Motion Feedback and Simulation PMC Boards

DDC®
Connectivity Power Control

Product Brief

Motion Feedback PMC
SB-3641/3642

Motion Simulation PMC
SB-3644

DDC's Motion Feedback and Simulation Boards are rugged, air-cooled PMC designs featuring multiple high-accuracy, independent channels and simplified programmability. These cards are versatile enough to begin using in the lab, yet rugged enough to design into embedded applications just by the switch of a carrier card. As boards dedicated to providing highly accurate motion feedback and simulation, there is no need for complex configuration and programming of multiple functions. With the new common Motion Feedback C SDK: plug and play, and start simulating.

Features

Motion Feedback PMC (SB-3641 & SB-3642)

- 4 or 8 Synchro or Resolver input channels each with independent reference input
- Accuracy to 1 arc minute +1 LSB
- Programmable resolution and bandwidth
- Incremental encoder emulation (A Quad B)
- Available for Front I/O only or Front/Rear combination I/O

Motion Simulation PMC Board (SB-3644)

- 4 Synchro/Resolver output channels each with independent reference input
- Accuracy to 1 arc minute
- Programmable dynamic rotation

Additional Features (SB-3642 & SB-3644)

- Programmable two-speed mode
- 4 Discrete Inputs and 4 Discrete Outputs
- Common Motion Feedback library for Windows®, Linux®, and LabVIEW®
- User-friendly Windows® Graphical User Interface
- Voltage scaling for external reference signals, 2V to 120V
- Up to 16 Bit angle resolution
- RoHS Compliant

Benefits

- Versatile ruggedized board can be used for embedded designs and test systems
- Faster time-to-simulate with new Motion Feedback C Software Development Kit (SDK) based software suite
- Compact single-slot footprint boards effectively use space to include more features
- Efficient operation through enhanced heat management with DDC's custom-designed heat-sinks
- Designed to meet or exceed VITA-47 shock/vib specifications
- One-stop shop: optimize your DDC experience, can use with all synchro/resolver components and synchro booster amplifier
- Peace of mind: no calibration needed
- Made in USA

Applications

- High performance industrial and military position feedback and control systems
- Ship navigation
- Motor control
- Machine tool control
- Antenna control
- Robotics and process control systems
- Engineering development and production test

Need a Custom Solution?
DDC can customize designs for all products, ranging from simple modifications of standard products to fully customized solutions for commercial, military, aerospace, and industrial applications.

Printed on recycled paper.

Ordering Information

Motion Feedback PMC with Front I/O

SB-3642X F X-XA0N

- Supplemental Process Requirements:
  - N = Acrylic Conformal Coating
- Operational Temperature (Air Cooled):
  - 2A0 = -40°C to +85°C (Rugged)
- Number of Channels:
  - 4 = 4 Channels
  - 8 = 8 Channels
- I/O Connector:
  - F = Front Connector I/O
  - T = PMC on cPCI Carrier Card

Input Option	Input Mode	Programmable Bandwidth Range
0	2V Single Ended	80Hz/300Hz
1	11.8Vrms Synchro	80Hz/300Hz
2	11.8Vrms Resolver	80Hz/300Hz
3	90Vrms Synchro	80Hz/300Hz
4	90Vrms Synchro (60Hz)	15Hz/45Hz

Motion Feedback PMC with Front and Rear I/O

SB-3641X I X-202N

- Supplemental Process Requirements:
  - Blank = None
  - N = Conformal Coating
- Accuracy:
  - 2 = 1 min + LSB
- Operational Temperature:
  - 2 = -40°C to +85°C
  - 3 = 0°C to +70°C
- Number of Channels:
  - 1 = 4 Channels
  - X = 8 Channels

Input Option	Input Mode	Programmable Bandwidth Range
0	2Vrms Single Ended	100Hz/300Hz
1	11.8Vrms Synchro	100Hz/300Hz
2	11.8Vrms Resolver	100Hz/300Hz
3	90Vrms Synchro	100Hz/300Hz
4	90Vrms Synchro (60Hz)	15Hz/45Hz

Motion Simulation PMC Board

SB-36441 F 0-2A0N

- Supplemental Process Requirements:
  - N = Acrylic Conformal Coating
- Cooling Option:
  - A = Rugged Air Cooled
- Operational Temperature:
  - 2 = -40°C to +85°C
- I/O Connector:
  - F = Front Connector I/O
  - T = PMC on cPCI Carrier Card
- Ordering Options:

Ordering Option	Channel Count	Signal output	Operating Frequency	Accuracy
1	4	0 to 11.8Vrms Synchro/ Resolver	360 Hz to 10 kHz	1 arc-minute

Included Software

Board	GUI*	Windows Drivers & Libraries*	Linux Drivers & Libraries
Motion Feedback PMC (SB-3641, SB-3642)	✓	✓	✓
Motion Simulation PMC (SB-3644)	✓	✓	✓

*Note: Coming Soon! Contact DDC for availability.

Software

Synchro / Resolver
Graphical Analyzer/Simulator (GUI)
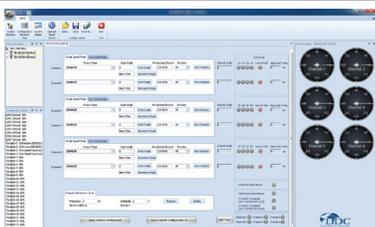
Synchro / Resolver
LabVIEW® Support Package
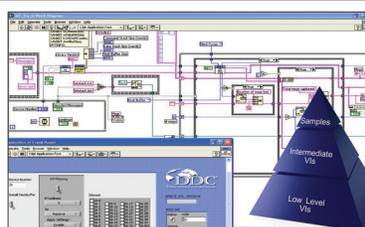
Drivers
and
User API Libraries
for
Windows®, Linux®, and VxWorks®

For ordering assistance and technical support,

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