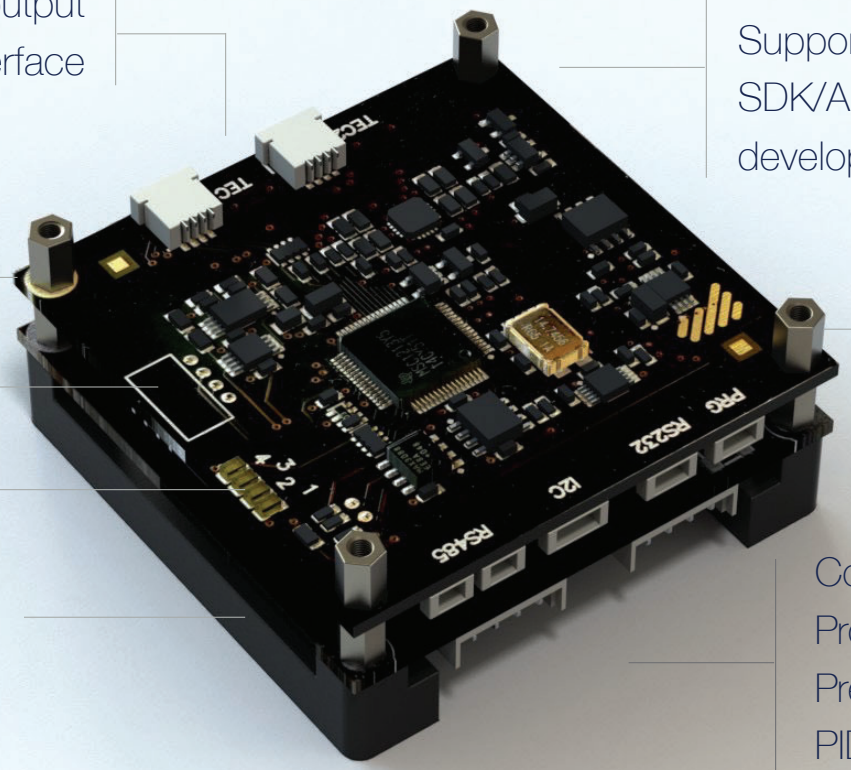
DX5100 OEM1 TEC Driver

CORE version

Single channel 4A x 8V (32W) output
RS-232 Communication interface

Provided with DX5100 Vision Software
Supports LabView
SDK/API for for customer software development is available



CPU Board DX5101

Power Board DX5102

Operating status LEDs

Power Board Heatsink

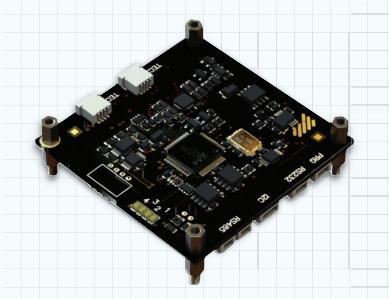
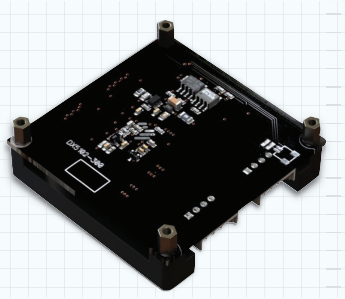
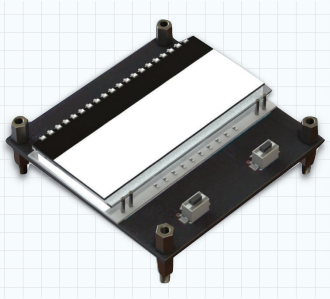
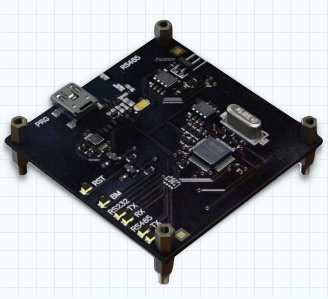
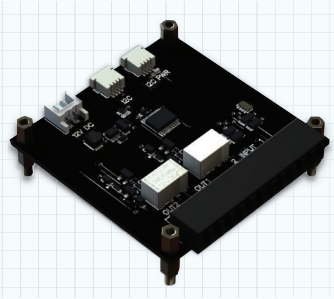
Assembly Screws
(for extension boards)

20mm

Compact OEM form factor
Programmable TEC Controller
Precise Bi-directional TEC regulating
PID temperature regulation mode
PID Auto-Tune function
Works with NTC and PTC sensors

DX5100 OEM1 (CORE)

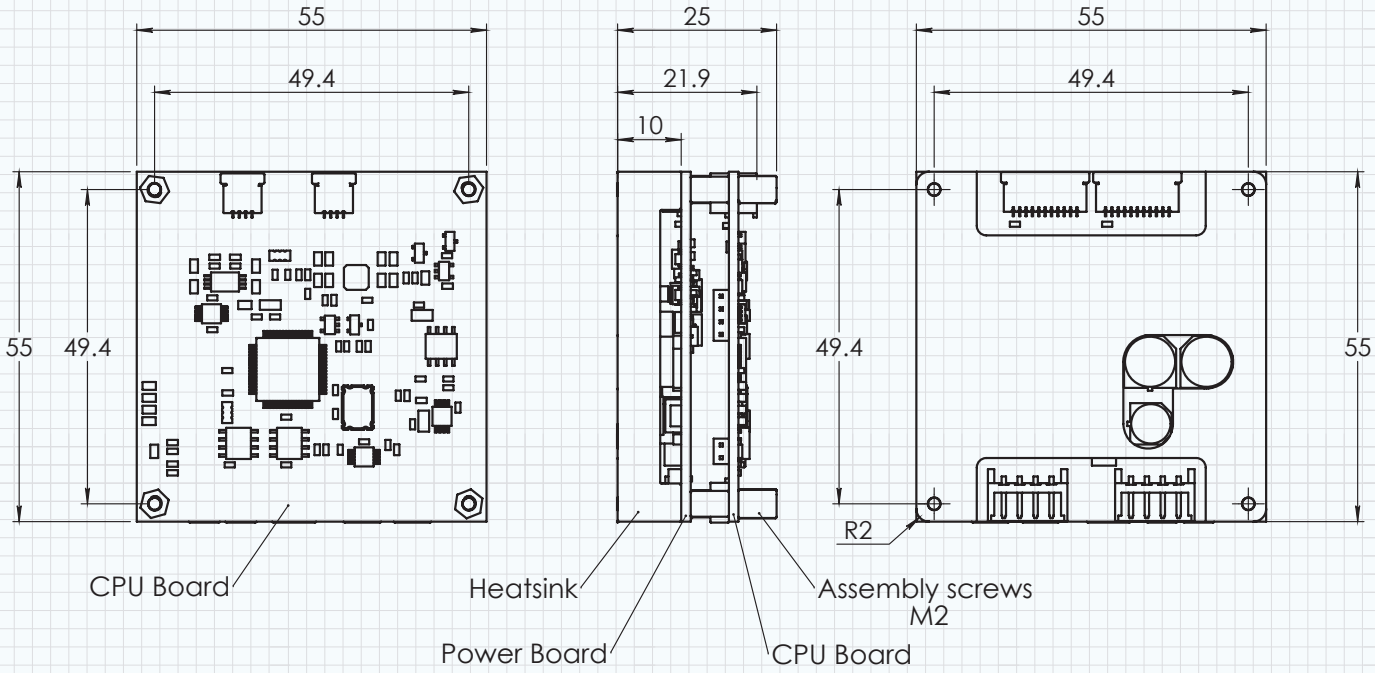
Components

DX5101 CPU Board	DX5102 Power Board	DX5103 LCD Board	DX5106 USB/RS-485	DX5107 Digital I/O Board
				
●	●	○	○	○
DX5100 CPU Board The “Brain” unit RS-232 Interface	Single-channel output 4A x 8V max (32W) Passive Heatsink	Two-strings LCD information output (N/A)	Brings USB and RS-485 interfaces (N/A)	Allows synchronization with external devices (N/A)

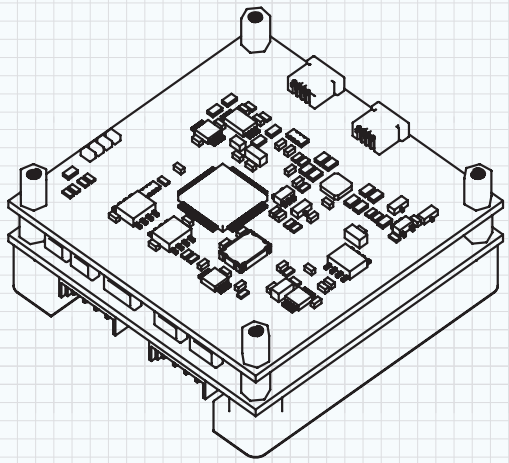
DX5100 OEM1 CORE consists of CPU Board and Power Board

DX5100 OEM1 (CORE)

Dimensions (mm)



Terminal cables between boards are not shown



DX5100 OEM1 (CORE) Specifications

OPERATING MODES			
PID Regulating	Yes		TEC bi-directional (heating and cooling)
PID Auto-Tune	Yes		
DC voltage	Yes		
Temperature Program	Yes		
T-regulation (relay)	Yes		
INTERFACE/CONTROL			
Communication Interfaces	RS-232		by default
Programming	WAKE		BIN & SYM
PROGRAMMABLE TRESHOLDS			
Temperatures	2		Every Channel
Max voltage	1		
OPERATING	Units	Value	
Operational temperatures range	°C	0…+45	
Storage temperatures range	°C	-20…+60	
Humidity	%	5…95%	
POWER SUPPLY			
Power Supply Requirements	DC output	12V	NOT Included for OEM Drivers
	Power	>36W	For max DX5100 32W output
OUTPUT PER CHANNEL	Units	Value	
Max current	A	4	Single Channel 4Ax8V max
Max voltage	V	8	
Max power	W	32	

TEC VOLTAGE REGULATION	Units	Value	
Voltage Range	V	-8…+8	
Accuracy of voltage regulation	mV	1	
Accuracy of voltage setting	mV	0.13	
Resolution	µV	6	
Output ripple, not more	µV	10	
Efficiency of converters	%	85	
TEMPERATURE REGULATION	Units	Value	
4-wires Measuring Method	Supported		Typical values. Depend on thermistors type
Resolution	°C	0.001	
Stability	°C	0.005	
Accuracy	°C	0.5	
SUPPORTED THERMISTORS			
Platinum thermistor		Pt	Known calibration T=f(R)
Other types of thermistors		NTC, PTC	
Resistance range	Ohm	70…996K	
MODE “PROGRAM"			
Number of programs		up to 16	0..15
Steps in program		up to 50	0..49
Steps number in a process		800	Programs in series
Program step duration, max	sec	65 535	
Time interval accuracy	sec	1	
Programs cascading		Yes	