

Introduction

Neon is a Free RTOS based connectivity module community development platform offered by GreenDot Technology. It is built on a SIMCOM SIM7672x series platform.

Neon offers additional amazing features, which provides a more creative edge to the developers and enthusiasts in the Automotive domain. Its major functionality is to fetch parameters of the connected device, facilitate critical on-board diagnostics, analysis, and feedback via voice alerts.

Key Benefits

- Support global multi network mode (LTE Cat 1)
- Integrates Threadx Free RTOS, Bluetooth and GNSS into one module
- Integrate GNSS function, supports rapid accurate positioning under different environment

Applications

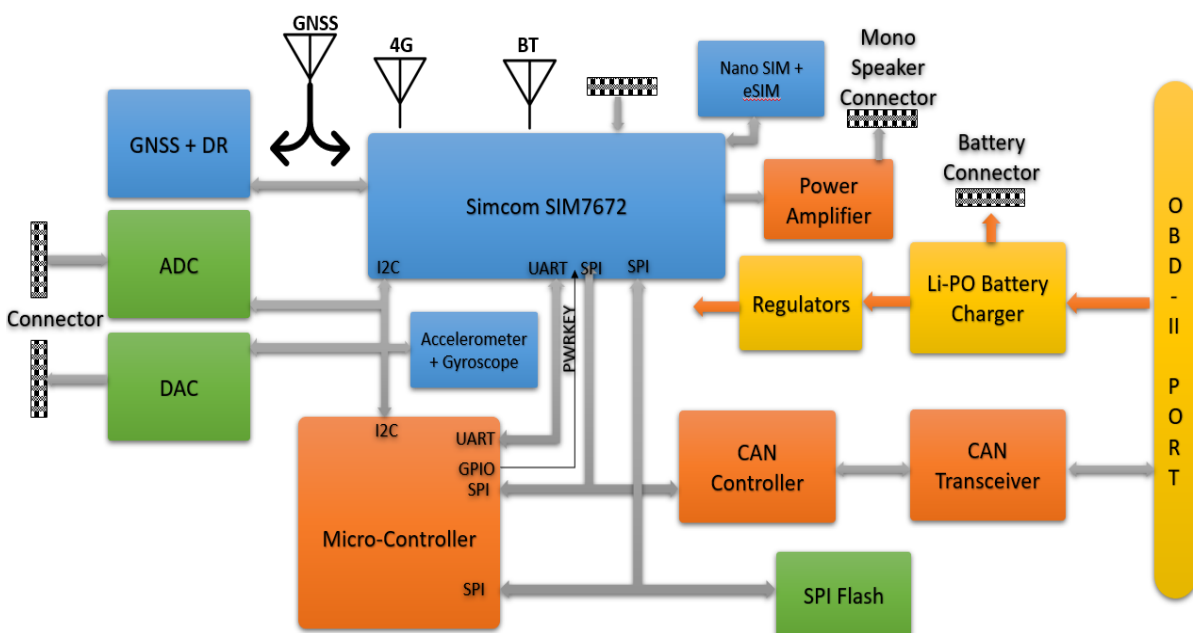
Neon is a highly integrated product, which can be widely used for various applications in the field of the Automotive sector

Neon can be widely used as an integral part or as a sub-system in the areas of

- Automotive cluster
- Telematics
- Vehicle Diagnostics

Block Diagram

Product Block Diagram - Neon



Interface

Connectivity Module	Integrates abundant industrial standard interfaces with powerful expansibility, such as UART, USB, I2C and GPIO, which makes it perfectly suitable for applications such as telematics, surveillance devices, and remote diagnostics etc.
MCU	Up to 14 KB Flash Program Memory Up to 1024 Bytes Data SRAM 32 MHz clock input Extreme Low-Power (XLP)
ADC	12-bit, low power, successive approximation ADC with an I2C-compatible interface. operates from a single 2.7V to 5.5V supply and features a 2 μs conversion time
DAC	The AD5338R uses a versatile 2-wire serial interface that operates at clock rates up to 400 kHz VLOGIC pin for 1.8V/3V/5V logic.
SPI Flash	FLASH Memory IC 8Mb (1M x 8) SPI 40 MHz 8-SOIC. Significantly improve performance and reliability, while lowering power consumption.
CAN Interface	CAN controller implements CAN 2.0B. Easy interfacing with the MCUs via SPI.
SENSOR	6-axis Motion Tracking device that combines a 3-axis gyroscope and a 3-axis accelerometer

BT	BT 5.0
GNSS	GPS /GLONASS /BeiDou /Galileo/QZSS Advanced AGPS self-generated orbit prediction
UART	3 Nos
I2C	Support up to 4* I2C for sensor data
SPI	Support up to 4 SPI interfaces.
UIM Card	1 No
Antenna	On Board: BT & GNSS connectors

Data Transfer

LTE (Mbps)	10(DL) / 5(UL)
EDGE (Kbps)	236.8(UL) / 236.8 (DL)
GPRS (Kbps)	236.8(UL) / 236.8 (DL)

General Features

Supply Voltage	12V
Temperature	TBD
Dimensions	150X80 mm
Weight	TBD