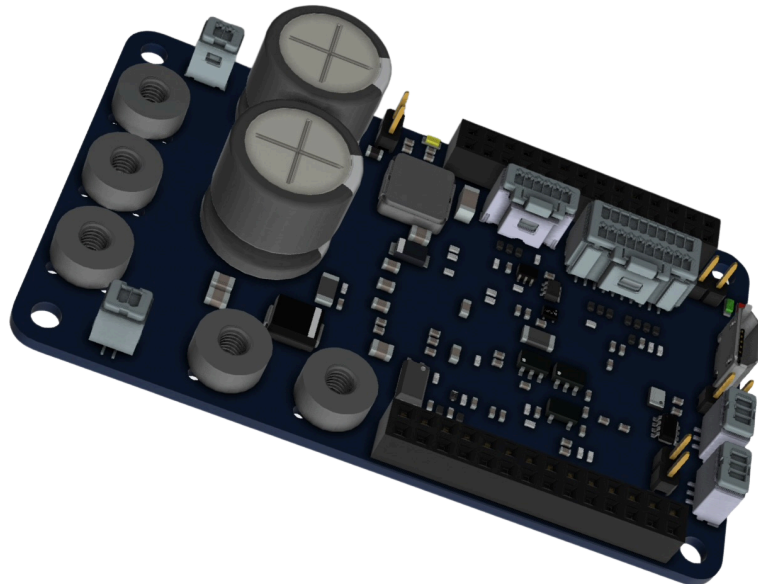
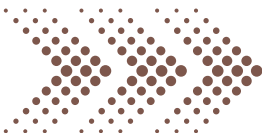


SDR-CB-120R-D SERVO DRIVE SPECIFICATIONS

REVISION D (MAY 2026)



SDR-CB-120R-D

TECH SPECIFICATION



Supported motor types	PMSM, BLDC, Servo, Frameless, Brushed motors
Nominal Current	80 Arms, 120A peak
Input Voltage	8V to 60V DC
Control loop frequency	21.25kHz (default), up to 40kHz Firmware-selectable Position:velocity:Current loop frequency - 1:1:1
Mode of operations	Servo Control / Position Control Electronic Speed Control (ESC) / Velocity control Electronic Torque Control (ETC) Auto-Configuration/System Identification. Energy Recuperation Brake
Supported algorithms of brushless motor control	Field-Oriented Control (FOC), Sensorless Observer Hall Sensors Observer, D-Q axis Coupling Compensation, Field Weakening, Protections, Notch Filters, Low Pass Filters
Switching (PWM) Frequency	42.5 kHz (default) up to 80 KHz, Firmware-selectable
Hall Sensors input (discrete)	Yes ("single-ended")
Interfaces to absolute position encoders	BISS-C (unidirectional), SSI, SPI, PWM, Quadrature with Index Signal ("single-ended")
Max. resolution of encoder	32 bit
Control Interfaces	CAN bus up to 1 mbit/sec , USB 2.0,
GPIO functions	2x Limit Switch inputs 1x Emergency Stop input
Supported operating systems	Windows 11 Windows 10
Tunning software	Yes (Free)
Power consumption when idling	120-180 mA
ADC resolution & Gain	13 bit (25% of the peak current (150Amp))
Operating temperature	-40 to +60 deg c

SDR-CB-120R-D

COMPATIBILITY CRITERIA FOR BRUSHLESS MOTORS

Rule 1: Motor Phase-to-Phase Maximum continuous Current Limit
Nominal current < 80 A

Rule 2: Electrical Time Constant Limit
Verify that $L/R > 0.00008$

Rule 3: Max Speed Limit
 $(\text{RPM}/60) * (\text{Poles}/2) < 4500$ (electrical Hz) for Sensorless motors or direct drive motors with Encoders,
 $(\text{RPM}/60) * (\text{Poles}/2) < 1600$ (electrical Hz), if Hall Sensors are used for commutation,

Rule 4: Motor Nominal Voltage
The motor's Nominal Voltage must be less than or equal to 60 V DC.
The optimal / most practical voltage limit is 52 V DC.

LAYOUT

