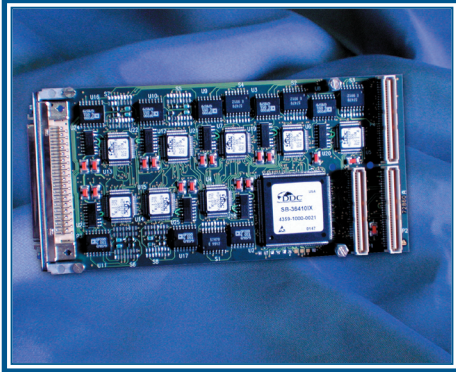


# EIGHT CHANNEL R/S-D PMC CARD

MODEL: SB-36410IX



## FEATURES

- Programmable Inputs, Resolution, and Bandwidth
- Accuracy Up to 1.3 Arc Minutes
- Synthesized Reference
- Each Channel Accepts Independent References
- Available -40°C to +85°C Temperature Range
- Encoder Emulation Capability

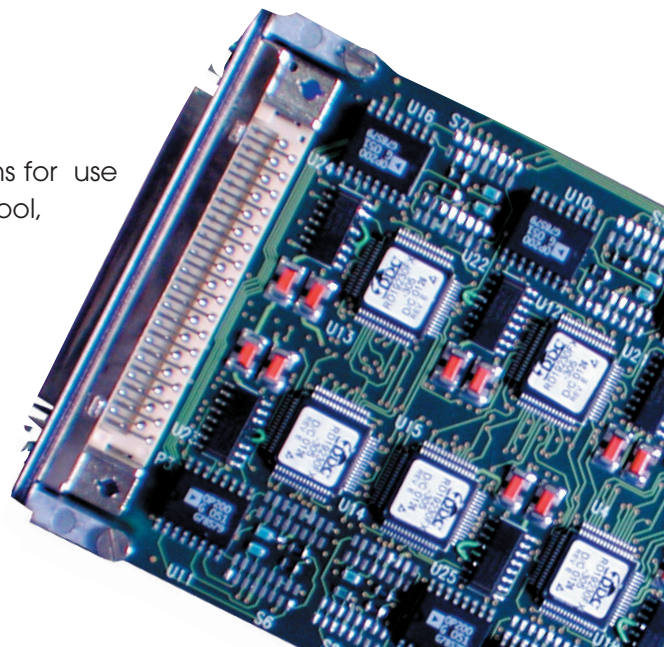
## DESCRIPTION

The SB-36410IX card provides a complete PMC solution for resolver/synchro-to-digital conversion. The card utilizes an RD-19230FX monolithic converter, one of DDC's flagship products with a longstanding history of success throughout applications worldwide. The SB-36410IX helps reduce design-in time and cost with its many programmable features-including programmable inputs of 2 V direct and 11.8V/90 V synchro or resolver type, and programmable bandwidth for 15/45 Hz or 100/300 Hz.

The SB-36410IX contains synthesized reference to protect against input-to-reference phase shift differences up to 45°. Built-in test, velocity outputs, and available temperature ranges of -40°C to +85°C make this card an exceptional value.

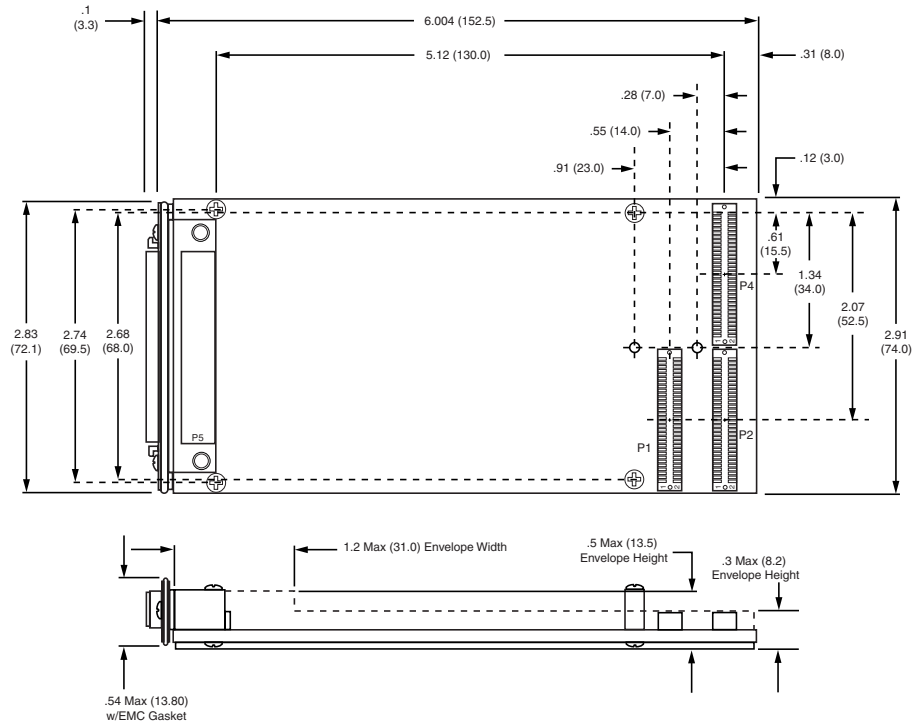
## APPLICATION

This COTS card is ideal for VME and cPCI control system. It provides a complete solution for modifying encoder-based systems for use with resolver inputs. Typical applications include motor, machine tool, antenna, robotics, and process control.



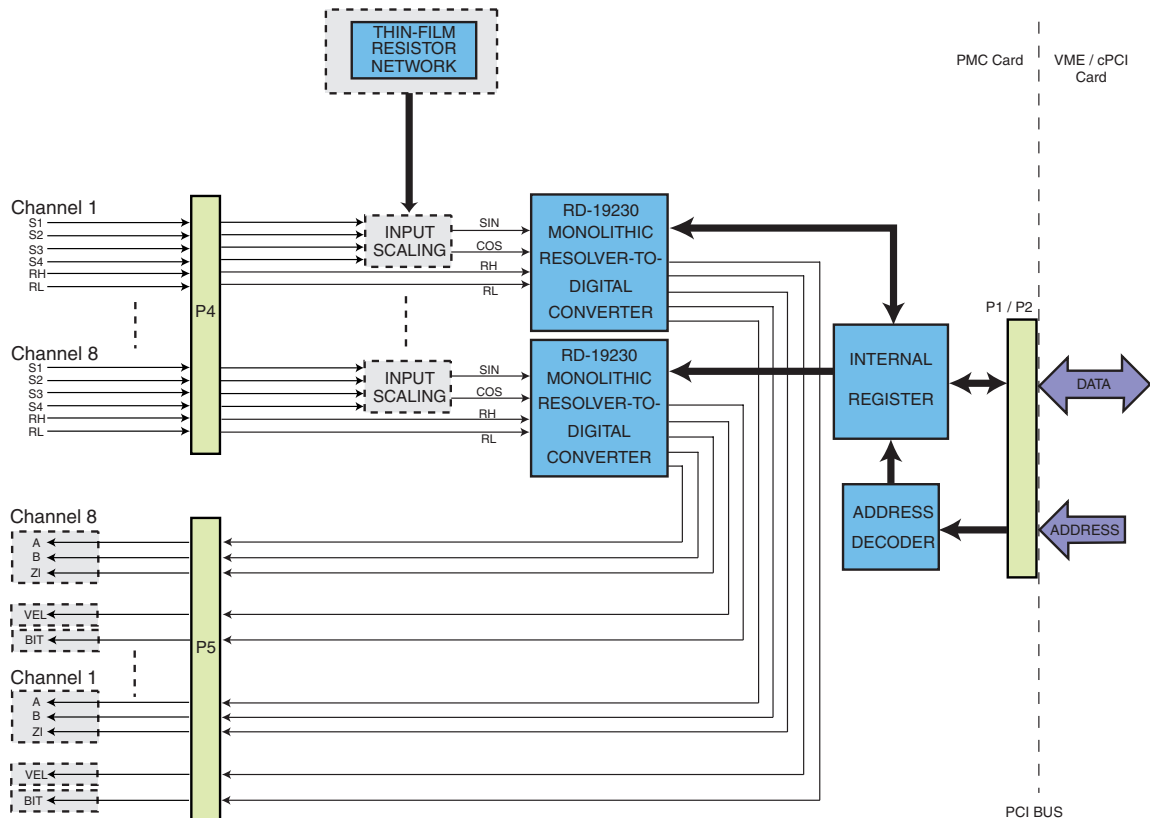
# SB-36410IX Mechanical Outline

Figure 1



## Block Diagram

Figure 2



## Specifications

PARAMETER	UNITS	VALUE			
<b>RESOLUTION</b>	Bits	10, 12, 14 or 16 programmable			
<b>ACCURACY</b> XX2	Min.	47-1k (note 2) 1 +1 LSB	1k-4k 1 +1 LSB	4k-7k 2 +1 LSB	
<b>SIGNAL INPUT</b>		<b>Solid State</b>			
Option #		Option 0	Option 1, 2	Option 3, 4	
Synchro	Vrms L-L	-	11.8	90	
Zin Line to Line	Ohms	-	52k	195k	
Zin each Line to Ground	Ohms	-	35k	130k	
Resolver	Vrms L-L	2 Vrms direct (note 3)	11.8	-	
Zin Single Ended	Ohms	10M min    20pf (note 1)	70k	-	
Zin Differential	Ohms	N/A	140k	-	
Common Mode Range	V	N/A	30 max	-	
<b>REFERENCE INPUT (RH, RL)</b>		<b>Solid State</b>			
Option #		Option 0	Option 1, 2	Option 3	Option 3
Carrier Frequency	Hz	360 - 7k	360 - 7k	360 - 1k	
Type		Differential	Differential	Differential	Differential
Voltage Range	Vrms	2 - 40	2 - 40	50 - 130	50 - 130
Input Impedance					
• differential	Ohms	100k	100k	300k	300k
• single ended	Ohms	50k	50k	200k	200k
Common-mode Range	Vpeak	50	50	50	50
<b>DIGITAL OUTPUTS</b>					
A, B, Zero Index (ZI)		50pf+			
Drive Capability		Logic 0: 1 TTL load, 1.6mA at 0.4V max Logic 1: 10 TTL loads, -0.4mA at 2.8V min			
After set into A quad B mode		Logic 0: 100mV max driving CMOS Logic 1: +5V supply minus 100mV min driving CMOS			
<b>POWER SUPPLY REQUIREMENTS</b>					
Voltage	Vdc	3.3V Supply	5.0V Supply		
Current	A typical	0.06	0.30		
<b>TEMPERATURE RANGE</b>					
Operating					
-30X	°C	0 to +70			
-20X	°C	-40 to +85			
Storage					
-30X	°C	-20 to +100			
-20X	°C	-50 to +150			
<b>PHYSICAL CHARACTERISTICS</b>					
Size	in.	6.00 x 2.91 x 0.54			
	mm.	152.5 x 74 x 13.8			
Weight	oz	3.88 (max)			
	g	110 (max)			

**Note 1:** || = "in parallel with"

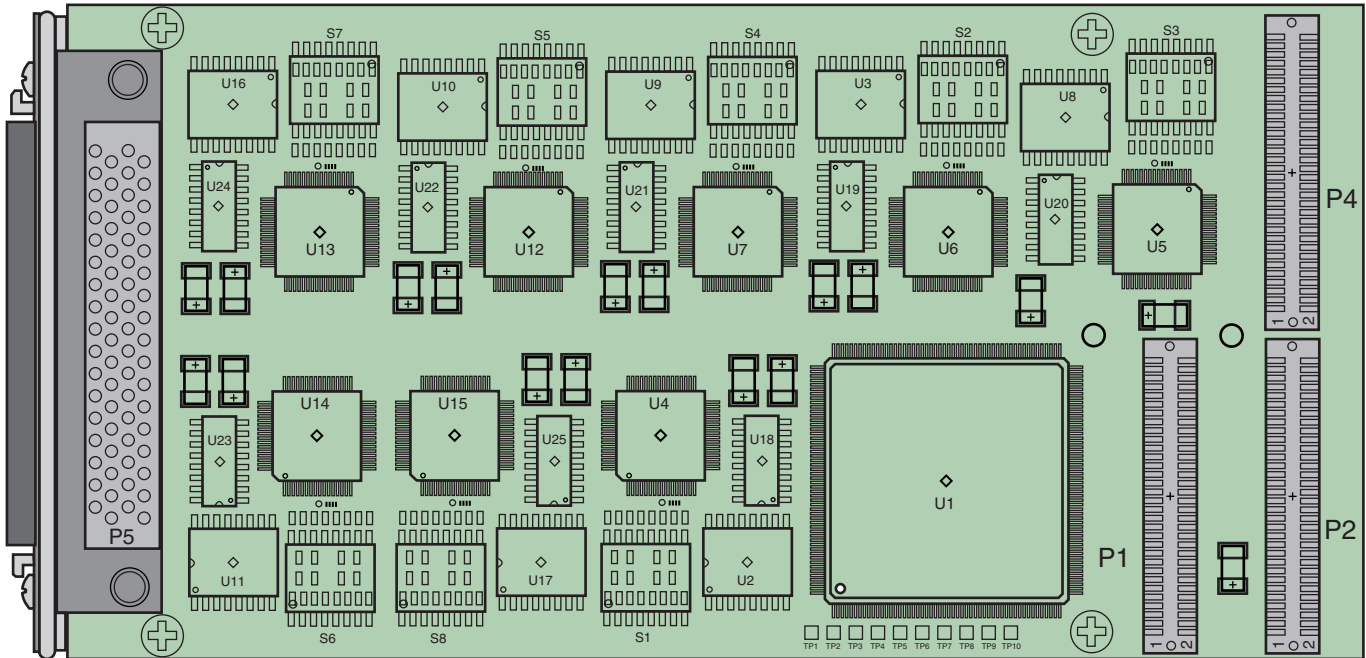
**Note 2:** If the frequency is between 47 and 1 kHz, then there will be 1 LSB of jitter.

**Note 3:** Direct input requires SIN input, COS input, and a common ground.



# Component Assembly

Figure 3



## Ordering Information

SB-3641 X I X - X 0 X X

Supplemental  
Blank = None  
N = Conformal Coating

Accuracy  
2 = (1 min + 1 LSB)

Temperature  
2 = -40°C to +85°C  
3 = 0°C to +70°C

Options  
X = 8 Channels  
1 = 4 Channels

Signal Input Options  
0 = 2V Direct  
1 = 11.8V Synchro  
2 = 11.8V Resolver  
3 = 90V Synchro  
4 = 90V Synchro (60Hz)



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