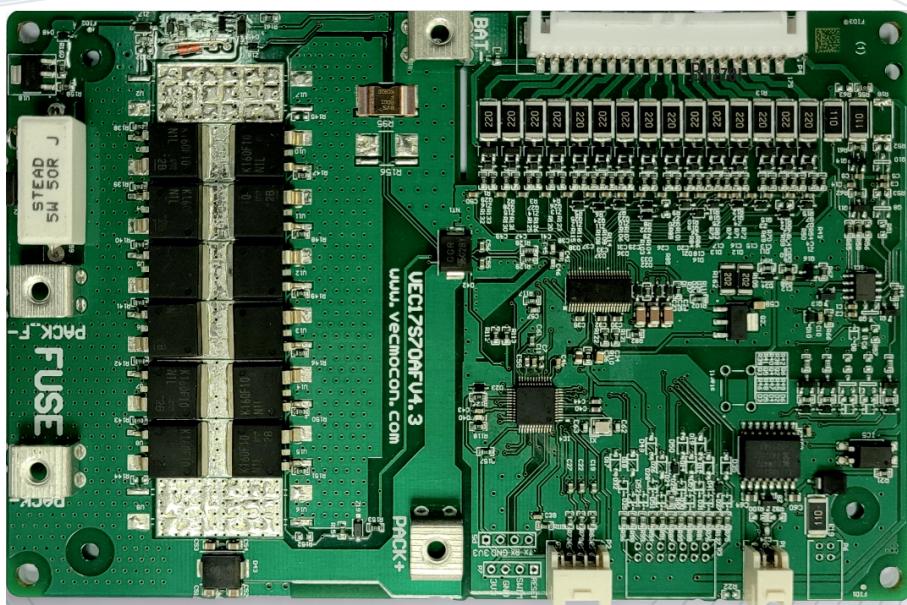




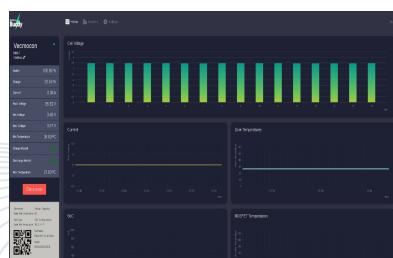
# VECMOCON TECHNOLOGIES

## Battery Management System

Fully compliant with AIS 156 guidelines



AV board for AIS 156 phase 2



Cloud Tools

Parameter	Existing Value	New Set Value	Type
Min. voltage critical	12.0	12.0	V
Max. voltage critical	12.0	12.0	V
Short circuit release time	0.0	0.0	sec
Over current discharge release time	0.0	0.0	sec
Over current charge release time	1.0	1.0	sec
Under voltage release time	1.0	1.0	sec
Cell Parallel	1	1	Number
ESD protection	1	1	ON/OFF
Thermal protection	1.0	1.0	V
Over voltage cutoff	4.0	4.0	V
Over voltage release	4.0	4.0	V
Over current cutoff	1.0	1.0	A
Under voltage release	3.0	3.0	V
Critical under voltage	2.0	2.0	V
Temperature cut off	5.0	5.0	deg
Over current detector	0.0	0.0	A
Over temp detector	0.0	0.0	C
Over voltage detector	0.0	0.0	V
Under temp release	1.0	1.0	C
Over voltage release	2.0	2.0	V
Over current discharge cutoff	-0.02	-0.02	A
Over Current Charge cutoff	2.0	2.0	A

Configuration Tool

DRIVEN BY INTELLIGENCE



i-VEC®  
DRIVE



## Description

Fully compliant with AIS 156 to strengthen the safety parameters of the battery pack.

## Features

- Intelligent battery management system with state of the art ML based algorithms
- Supports all lithium-ion chemistries
- Isolated CAN communication with SAE J1939 protocol
- Active GPS + 4G enabled IoT gateway available
- Fully configurable 21 parameters (cutoff limits, release limits as well as release times, and more) over a web based configuration tool
- Fully analog front end
- Onboard pre-charging function for up to 20,000  $\mu$ F capacitive load.
- 4 redundant temperature sensors for the battery pack and 3 temperature sensors on board.
- Remote diagnostic capabilities which comes with on field diagnostic BATTERY BUDDY™ tool.
- State of the art SOC estimation using Vecmocon's proprietary "Dynamic state charge" algorithm.

## Applications



MOTORCYCLES



SCOOTERS



THREE WHEELERS



BACKUP SYSTEMS



ENERGY STORAGE SYSTEMS

## Technical Specifications

Parameter	Comment	Min	Typical	Max	Units
Battery Voltage	Upto 24 Cells in series		48/60/72		V
BMS Supply Current (Continuous)	Normal Mode	18	20	25	mA
BMS Supply Current (Sleep)	Sleep Mode		2		uA
Cell Voltage Measurement Range	Pre-channel		2.0	5.0	V
Cell Voltage Measurement Accuracy			$\pm 15$		mV
Discharge Current (Continuous)			60		A
Discharge Current (Peak)	For 10 seconds		90		A
Charge Current (Continuous)			60		A
Charge Current (Peak)	For 10 seconds		90		A
Balance Current		180	200	210	mA
Series Configuration	13–24 S (Hardware configurable)				Series
Operating Temperature	In battery with cover	-40	90		°C
Dimensions	13–16 cells in series		(105mm x 160mm x18mm)		mm
	18–24 cells in series		(105mm x190mm x18mm)		mm