ECR #: 35
Title: Registration "tab" for A.G.P. Card
Release Date: 6/4/97
Impact: Change
Spec Version: AGP 1.0

Summary:
This ECR is a consolidation of ECRs #15, #29, and #32 and introduces additional changes to the A.G.P. Interface Specification Version 1.0. All of the add-in card figures are replaced. A registration "tab" is added to both the ATX and NLX card form factors. Backside (solder side) component heights have been increased in some areas of each card to allow thermal enhancements (such as heatsinks or heat pipes) to be attached to the card backside. This ECR supersedes and replaces ECRs #15, #29 and #32.

Background:
The registration "tab" is added to both NLX and ATX form factor cards to ensure registration and alignment based on the OEM motherboard AGP connector direction.

Replaced ECR headers

ECR15:

Summary:

Clarifies discrepancies in Figure 5-1, Figure 5-2, Figure 5-4 and Table 5-1 in the AGP Rev 1.0 Interface Specification

Background:

N/A

ECR29:

Summary:

Remove the English dimension of the critical pin to pin spacing from Detail A and B. Add note 7 to drawing Figures 5-1 and 5-2 that indicates that the contact system is 1 mm and than when using the English equivalent the conversion is required to be 5 digits. For work in process, it is highly recommended that these dimensions be checked.

Background:

In the AGP 1.0 interface specification and in ECR #15 there has been confusion as to the "real" critical spacing between adjacent pins. In previous drawings the dimension in question was called out as 1 mm or 0.039 inches. However, the system is really a metric system and using 0.039 instead of the 1 mm or 5 digit English equivalent introduces rounding errors across the 62 pins such that the pins and connector pads do not line up.

ECR32:

Summary:

Add an NLX form factor for A.G.P. to allow use of A.G.P. in an NLX chassis. This is a low profile form factor that will fit in an NLX chassis and will be compatible with an ATX chassis through the use of an altered bracket.

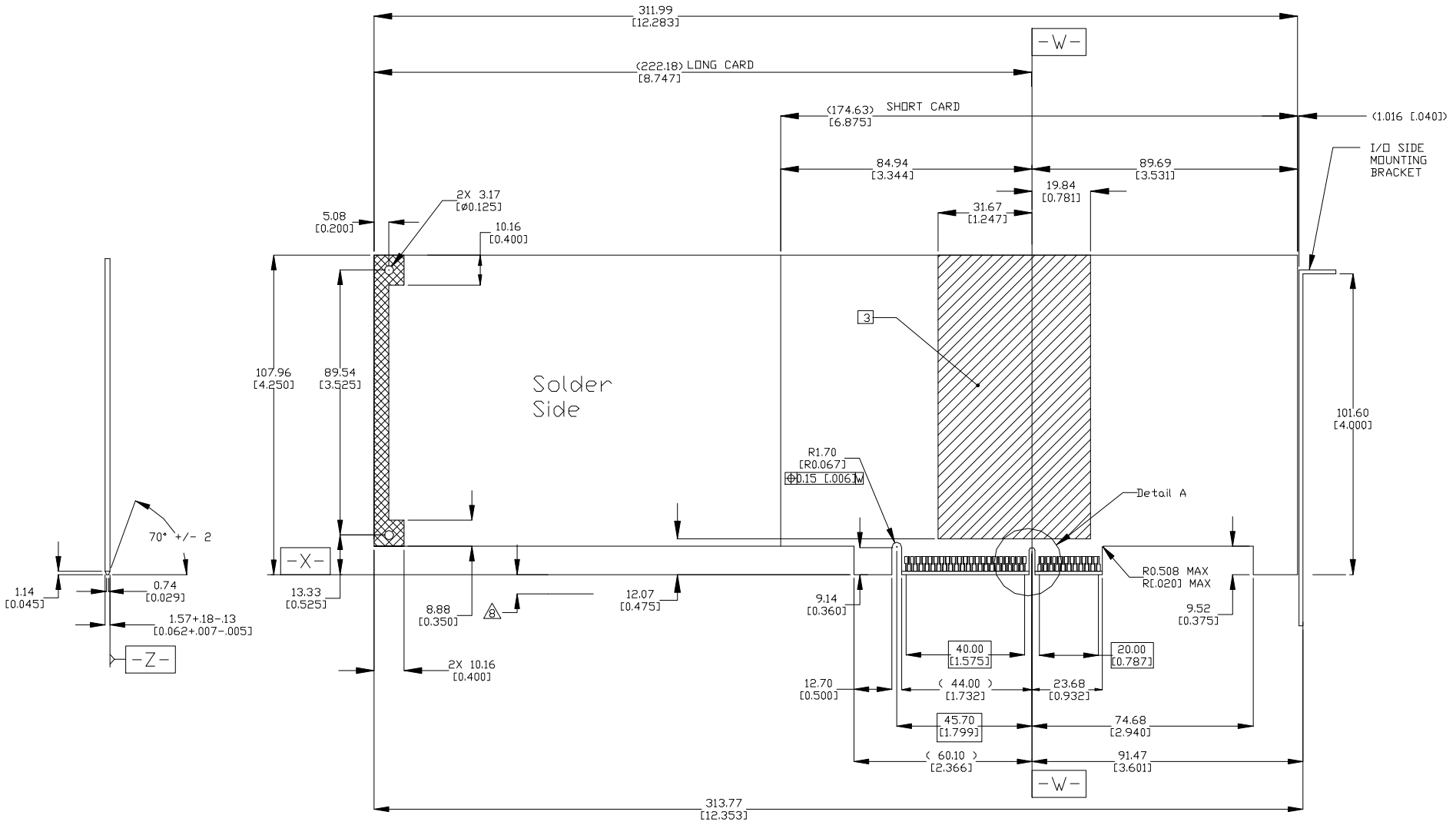
Background:

The A.G.P. interface specification requires modifications for an NLX A.G.P. card form factor. The

drawings and text listed here are intended to show the requirements for the new NLX form factor A.G.P. add-in card. The two most significant changes in the current card form factor are the height of the card and the rear card cutout. The decrease in add-in card height is to accommodate the component height restrictions as specified in the NLX specification. The backside card notch is to allow the card to clear the NLX stacked I/O connectors in the back of the chassis.

Change Current Specification as shown:

Replace Figures 5-1 through 5-3 with the following figures:



Notes:
1. TOLERANCES +/-.127 (.005)
2. SOLDER SIDE MAX COMPONENT HEIGHT IS 2.667 [0.105] UNLESS OTHERWISE SPECIFIED
3. 16.51[0.650] MAX SOLDER SIDE COMPONENT HEIGHT
4. COMPONENT SIDE MAX COMPONENT HEIGHT IS 14.47 [0.570]
5. DOUBLE HATCHED AREAS TO BE COMPONENT FREE SOLDER SIDE AND COMPONENT SIDE
6. MOUNTING BRACKETS ARE TO BE DESIGNED ACCORDING TO CURRENT PCI SPEC PINS B1-26 ARE LOCATED ON COMPONENT SIDE
7. THIS IS A 1MM CONTACT SYSTEM, CONVERSION TO ENGLISH SHOULD BE CARRIED OUT TO AT LEAST 5 DIGITS
8. 6.604 [.260] TO MOTHERBOARD

Figure 5-1 A.G.P. ATX Form Factor Add-in Card

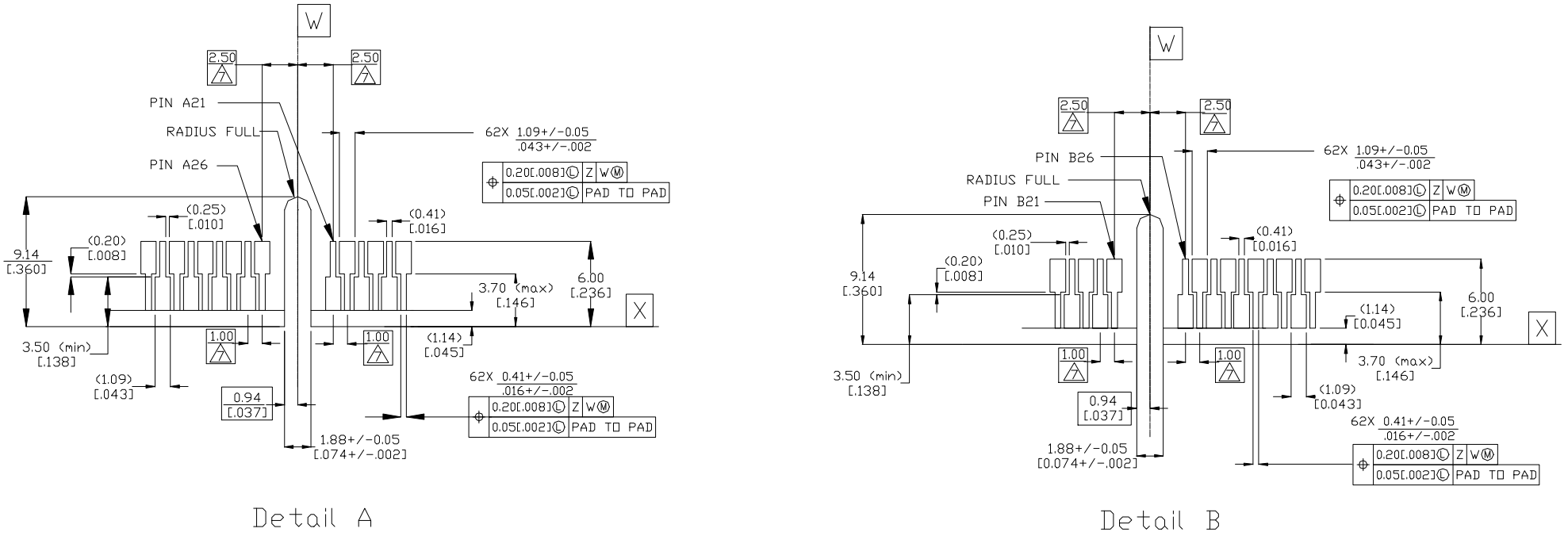


Figure 5-2 Detail A & B: A.G.P. Card Edge Finger Layout (VIEWED FROM COMPONENT SIDE)

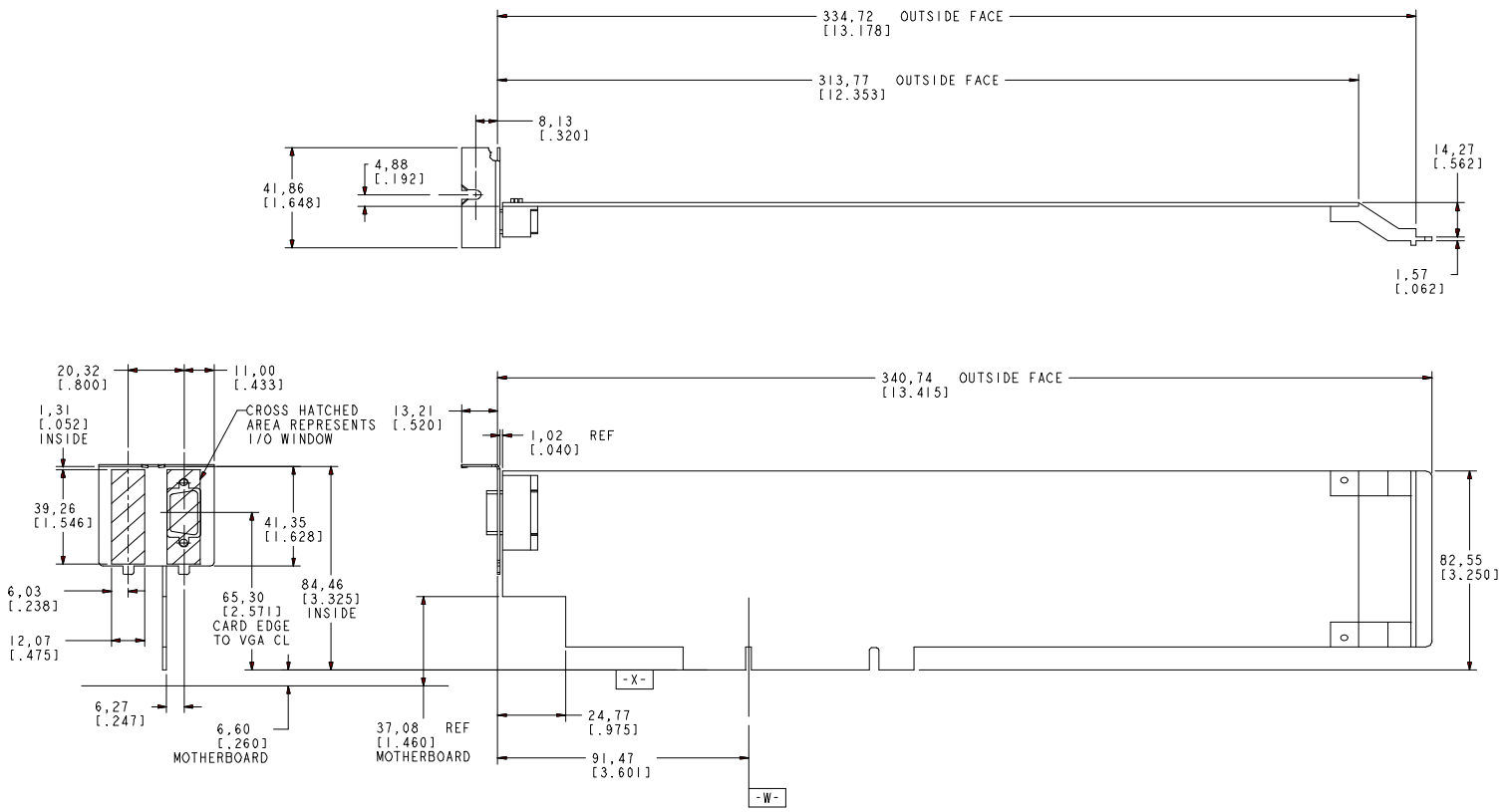


Figure 5-3 A.G.P. NLX Form Factor Add-in Card

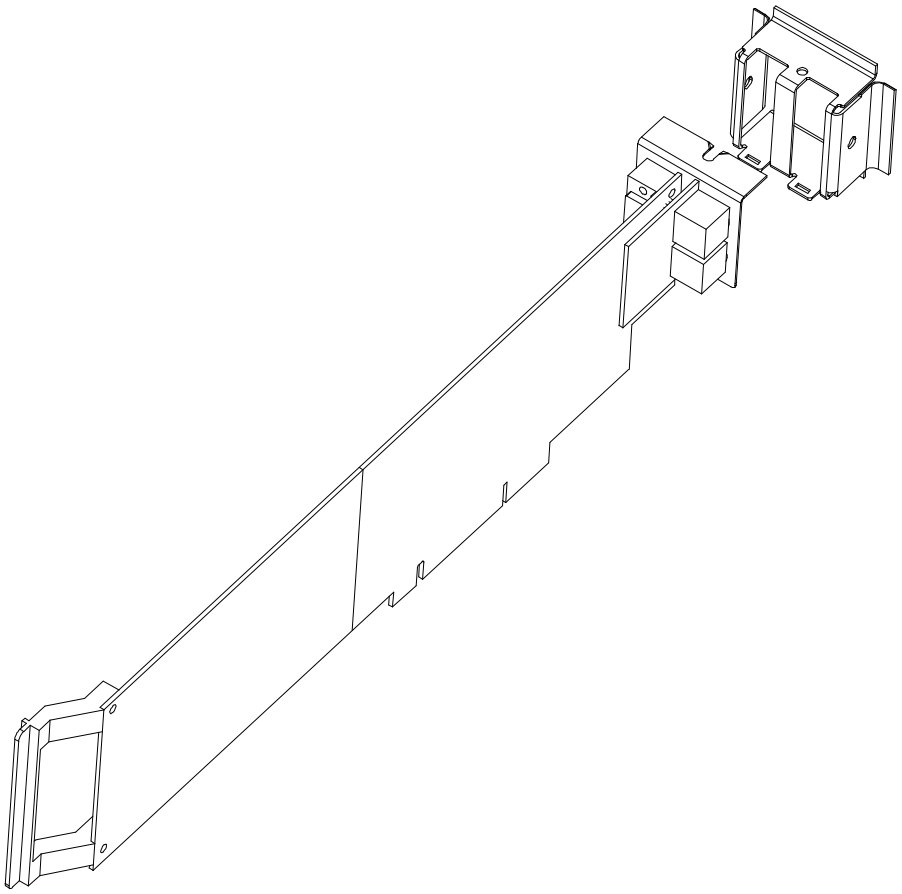
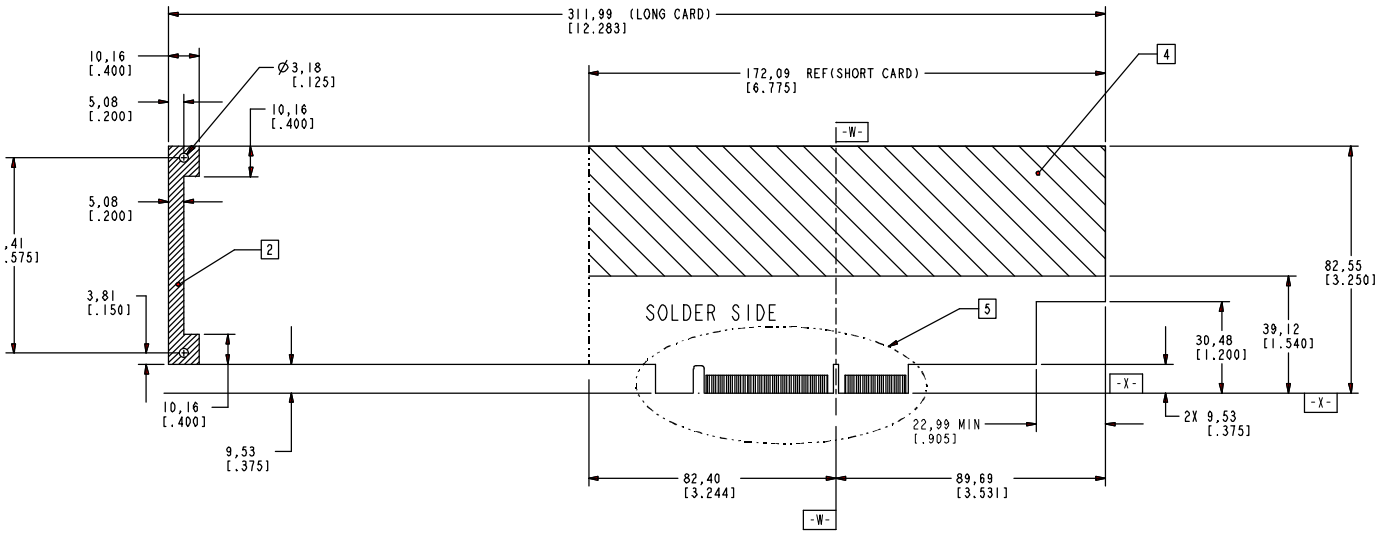


Figure 5-4 A.G.P. NLX form Factor Add-in Card Comprehensive View



NOTES:

1. TOLERANCES ±.127 [±.005]
2. THIS AREA TO BE COMPONENT FREE BOTH SIDES.
3. MAXIMUM ALLOWABLE HEIGHT ON SOLDER SIDE IS 2.67[.150] UNLESS OTHERWISE SPECIFIED.
4. COMPONENTS IN THIS AREA RESTRICTED TO 22.35[.880].
5. GOLD FINGERS AND TABS SAME AS DETAILED IN ATX AGP DESIGN.

Figure 5-5 A.G.P. NLX Form Factor Card Detail

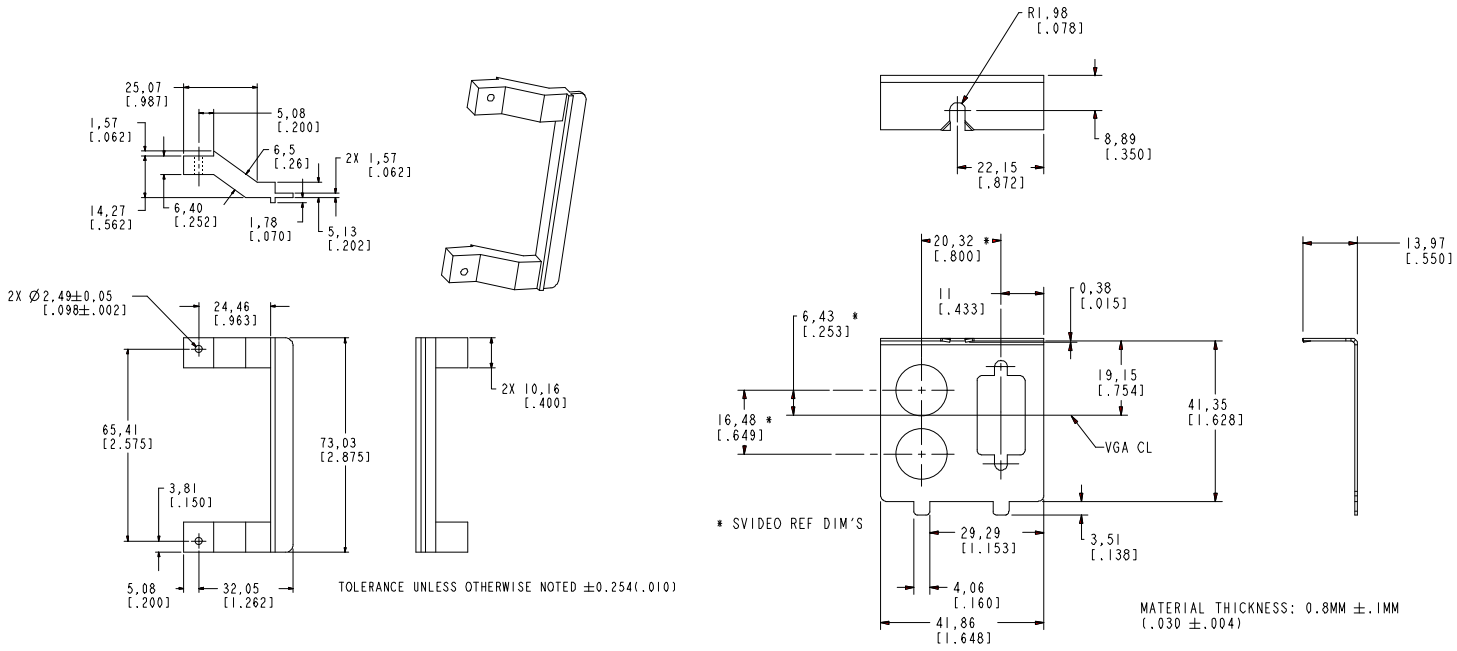


Figure 5-6 A.G.P. NLX Form Factor Add-in Card Reference Bracket Details

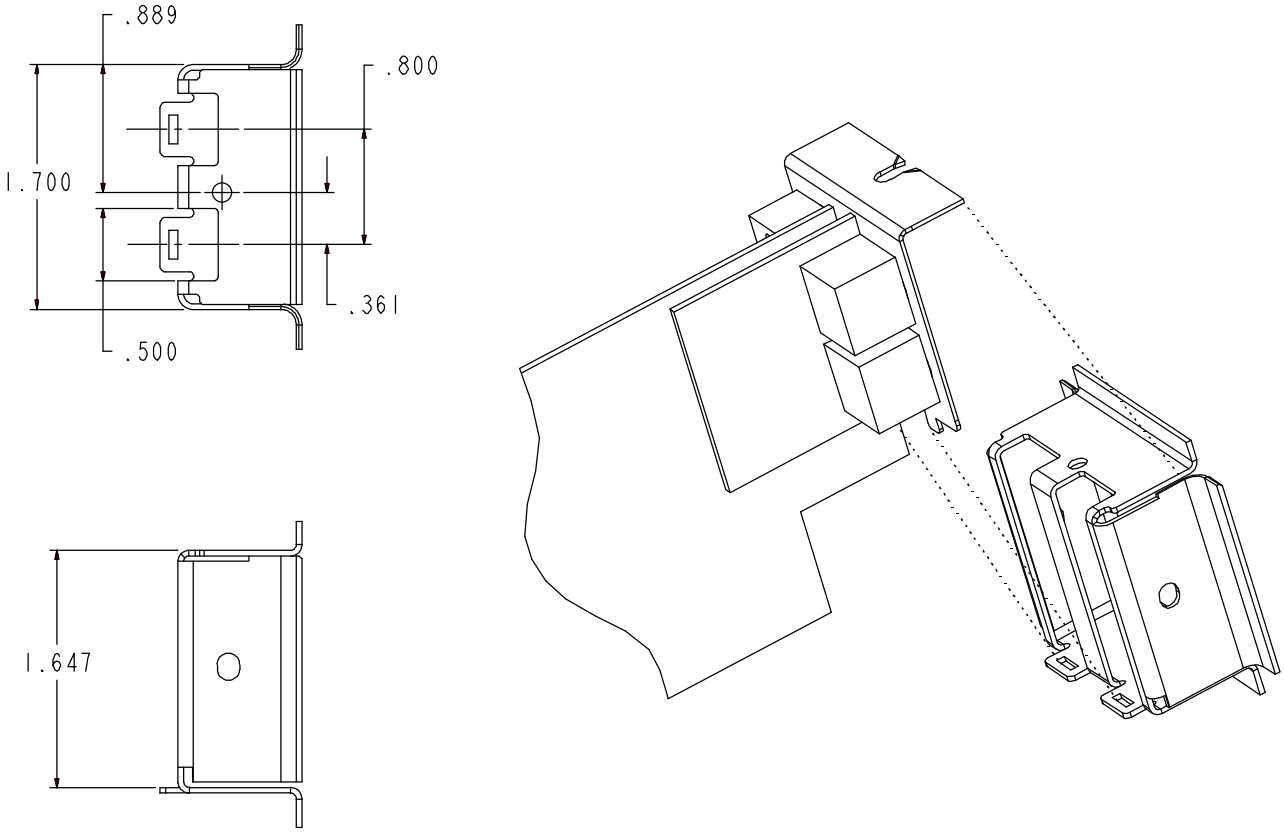


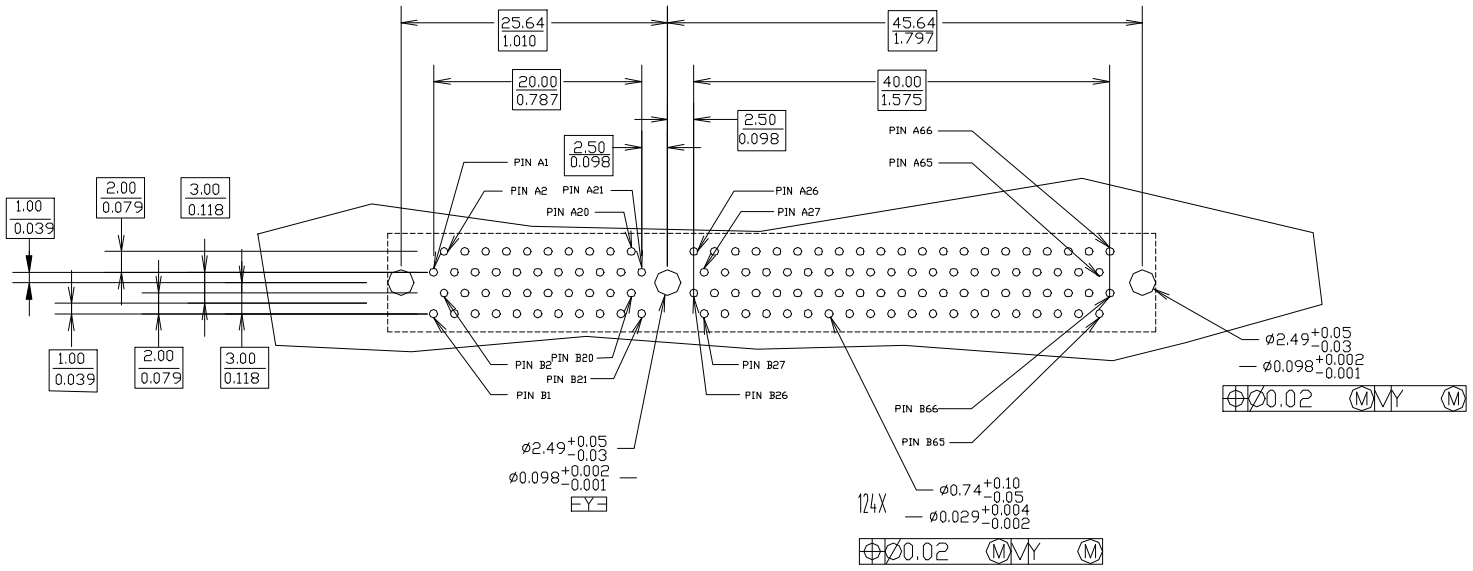
Figure 5-7 A.G.P. NLX Form Factor I/O Bracket and Chassis Interaction

Change from:

"**Figure 5-4** Motherboard Connector footprint and layout deminsions."

To:

"**Figure 5-8** Motherboard Connector Footprint and Layout Dimensions."
and Replace figure with the following:



Replace Table 1 on page 95 with:

	AGP	
Pin#	B	A
1	OVRCNT#	12V
2	5.0V	Reserved
3	5.0V	Reserved*
4	USB+	USB-
5	GND	GND
6	INTB#	INTA#
7	CLK	RST#
8	REQ#	GNT#
9	VCC3.3	VCC3.3
10	ST0	ST1
11	ST2	Reserved
12	RBF#	PIPE#
13	GND	GND
14	Reserved	Reserved
15	SBA0	SBA1
16	VCC3.3	VCC3.3
17	SBA2	SBA3
18	SB_STB	Reserved
19	GND	GND
20	SBA4	SBA5
21	SBA6	SBA7
22	KEY	KEY
23	KEY	KEY
24	KEY	KEY
25	KEY	KEY
26	AD31	AD30
27	AD29	AD28
28	VCC3.3	VCC3.3
29	AD27	AD26
30	AD25	AD24
31	GND	GND
32	AD_STB1	Reserved
33	AD23	C/BE3#
34	Vddq3.3	Vddq3.3
35	AD21	AD22
36	AD19	AD20
37	GND	GND

38	AD17	AD18
39	C/BE2#	AD16
40	Vddq3.3	Vddq3.3
41	IRDY#	FRAME#
42	Reserved	Reserved
43	GND	GND
44	Reserved	Reserved
45	VCC3.3	VCC3.3
46	DEVSEL#	TRDY#
47	Vddq3.3	STOP#
48	PERR#	PME#
49	GND	GND
50	SERR#	PAR
51	C/BE1#	AD15
52	Vddq3.3	Vddq3.3
53	AD14	AD13
54	AD12	AD11
55	GND	GND
56	AD10	AD9
57	AD8	C/BE0#
58	Vddq3.3	Vddq3.3
59	AD_STB0	Reserved
60	AD7	AD6
61	GND	GND
62	AD5	AD4
63	AD3	AD2
64	Vddq3.3	Vddq3.3
65	AD1	AD0
66	Reserved	Reserved