SuperTrak PHARMA8™

Component Data Sheets

Rev. 1, August 2024

SuperTrak™ CONVEYANCE

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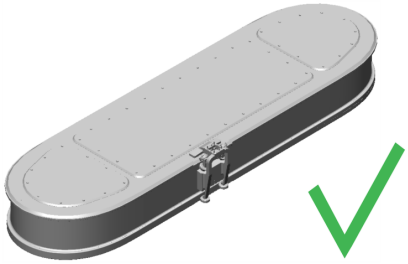
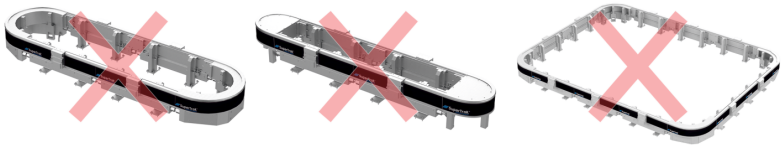
This document is for the following SuperTrak CONVEYANCE™ product:

SuperTrak™ PHARMA8



This document is **NOT** for the following SuperTrak CONVEYANCE™ products:

SuperTrak™ HORIZON10



SuperTrak™ VERTICAL10

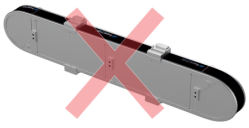


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Table of Contents

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Notes

This document provides information about SuperTrak PHARMA8™ components. Information found here is for general reference and may be updated without notice. Be sure you are using the most current version of this document by going to https://supertrakconveyance.com/technical-documentation/ . More information about the SuperTrak PHARMA8™ conveyance platform can be found in the Operation and Maintenance Manual which is also available through the link referenced above.

> *A gray vertical line segment in the left margin of a page indicates a section where text or a graphic has been added or updated since the prior revision of this document.*

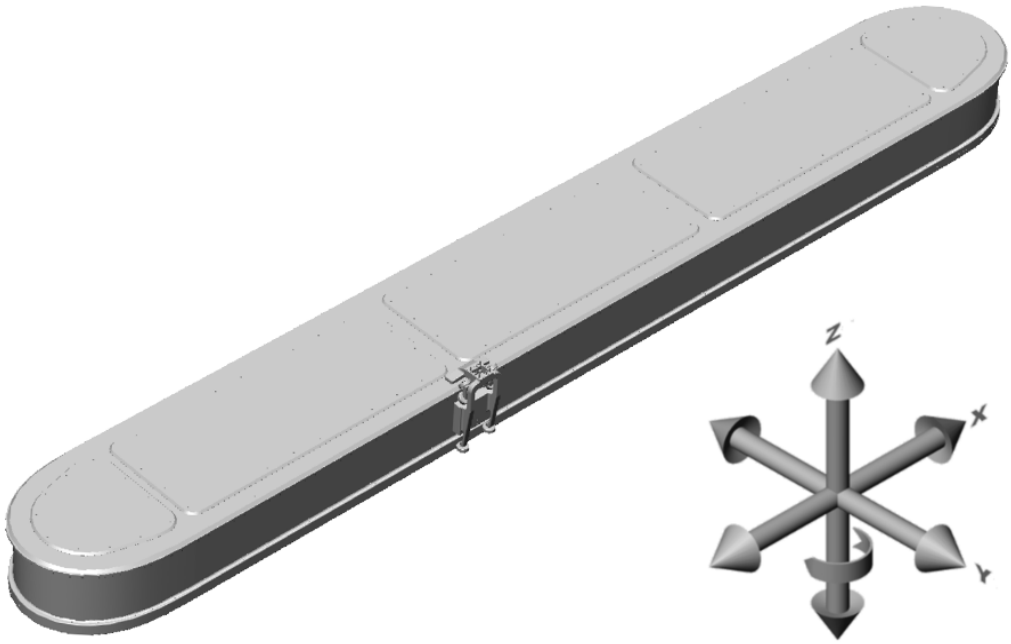
Data Sheet Summary Table

The following table summarizes the SuperTrak GEN3 components. Use the cross-references to located the data sheets for each component.

Component	Data Sheet
Control panel	See *Control Panel Data Sheet* on page 9.
Power supply	See *Power Supply Data Sheet* on page 12.
Gateway Board	See See *Gateway Board (ACB3040-C01) Data Sheet* on page 16.
Coil Driver Board	See *Coil Driver Board (ACB3000-E01) Data Sheet* on page 18.

Frame of Reference

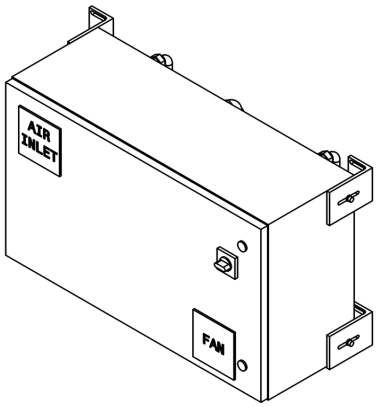
This document describes tooling movement using the following frame of reference:



Control Panel Data Sheet

The control panel provides controls for monitoring individual modules and shuttles.

Features



- Integration with the automation system safety circuit utilizes dual channel input with a feedback loop via provided terminals.
- Available in two (2) options:
  - 400Y230 VAC
  - 208Y120 VAC
- Includes:
  - An uninterruptible power supply (UPS).
  - Two (2) air filters.
  - An open interface to programmable logic controller (PLC): PROFINET, EtherNet/IP, EtherCAT, or PowerLink.

Part Number

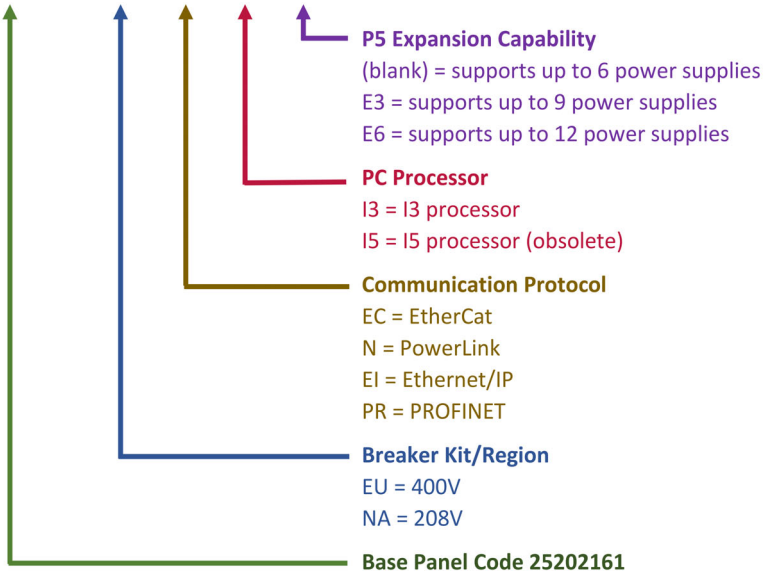
The control panel part number is configurable; it consists of five parts:

[Base Panel]-[Breaker Kit]-[Communication]-[PC]-[P5-Expansion]

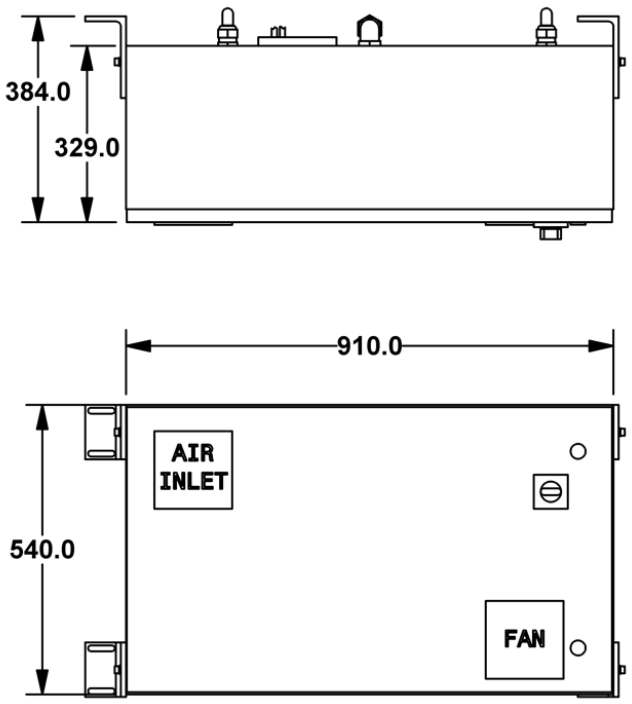
The graphic below shows the options for configuring a control panel part number.

Example: 25202161 - NA - EC - I3 - E6

Format: 25202161 - XX - XX - XX - XX



Dimensions



Dimensions for reference only. See SuperTrak Design Package for detailed drawings.

Technical Specifications

Specification	Value	
	EU	NA
Control voltage	• 24VDC (digital power supplied from the control panel) • 28VDC (motor power supplied from the power supplies)	
Frequency	50/60 Hz	
Full load amps	36A	
Largest load	20A	
Line voltage	400Y230VAC+PE	208Y120VAC+PE
Materials	Steel sheet, lacquered, RAL7024, polyamide (PA)	
Phases	3 ph, 5-wire	
Short circuit current rating	5kA	
UPS current rating	15A	
UPS frequency	50/60 Hz	
UPS line voltage	24VDC	
Weight	70 kg (154.3 lbs)	

Control Panel Certifications

Region	Certifications*
North America	Certified to UL 508A:2014 Industrial Control Panels.
European Economic Area (CE markings)	EU- Declaration of Conformity per LVD 2014/35/EU: EN 60204-1 Electrical Equipment of Machines 2014/30/EU – Electromagnetic Compatibility: EN 61000-6-2:2005 Immunity, EN 61000-6-4:2011 Emissions

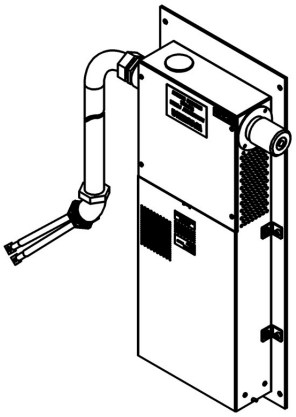
* Certifications for the control panel apply to part number 25202161 only. For detailed information on SuperTrak component certifications, visit https://supertrakconveyance.com/certifications/

Power Supply Data Sheet

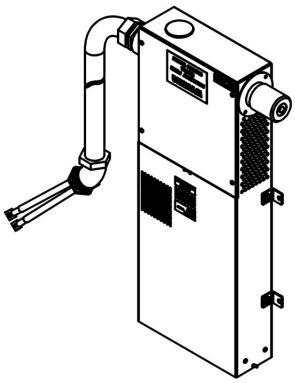
The power supply supplies power to straight and curved sections.

Features

- Provides a modular power system; adjust the number of SuperTrak conveyance platform power supplies based on the size and requirements of the system.
- Includes:
  - A 28VDC power output cable.
  - An AC power input plug.
  - One (1) air filter.
  - Connection cable for PLC monitoring (24V).
  - One (1) mounting plate and screws.
  - Four (4) mounting brackets.



With back plate



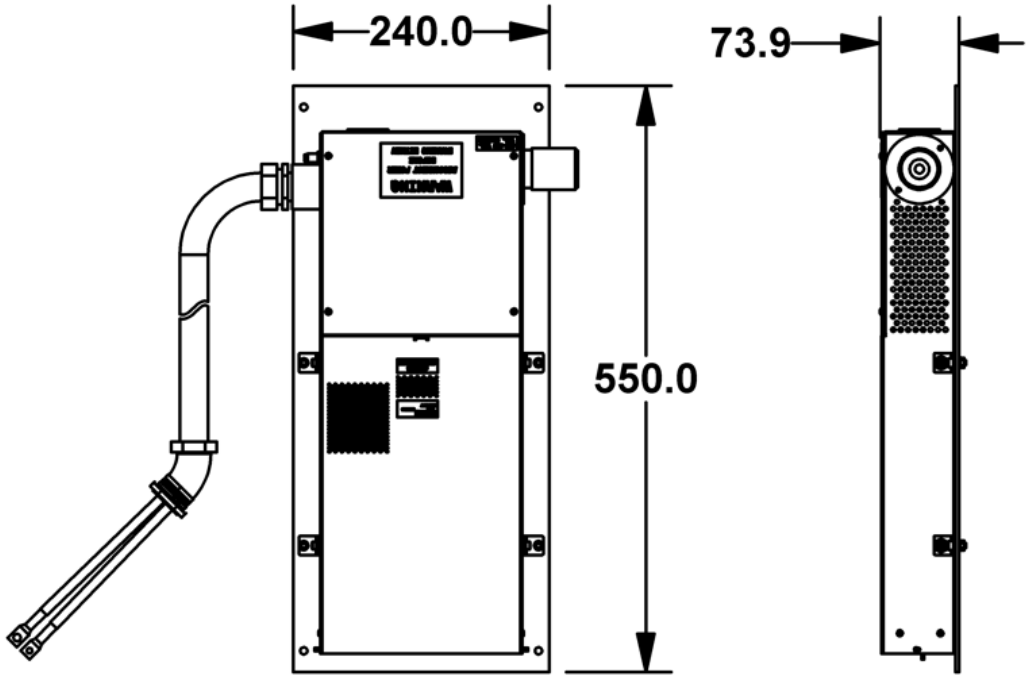
Without back plate

Part Numbers

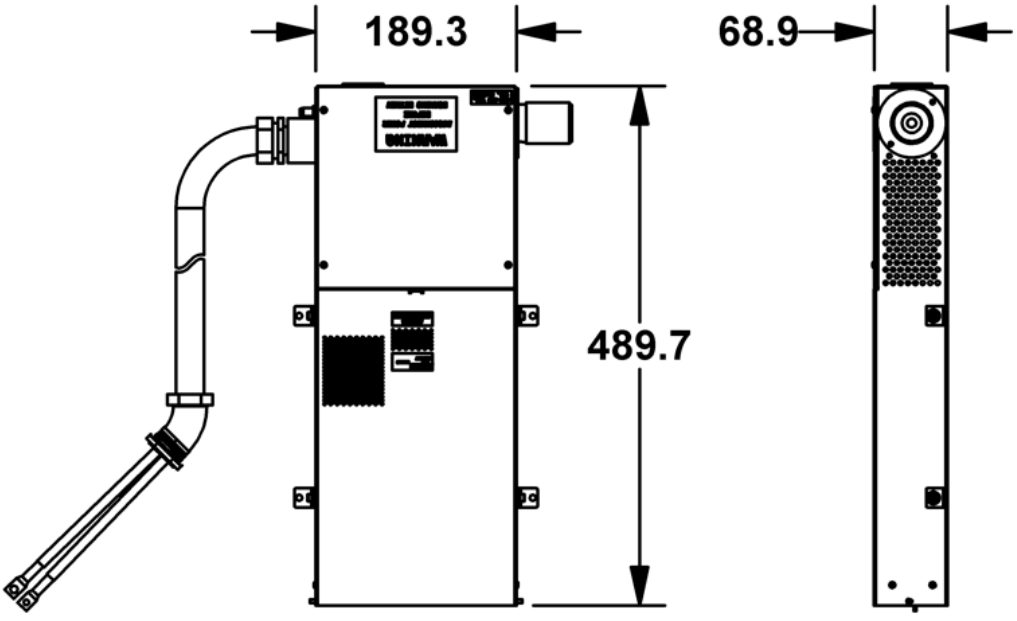
Part	DC Output Cable Length[a]	Part Number
Power supply (with a mounting plate)	1.5 m	25195828
Power supply (without a mounting plate)	1.5 m	25270337
	5 m	25270337-5M
	8 m	25270337-8M

a.All power supplies on a track must have the same cable lengths. Do not use power supplies with varying cable lengths on the same system.

Dimensions (with back plate)



Dimensions (without back plate)



Dimensions for reference only. See SuperTrak Design Package for detailed drawings.

Technical Specifications

Specification	Value
Cable length	1500 mm (59.05 in.) - standard
	5000 mm (196.85 in.) - optional
	8000 mm (314.96 in.) - optional
Cable bend radius (inside)	63.5 mm (2.5 in.)
Class	IP20
Frequency	50/60Hz
Main voltage (input)	200-240VAC
Efficiency (%)	85% (typical)
Material	Aluminum, brass, nickel-plated, polyamide (PA), PUR
Max. number of power supplies	Application-dependent
Output wattage (continuous)	1500W
Output voltage	28VDC
Approximate weight: power supply with mounting plate and standard 1.5 M cable	9 kg (20 lbs)
Approximate weight: power supply with mounting plate and optional 5 M cable	13 kg (29 lbs)
Approximate weight: power supply with mounting plate and optional 8 M cable	15 kg (33 lbs)
SCCR	5kA

Power Supply Status Input

Overcurrent/Short-Circuit Protection

- Overcurrent protection is built in (105% of rated current, or 101% of peak current).
- The power supply will automatically recover when the fault condition is removed.
- If the overcurrent protection circuit operates continuously for 5 seconds, the output voltage will shut down.
    - To recover the output voltage, remove the condition that is causing the overcurrent, shut down the AC input voltage, wait more than 3 minutes and turn on the AC input again.

Overvoltage Protection

- Overvoltage protection is built in (Vo+5.6 – 11.2).
- If the overvoltage protection circuit is activated, shut down the input voltage, wait more than 3minutes and turn on the AC input again to recover the output voltage.

Thermal Protection

The built-in thermal protection circuit will be activated under the following conditions and will shut down the output when:

- The temperature continues to exceed the values determined by the derating curve. (50°C @ 100% Loading, 71°C @ 50% Loading)
- The fan stops, or air flow is blocked from the fan.

If the thermal protection circuit is activated, shut off the input voltage and eliminate the overheating conditions. To recover the output voltage, allow the unit to fully cool down (~10min) before reapplying the input voltage.

Power Supply Certifications

Region	Certifications*
North America	Certified to UL 61010-1:2018, CAN/CSAC22.2 No. 61010-1:2018 & UL 508:2013 Industrial Control.
European Economic Area (CE markings)	EU- Declaration of Conformity per LVD 2014/35/EU: EN 61010:2010 Safety Electrical Equipment for Measurement, Control. 2014/30/EU – Electromagnetic Compatibility: EN 61000-6-2:2005 Immunity, EN 61000-6-4:2011 Emissions

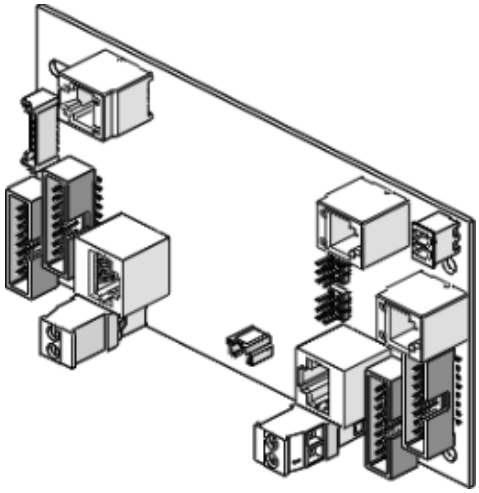
* Certifications for the power supply apply to part number 25270337 (and 25270337-XX where XX represents alternate DC cable length) only. For detailed information on SuperTrak component certifications, visit https://supertrakconveyance.com/certifications/

Gateway Board (ACB3040-C01) Data Sheet

Each SuperTrak GEN3™ motor section contains an ACB3040 Gateway board to manage communications and servo control. (The 180 deg. (800 mm) section has two Gateway boards.) Communication with the SuperTrak™ controller and adjacent Gateway boards are made via the proprietary Gateway-Gateway Serial Link (GGSL) network. This data sheet contains the specifications for the C01 version of the Gateway Board. For information on other versions of the Gateway Board, contact SuperTrak Technical Support.

Features

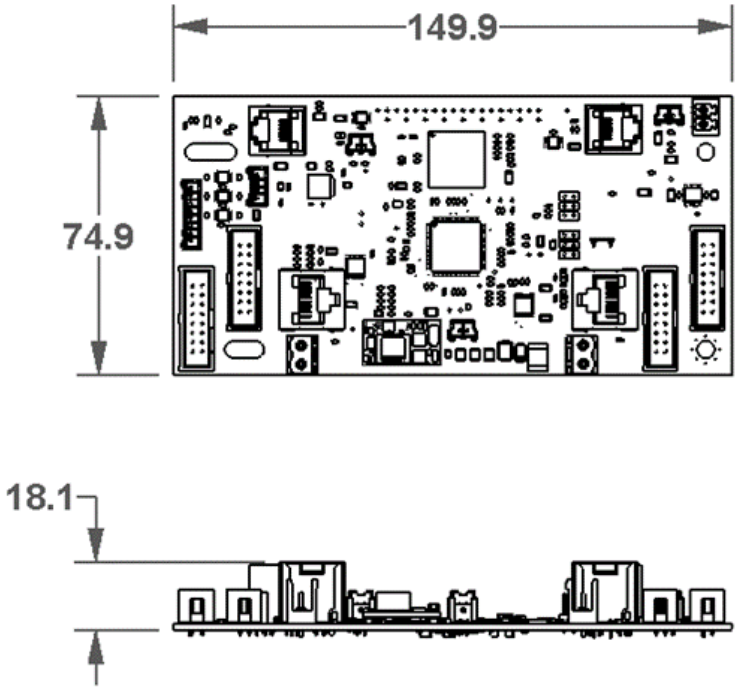
- The Gateway board handles low-level control of the motor and position feedback systems via interfaces with a pair of coil driver boards and a pair of encoder boards.
- The Gateway board features Xilinx Spartan-6 FPGA and CoolRunner-II CPLD devices that work in concert to manage communications and section control.



Part Number

Part	Type	Part Number
SuperTrak GEN3™ Gateway board	ACB3040	SP-25211309

Dimensions



Dimensions for reference only.

Technical Specifications

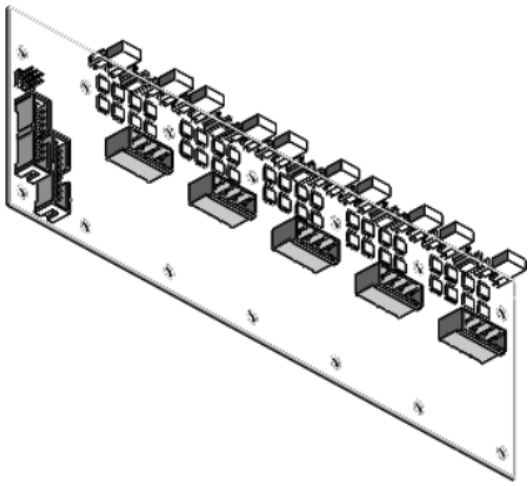
Specification		Value			
Weight		0.080kg			
Environmental conditions and limits		Same as for track sections--see the SuperTrak PHARMA8™ Operations and Maintenance Manual at https://supertrakconveyance.com/technical-documentation/ for more information.			
Interfaces		• 2x coil driver proprietary serial interfaces • 2x encoder board interfaces • 2x network interfaces for Gateway network uplink & downlink • 1x JTAG programming interface			
Power	Parameter	Minimum	Typical	Maximum	Units
	Input DC Voltage	23.8	24.0	25.2	V
	Input current	-	-	250	mA

Coil Driver Board (ACB3000-E01) Data Sheet

Each SuperTrak GEN3™ motor section contains multiple ACB3000 Coil Driver boards to commutate current in motor coils. The 180 deg. (800 mm) sections have three (3) coil driver boards while all other types of sections have two (2) coil driver boards. The coil driver receives commands and returns sensor values to the Gateway board via proprietary serial links. This data sheet contains the specifications for the E01 version of the coil driver board. For information on other versions of coil driver boards, contact SuperTrak Technical Support.

Features

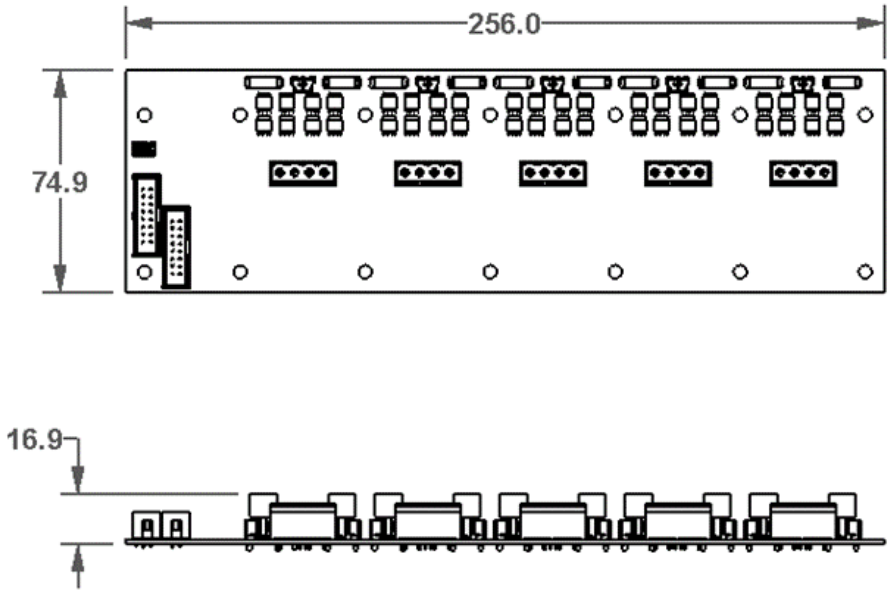
- Xilinx CoolRunner-II CPLD devices providing individual control of ten (10) motor coils.
- Motor temperature and coil current sensors with extreme limit sensing and protection.



Part Number

Part	Type	Part Number
SuperTrak GEN3™ coil driver board	ACB3000	SP-25211311

Dimensions



Dimensions for reference only.

Technical Specifications

Specification		Value			
Weight		0.130kg			
Environmental conditions and limits		Same as for track sections--see the SuperTrak PHARMA8™ Operations and Maintenance Manual at https://supertrakconveyance.com/technical-documentation/ for more information.			
Software compatibility		Controller software version between 3.0.6.0 and 3.0.34.x			
Interfaces		• 2x Gateway proprietary serial interfaces • 1x JTAG programming interface			
Power	Parameter	Minimum	Typical	Maximum	Units
	Input DC Voltage - Motor	23	28	31	V
	Motor coil fuse rating	-	-	15	A

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