



NEXUS

CAN BUS IoT GATEWAY



- Rugged IoT Gateway for DIABOARD cloud portal data transmission
- GNSS geolocalization trace signal
- 4G LTE global communication
- M2M Multi-network SIM card
- WiFi connection
- Bluetooth connection for device configuration
- Integrated antennas
- Cyber security
- Designed for machines and equipment equipped with a CAN BUS network

TECHNICAL DATA

POWER SUPPLY 9-30 VDC

CAN BUS PORT

x2 CAN BUS 2.0 A/B COMPLIANT – (11, 29 BIT) – ISO 11898-2 UP TO 1Mbit/s
Compatible sniffing protocol: CANOPEN – J1939
With selective wake-up functionality

4G LTE cat.1

LTE Frequency band [MHz]:
• LTE-FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 18/ 19/ 20/ 25/ 26/ 28/ 66
• TLE-TDD: B34/ 38/ 39/ 40/ 41

2G EDGE GPRS

Data Transmission:
• LTE data rate (Mbps): Max. 10 (DL)/Max. 5 (UL)
• EDGE data rate (Kbps): Max. 236.8 (DL)/Max. 236.8 (UL)
• GPRS data rate (Kbps): Max. 85.6 (DL)/Max. 85.6 (UL)

GNSS

GPS + BeiDou + Galileo
ACCURANCY: 10m (with optimum signal conditions)

WIFI

IEEE 802.11b/g/n/ax
Frequency Band: 2.4GHz

BLUETOOTH

Bluetooth® LE 5.4

SENSORS

Shock and acceleration detection

BLACK BOX

Data storage in case of signal absence

16MB internal flash memory

STATUS INDICATION

No. 3 leds lights

TEMPERATURE

OPERATIVE: -35+75°C
STORAGE: -40+80°C
BATTERY (TEMP): -20°C+60°C



Scan me

(25/09/2026) - 1



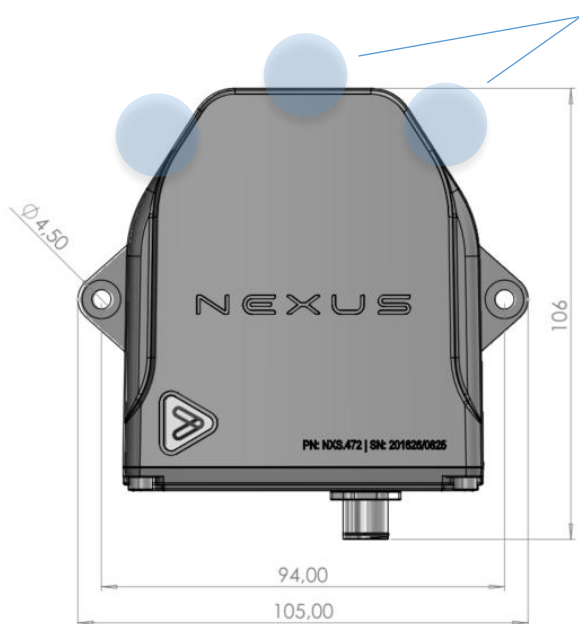
NEXUS

CAN BUS IoT GATEWAY

ELECTRONIC FEATURES

SIM CARD	Included micro-SIM card
	• Non-steered roaming SIM with worldwide coverage • M2M Multi-network SIM card
FIRMWARE UPDATE	OTA - system update via OTA-CAN BUS included
WEB INTEGRATION	Data collected by communication ports are displayed on the DIABOARD portal (MQTT)
CYBER SECURITY	• Encrypted communication between gateway and portal
	• On board authentication and secure data management services
IGNITION KEY	digital input for switch ON/OFF management

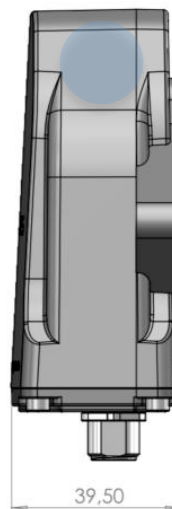
SIZE (mm)



INTEGRATED ANTENNA LOCATIONS

The device shall be installed with the antenna surfaces pointing UP

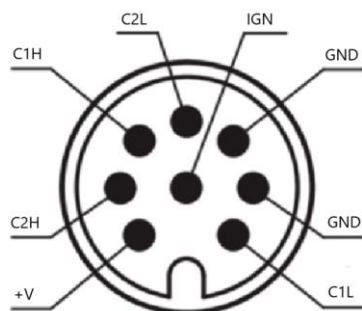
The GPS reception is optimized for outdoor installation. Otherwise, external antenna required.



MAIN CONNECTION PINOUT

CONNECTOR TYPE

M12 8 pin **male** connector



Front connector side

+V	+ POWER SUPPLY
C2H	CAN 2 H
C1H	CAN 1 H
C2L	CAN 2 L
IGN	IGNITION KEY
GND	GROUND
GND	GROUND
C1L	CAN 1 L





OPTIONALS

EXTERNAL GPS ANTENNA **SMA (F)** External connector for wired rugged antenna for indoor or cabin installation

PROTOCOLS INTEGRATION OBDII, CAN FD, ISOBUS, others on request

BACKUP BATTERY NiMh - 600mAh (up to 3 h without main power supply*)

INPUTS

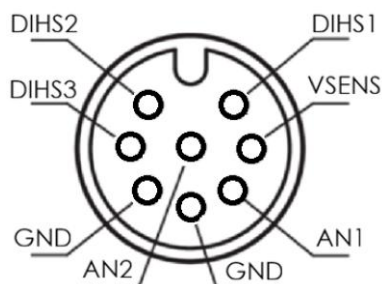
ON A DEDICATED CONNECTOR

n.1 4.20 mA INPUT
n.1 NTC INPUT
n.2 DIGITAL INPUT
n.1 FREQUENCY INPUT
n.1 +VSNS

INPUTS CONNECTOR - pinout

CONNECTOR TYPE

M12 8 pin **female** connector



Front connector side

AN1	4.20 m A
AN2	NTC
DIHS1	DIG IN 1
DIHS2	DIG IN 2
DIHS3	DIG IN 3 (FAST)
GND	GROUND
VSENS	+V SENS



STANDARDS

APPROVAL

CE RED, UKCA
On request: FCC

Health and safety - Article 3.1(a)

EN IEC 62368-1:2020 + A11:2020
EN 50665:2017
EN IEC 62311:2020

Electromagnetic compatibility - Article 3.1(b)

EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
EN 301 489-19 V2.2.0
EN 301 489-52 V1.1.2
EN 55032:2015+A11:2020
EN 55032:2017+A11:2020

Efficient use of radio spectrum - Article 3.2

EN 301 511 V12.5.1
EN 301 908-1 V13.1.1
EN 301 908-13 V13.1.1
EN 300 328 V2.2.2
EN 303 413 V1.2.1

ENVIRONMENTAL TESTING

IEC 60068-2-64
IEC 60068-2-27
IEC 60068-2-27
IEC 60068-2-30

PROTECTION

IEC 60529 (IP67)

NOTE:

*with active GPS (antenna connected, 1Hz positioning); active CAN transceiver (disabled CAN logic); 1000-byte packet transmitted every 60s via disconnect/reconnect cycle.



NOTE