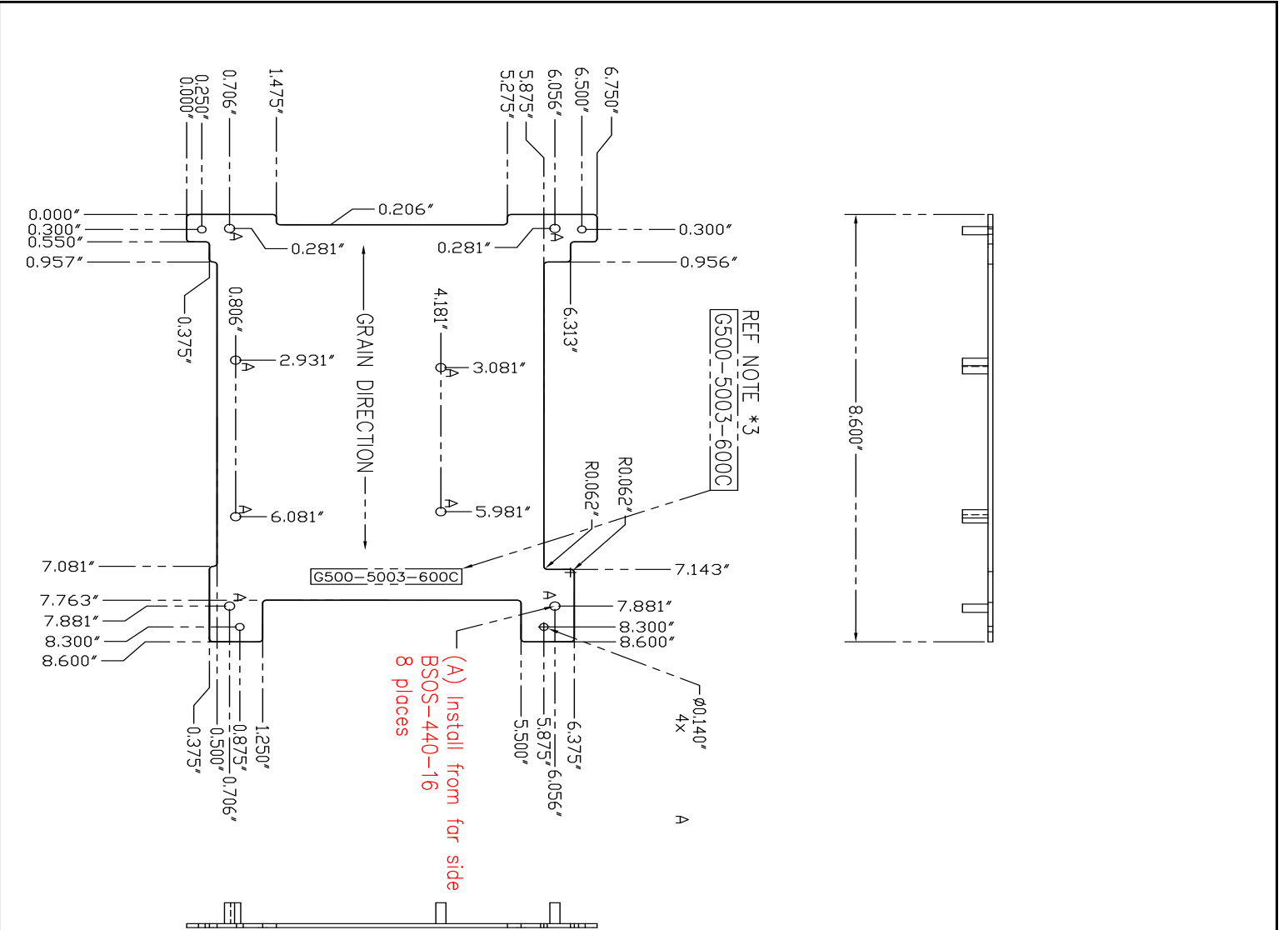
- (1) Material .080 5052 AL
 - (2) deburr & break all sharp edges
- Dupont "BLACKRIDGE powder"
Part # RFB50512055

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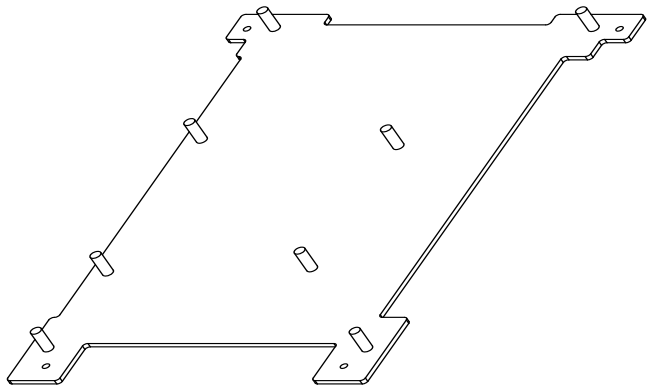
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMALS: ANGLES: ± 1/2° XX ± .03 XXX ± .010		MACHINE FINISH		CONTRACT NUMBER:		THIS DRAWING IS OUR PROPERTY. CONTAINING REVISIONS WITH IDENTIFICATION CHARACTERS.		WinSystems, Inc. "THE 5TH AND MAINSTREET"		*RoHS*	
DRAWN BY:	DATE:	CHECKER:	DATE:	APPROVAL:	DATE:	TITLE:	ENC-EBC-1000		DRAWING NUMBER: G500-5003-500B		
CUST. APPRV.	DATE:	REV / SIZE		CAGE / FCN		SCALE		SHT 1 OF 1			
		B	D								

Mount Plate



(A) Install from far side
BSOS-440-16
8 places

REVISION HISTORY		DATE	APPROVED
REV	DESCRIPTION	5.28.07	
A	DRAWN BY OUTSIDE VENDOR	02.27.08	
B	MISSING DIMS PG/104, REDUCE WIDTH AT FLANGES W/THRU HOLES TO 8.60"	P/N IMPRINT	
C	CHANGE SOS-440-16 8 PLACES TO BSOS-440-16, 8 PLACES EOO 08-188	11.18.08	



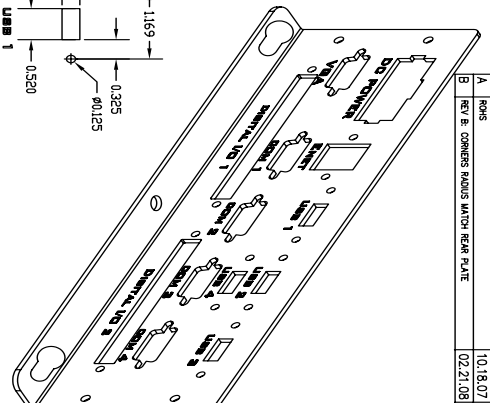
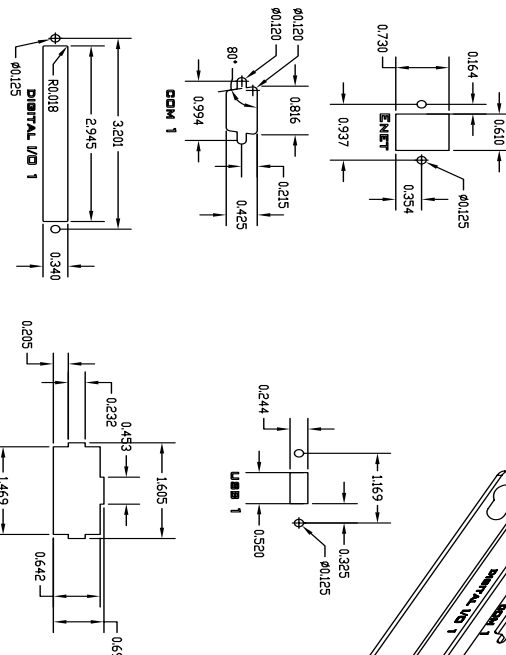
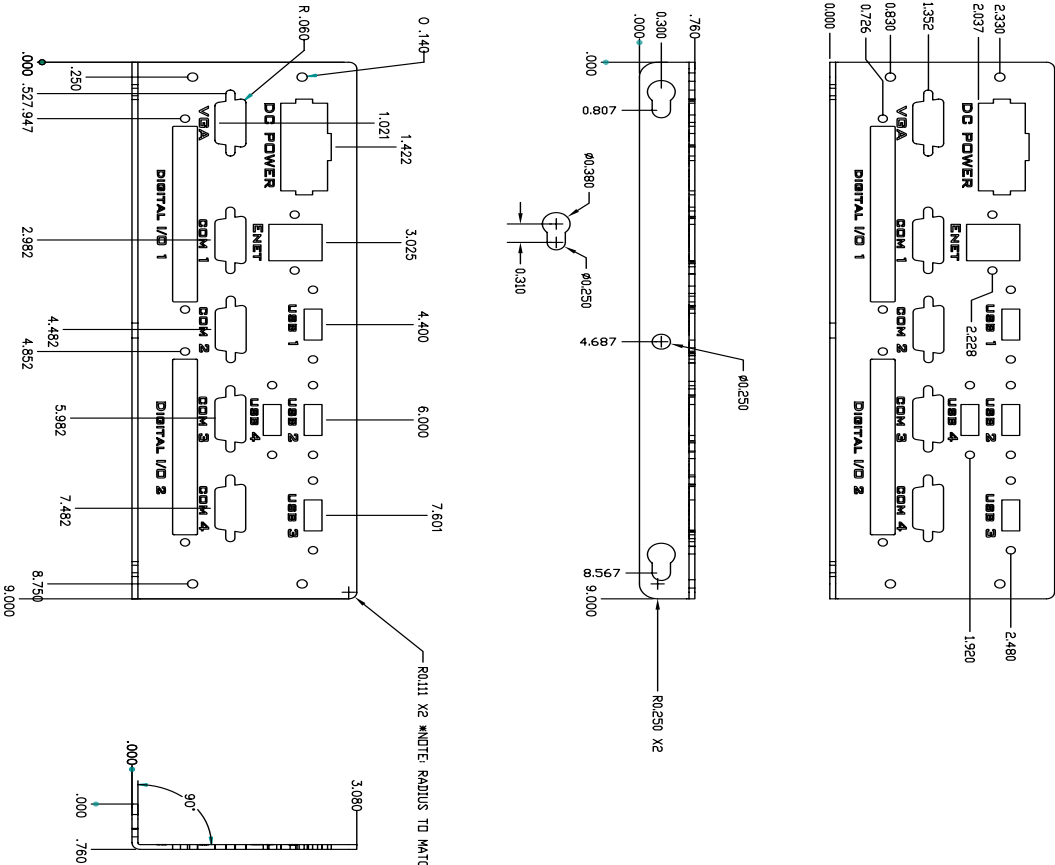
- Notes
- 1 Material .08 5052 AL
 - 2 Deburr And break all sharp edges
 - 3 PUNCH PART NUMBER "G500-5003-600C" INTO METAL
 - 4 CLEAR CHROMATE

Rohs Compliance Notice: All Vendors providing quotations and/or materials to Winsystems, Inc., must supply a Rohs Directive "Certificate of Compliance", referencing the part number(s) of delivered items.

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ANGLES ± 1/2° XXX ± .010		CONTRACT NUMBER		Winsystems, Inc. "THE STD BSR AUTHORITY"	
MACHINE FINISH	✓	DRAWN BY:	DATE:	TITLE:	*Holds*
		CHECKER:	DATE:	ENC-EBC-1000	
		APPROVAL:	DATE:	DRAWING NUMBER:	G500-5003-600C
		CUST. APPRV.:	DATE:	SCALE:	SHT 1 OF 1
REV	SIZE	CAGE/FCOM	SCALE	SHT 1 OF 1	
C	D	1A/B7			

EndPlate, Right, I/O, Power



REVISION HISTORY		
REV	DESCRIPTION	DATE
A	ROHS	10.18.07
B	REV B CORRECTS RADIUS MATCH REAR PLATE	02.21.08

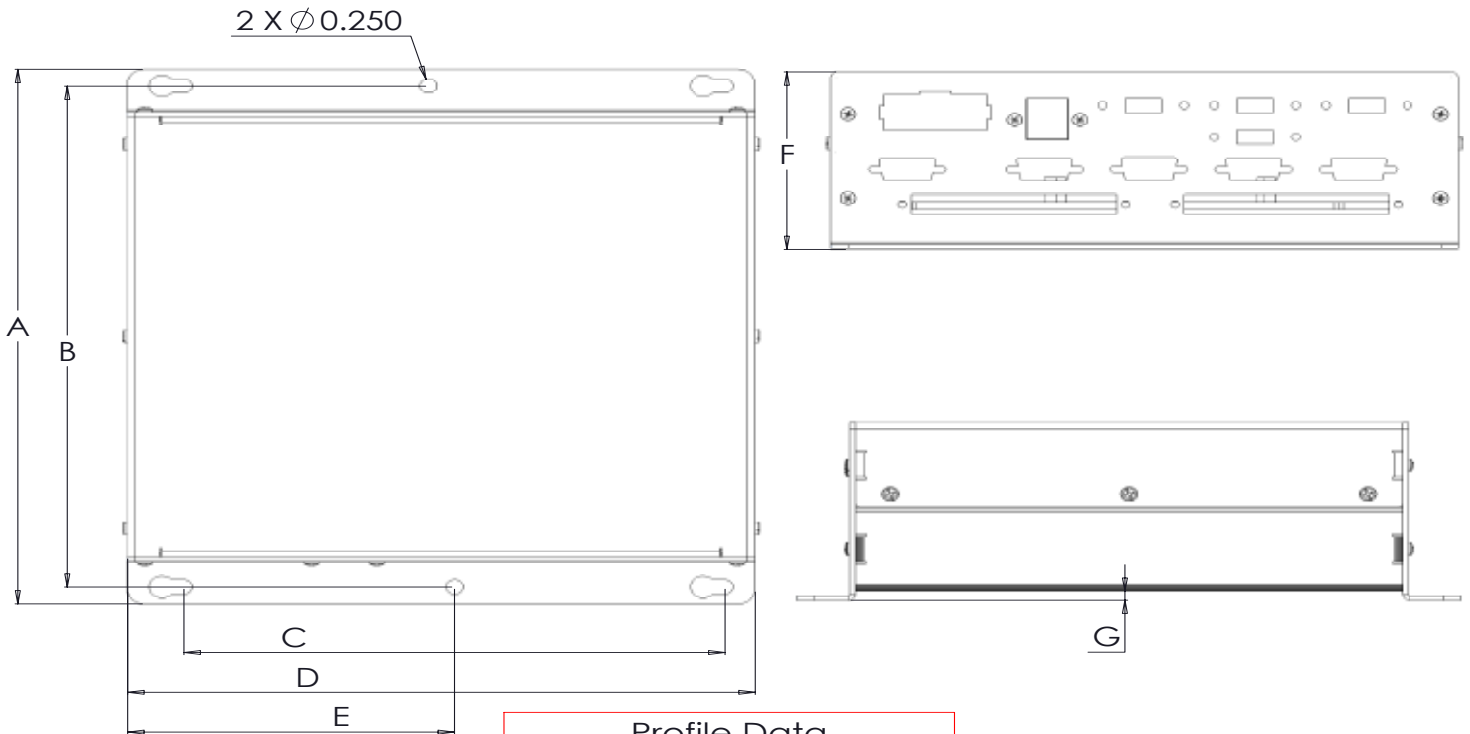
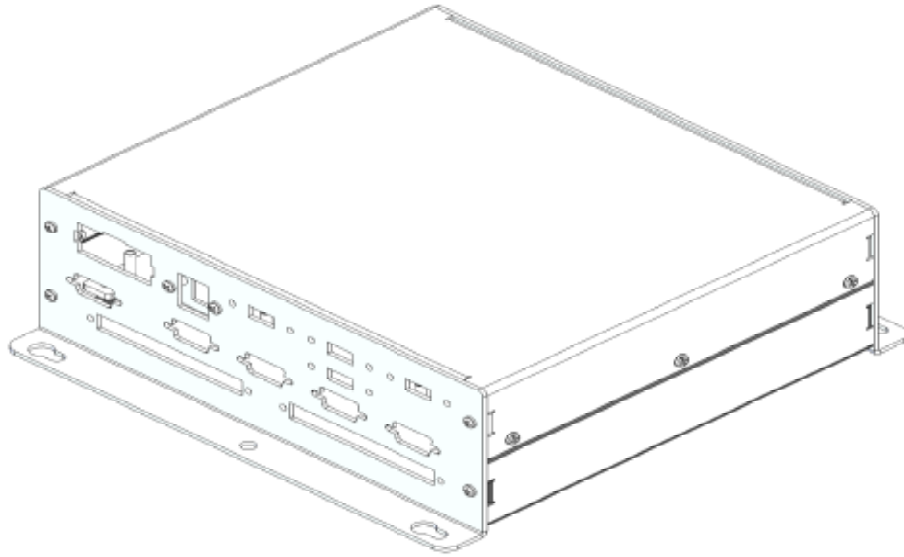
ROHS COMPLIANCE NOTICE: All Vendors providing quotations and/or materials to WinSystems, Inc., must supply a RoHS Directive "Certificate of Compliance", referencing the part number(s) of delivered items.

*ALL ALTERNATES MUST BE ELECTRICAL AND MECHANICAL EQUIVALENTS TO SPECIFIED PARTS, and must be ROHS COMPLIANT.

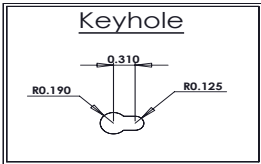
- Notes
- (1) Material .080 5052 AL
 - (2) Deburr & break sharp edges Dupont "BLACKRIDGE powder" Part #

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ANGLES ± 1/2°		CONTRACT NUMBER:		TITLE:	
MACHINE FINISH		DRAWN BY:		ENDPLATE, RIGHT, I/O, POWER	
XX ± .03		CHECKER:		ENC-EBC-1000	
XXX ± .010		APPROVAL:		DRAWING NUMBER:	
		DATE:		G500-5003-501B	
		DATE:		CAGE/FCOM SCALE:	
		DATE:		1A/B7	
		DATE:		SHT 1 OF 1	

Chassis Assembly

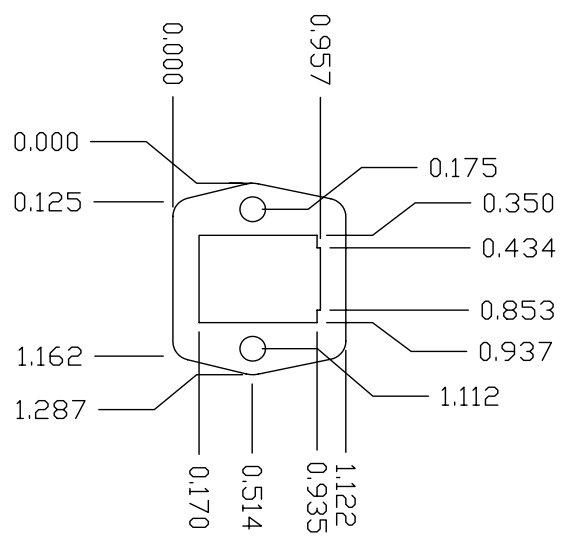


Profile Data	
A = 9.52"	Mounting Flange - Overall
B = 8.92"	Mounting Flange - Hole Center-Line
C = 7.76"	Keyhole, 4 Places
D = 9.00"	Cover - Overall
E = 4.68"	Hole 1/4", 2 Places
F = 3.16"	Height - Overall
G = .159"	Clearance



Ethernet Jack Plate

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



Notes

- (1) Material .060 5052 AL
 - (2) Deburr & break all sharp edges
 - (3) CLEAR ALDINE
- install from far side
 PEM SOS-440-8
 2 places

Rohs Compliance Notice: All Vendors providing quotations and/or materials to WinSystems, Inc., must supply a Rohs Directive "Certificate of Compliance", referencing the part number(s) of delivered items.

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THIS DRAWING IS CAD GENERATED. COORDINATE REVISIONS WITH DOCUMENTATION CONTROL.

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCE : FRACTIONS:
 DECIMALS: ANGLES: ± 1/2°
 .XX ± .03
 .XXX ± .010

MACHINE FINISH:



CONTRACT NUMBER:		DATE:		TITLE:	
DRAWN BY:		DATE:		ETHERNET JACK PLATE,	
CHECKER:		DATE:		*RoHS*	
APPROVAL:		DATE:		ENC-EBC-1000	
CUST. APPRV.		DATE:		DRAWING NUMBER:	
				G500-5000-060A	
REV	SIZE	CAGE/FSCM	SCALE	SHT 1 OF 1	
A	D	1A087			

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 "THE STD BUS AUTHORITY"

Specifications

Materials

- Outer cover** : 0.080" black powder coated aluminum
- End plates** : 0.080" black powder coated aluminum
- Base plate** : 0.080" clear coated aluminum

Mechanical

- Size** : 9.0"W x 9.5"D x 3.0"H
- Weight** : 2.4 lbs (excludes SBC, I/O boards or cables)

WARRANTY REPAIR INFORMATION

(<http://www.winsystems.com/company/warranty.cfm>)

WARRANTY

WinSystems warrants to Customer that for a period of two (2) years from the date of shipment any Products and Software purchased or licensed hereunder which have been developed or manufactured by WinSystems shall be free of any material defects and shall perform substantially in accordance with WinSystems' specifications therefore. With respect to any Products or Software purchased or licensed hereunder which have been developed or manufactured by others, WinSystems shall transfer and assign to Customer any warranty of such manufacturer or developer held by WinSystems, provided that the warranty, if any, may be assigned. Notwithstanding anything herein to the contrary, this warranty granted by WinSystems to the Customer shall be for the sole benefit of the Customer, and may not be assigned, transferred or conveyed to any third party. The sole obligation of WinSystems for any breach of warranty contained herein shall be, at its option, either (i) to repair or replace at its expense any materially defective Products or Software, or (ii) to take back such Products and Software and refund the Customer the purchase price and any license fees paid for the same. Customer shall pay all freight, duty, broker's fees, insurance charges for the return of any Products or Software to WinSystems under this warranty. WinSystems shall pay freight and insurance charges for any repaired or replaced Products or Software thereafter delivered to Customer within the United States. All fees and costs for shipment outside of the United States shall be paid by Customer. The foregoing warranty shall not apply to any Products of Software which have been subject to abuse, misuse, vandalism, accidents, alteration, neglect, unauthorized repair or improper installations.

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WARRANTY SERVICE

1. To obtain service under this warranty, obtain a return authorization number. In the United States, contact the WinSystems' Service Center for a return authorization number. Outside the United States, contact your local sales agent for a return authorization number.
2. You must send the product postage prepaid and insured. You must enclose the products in an anti-static bag to protect from damage by static electricity. WinSystems is not responsible for damage to the product due to static electricity.