

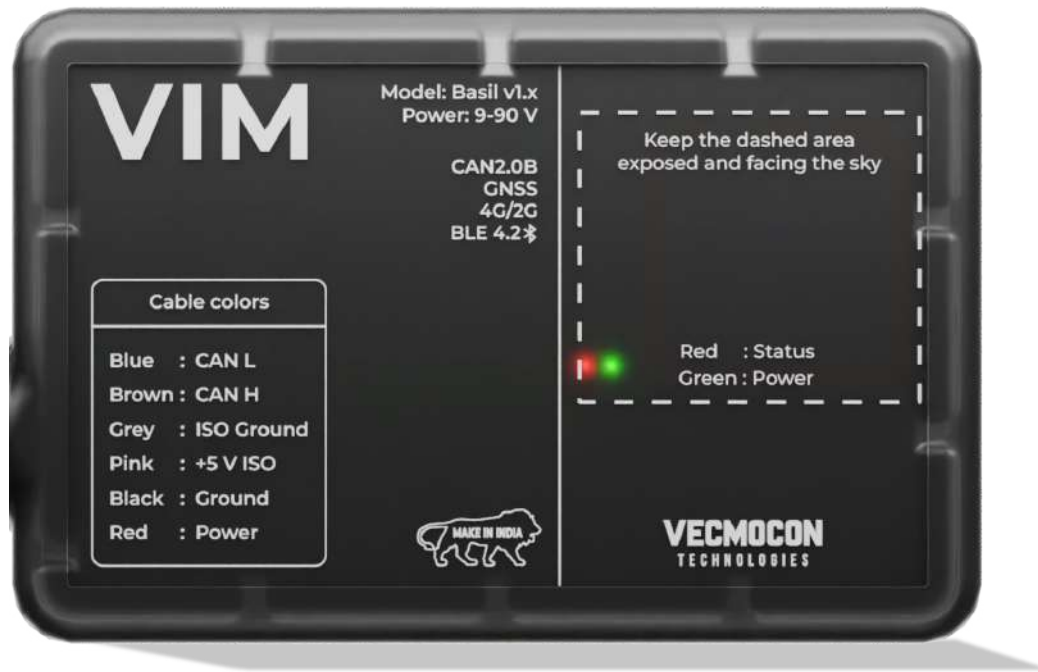
# VECMOCON

ENGINEERED FOR INTELLIGENCE

## VEHICLE INTELLIGENCE MODULE VIM 1.X SPEC SHEET



# Vehicle Intelligence Module - VIM 1.X



- Acts as a central hub for data exchange, facilitating features like remote diagnostics and secure firmware updates over-the-air (OTA).
- Beyond data exchange, the module also offers advanced management and control capabilities. The module can execute on-device machine learning algorithms, enabling local data processing for faster and efficient operations.
- Driving mode and free fall detection (6 Axis IMU)
- Remote diagnostics and Fault management
- Store data locally when the network is unavailable.
- Remote immobilization feature to safeguard the asset in case of theft.
- Tech enablement platform for BaaS and Battery Aadhaar coupled with Vec-TR
- Power Saving mode to save power consumption when low on SOC

# VIM 1.X SPECIFICATION

## POWER

Parameter	Specifications
Input Voltage	9-90VDC*
Protection	Overvoltage / Reverse
Current Consumption	Normal: ~14-16mA @50V Sleep: ~350µA @50V

## CELLULAR

Parameter	Specifications
GSM	Max 5 [UL] / 10 [DL] Mbps (FDD), LTE- FDD B1/B3/B5/B8 LTE- TDD B34/B38/B39/B40/B41 GSM 900 MHz/1800 MHz
Power Output	2W @850/900MHz : Class 4 1W @1800/1900MHz : Class 1 LTE – FDD & LTE - TDD bands : Class 3
SIM	eSIM Optional[Insertion : Push- Pull , Nano Sim Card Connector]
Antenna	Internal High Gain
Packet Data	TCP/IP/MQTT/HTTP/

## GNSS

Parameter	Specifications
Feature	GPS + BeiDou
Sensitivity(tracking)	-165dBm
Acquisition(normal)	Cold <45s, Warm <20s, Hot<5s@-130dBm
Antenna	Internal Active Antenna

# VIM 1.X SPECIFICATION

## I/O Interface

Parameter	Specifications
CAN Interface	1XCAN 2.0B (Isolated Optional)
BLE	v4.2

## ADDITIONAL

Parameter	Specifications
Memory	8MB NOR Storage (Expandable up to 32MB)
Motion Sensor	6-Axis IMU(Optional)
Firmware Update	Self and Asset FOTA

## SECURITY

Parameter	Specifications
Algorithm/Encryption	SSL/TLS v1.2, AES-128/256

## OPERATING ENVIRONMENT

Parameter	Specifications
Operating Temperature	0 °C to + 65 °C full performance
Storage Temperature	-40 °C to +85 °C
Humidity	95% non-condensing

## Enclosure

Parameter	Specifications
IP Rating	IP65
Dimension	90X60X24 [LXBXH (mm)]

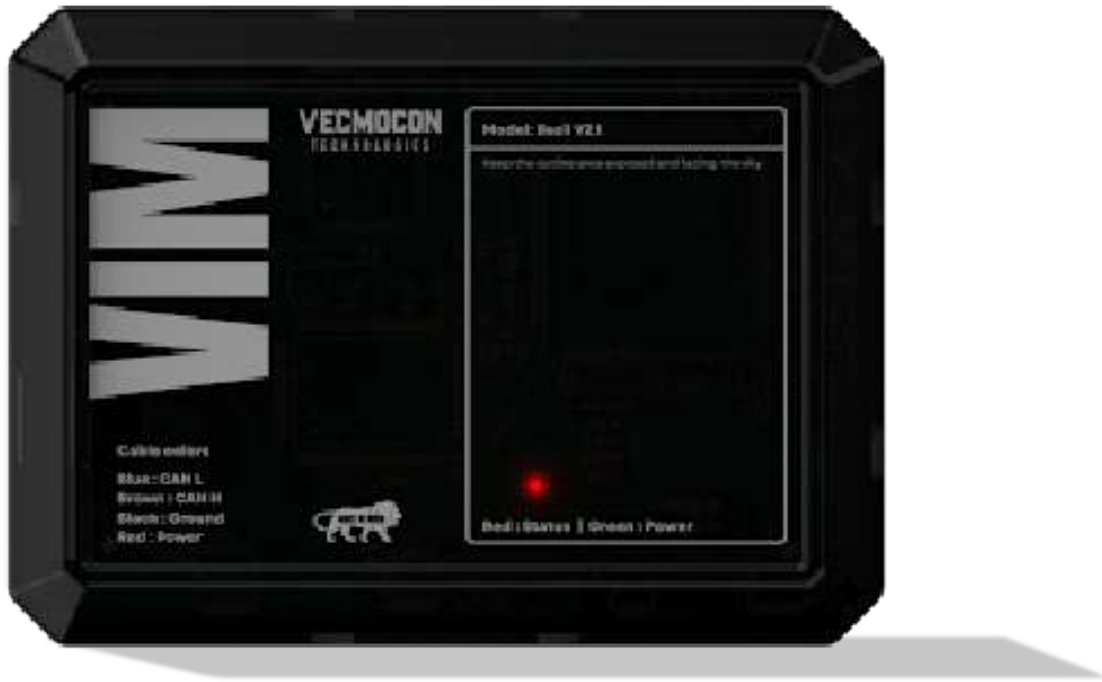
# VECMOCON

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## VEHICLE INTELLIGENCE MODULE VIM 2.X SPEC SHEET



# Vehicle Intelligence Module - VIM 2.X



Unified solution integrating Smart Telemetry and Data logging that combines Classic telemetry use case for Asset monitoring and high speed CAN data logs (10ms) for SW developers to continuously improve control algorithms.

Acts as a central hub for data exchange, facilitating features like remote Diagnostics and secure firmware updates over-the-air (OTA).

Beyond data exchange, the module also offers advanced management and Control capabilities. The module can execute on-device machine learning Algorithms, enabling local data processing for faster and efficient operations.

Driving mode and free fall detection (6 Axis IMU)

Remote diagnostics and Fault management

Zero Data loss for data transfer (onboard memory)

Remote immobilization feature to safeguard the asset in case of theft.

Tech enablement platform for BaaS and Battery Aadhaar coupled with Vec-TR

Power Saving mode to save power consumption when low on SOC

# VIM 2.X SPECIFICATION

## POWER

Parameter	Specifications
Input Voltage	9-90VDC
Protection	Overvoltage Reverse
Current Consumption	Normal: 14-16mA @50V Sleep: ~350µA @50V

## CELLULAR

Parameter	Specifications
GSM	Max 5 [UL] / 10 [DL] Mbps (FDD), LTE- FDD B1/B3/B5/B8 LTE- TDD B34/B38/B39/B40/B41 GSM 900 MHz/1800 MHz
Power Output	2W @850/900MHz : Class 4 1W @1800/1900MHz : Class 1 LTE – FDD & LTE - TDD bands : Class 3
SIM	eSIM Optional[Insertion : Nano Sim Card Connector]
Antenna	Internal High Gain
Packet Data	TCP/IP/MQTT/FTP/HTTP

## GNSS

Parameter	Specifications
Feature	GPS + BeiDou + IRNSS(Optional)
Sensitivity(tracking)	-165dBm
Acquisition(normal)	Cold <45s, Warm <20s, Hot<5s@-130dBm
Antenna	Internal Antenna/External Antenna

# VIM 2.X SPECIFICATION

## I/O Interface

Parameter	Specifications
4XGPIO	Configurable as Input or Output Input: 12V - 90V Output: ~2.5W
2XAnalog Input	Upto Voltage of 12V - 90V Voltage Reading
CAN Interface	2XCAN 2.0B [Speed: 250K/500k Configurable] (Isolated Optional)
BLE	v4.2
RS232	1XRS232 Interface

## ADDITIONAL

Parameter	Specifications
Memory	8MB NOR Storage
Motion Sensor	6-Axis IMU
Firmware Update	Self and Asset FOTA
<b>Optional:</b> High-Frequency Data Logging	Up to 10ms High frequency data logging with Memory up to 32GB (SD card)

## SECURITY

Parameter	Specifications
Algorithm/Encryption	SSL/TLS v1.2, AES-128/256

# VIM 2.X SPECIFICATION

## OPERATING ENVIRONMENT

Parameter	Specifications
Operating Temperature	0 °C to + 65 °C full performance
Storage Temperature	-40 °C to +85 °C
Humidity	95% non-condensing

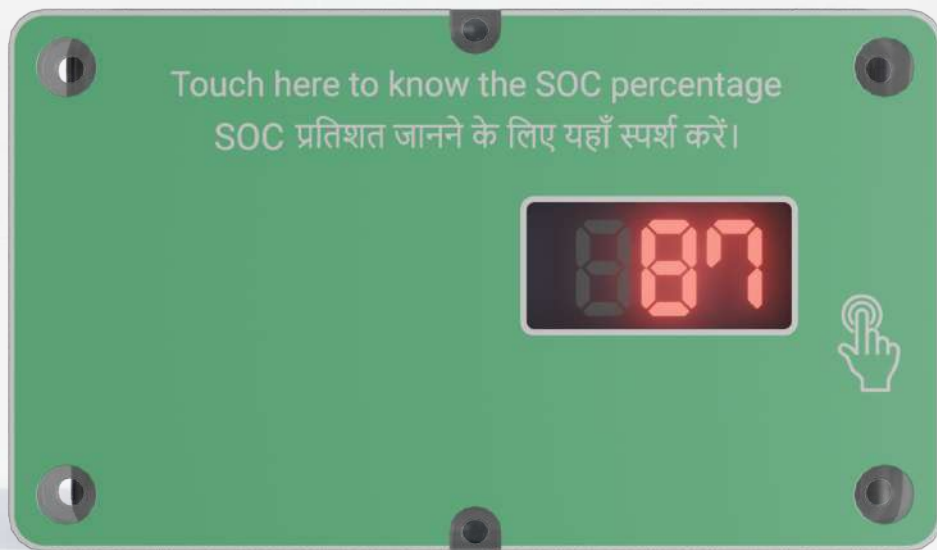
## Enclosure

Parameter	Specifications
Dimension	125X95X30 [LXBXH (mm)]
IP Rating	IP67

# VECMOCON

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## VEHICLE INTELLIGENCE MODULE VIM B.X



# Vehicle Intelligence Module - VIM B.X



Unified solution integrating Smart Telemetry and Data logging that combines Classic telemetry use case for Asset monitoring and high speed CAN data logs (10ms) for SW developers to continuously improve control algorithms.

Acts as a central hub for data exchange, facilitating features like remote Diagnostics and secure firmware updates over-the-air (OTA).

Beyond data exchange, the module also offers advanced management and Control capabilities. The module can execute on-device machine learning Algorithms, enabling local data processing for faster and efficient operations.

Driving mode and free fall detection (6 Axis IMU)

Remote diagnostics and Fault management

Zero Data loss for data transfer (onboard memory)

Remote immobilization feature to safeguard the asset in case of theft.

Tech enablement platform for BaaS and Battery Aadhaar coupled with Vec-TR

Power Saving mode to save power consumption when low on SOC

# VIM B.X SPECIFICATION

## POWER

Parameter	Specifications
Input Voltage	42-90VDC
Protection	Overvoltage Reverse
Current Consumption	Normal: ~14-16mA @50V Sleep: ~350µA @50V

## CELLULAR

Parameter	Specifications
GSM	Max 5 [UL] / 10 [DL] Mbps (FDD), LTE- FDD B1/B3/B5/B8 LTE- TDD B34/B38/B39/B40/B41 GSM 900 MHz/1800 MHz
Power Output	2W @850/900MHz : Class 4 1W @1800/1900MHz : Class 1 LTE – FDD & LTE - TDD bands : Class 3
SIM	eSIM Optional[Insertion : Push- Pull, Nano Sim Card Connector]
Antenna	Internal High Gain
Packet Data	TCP/IP/MQTT/FTP/HTTP

## GNSS

Parameter	Specifications
Feature	GPS + BeiDou
Sensitivity(tracking)	-165dBm
Acquisition(normal)	Cold <45s, Warm <20s, Hot<5s@-130dBm
Antenna	Internal Antenna

# VIM B.X SPECIFICATION

## I/O Interface

Parameter	Specifications
CAN Interface	1XCAN 2.0B (Protection upto 75V) (Isolated Optional)
BLE	v5.4

## ADDITIONAL

Parameter	Specifications
Memory	8MB NOR Storage (Expandable upto 32MB)
Motion Sensor	3-Axis Accelerometer
Firmware Update	Self and Asset FOTA

## SECURITY

Parameter	Specifications
Algorithm/Encryption	SSL/TLS v1.2, AES-128/256

## OPERATING ENVIRONMENT

Parameter	Specifications
Operating Temperature	0 °C to + 65 °C full performance
Storage Temperature	-40 °C to +85 °C
Humidity	95% non-condensing

## Enclosure

Parameter	Specifications
Dimension	115X67X16[LXBXH (mm)]