

# GADN-F CAN Bus and GNSS Combo Card

## Features

- Built-in u-blox M8 GNSS modules
- Optional Untethered/Automotive Dead Reckoning Technology
- Single Mini PCI Express Socket Services All Features
- 2-Channel Individual CAN and 1-Channel J1708 Interfaces
- Sensor Integrated: 3D Gyroscope, 3D Accelerometer
- Vehicle Communication: CAN bus 2.0 a/b, OBD-II, J1939 and J1708



## Introduction

ANTZER TECH's GADN series integrates CAN (CAN bus 2.0 a/b, OBDII, J1939, J1708), 6 axis sensors, and GNSS features into one mini PCI-E combo module.

GADN series has optional configuration for UDR (Untethered Dead Reckoning) or ADR (Automotive Dead Reckoning) function that supports powerful positioning using inertial sensing data and GNSS signals (a.k.a. sensor fusion). With Dead Reckoning Function, the module could give accurate information on position even when the GNSS signals are poor or obstructed such as signal loss in tunnels, driving in indoor parking facilities, or urban canyons.

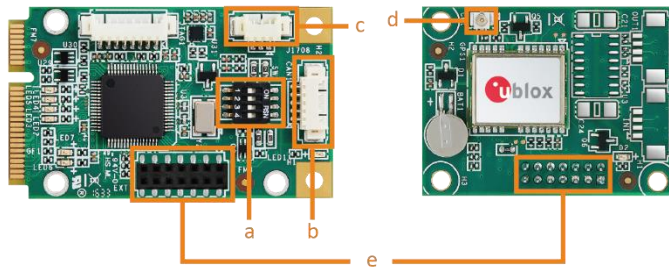
ANTZER TECH's GADN Series is the ideal solution for the Fleet Management, Public Transit, Law Enforcement, Digital Signage Player, Vehicle Data Collection, Vehicle Tracking and Telematics System.

## Specifications

Interface	Form Factor	Full PCI Express Mini Card with Extension Board
	Host Interface	USB 2.0 via PCI Express Mini Card Socket
CAN/Sensor	Interface Number	CAN (ISO 11898) x 2 Individual Channels J1708 x 1
	Sensor	3D Gyroscope 3D Accelerometer
	CAN	CAN bus 2.0 a/b, OBD-II (ISO 15765-4), J1939 (and J1708)
	Identifier Filtering	Mask and Identifier List Mode
GNSS	GNSS Module	u-blox NEO-M8N/M8U/M8L
	Receive Type	72-channel u-blox M8 engine Concurrent reception of up to 3 GNSS (GPS, Galileo, GLONASS, BeiDou)
	Dead Reckoning	GADN-FxxUx for UDR, GADN-FxxLx for ADR
	Quick Hot Start	Support (Li-Coin Battery is Required)
	GPS Antenna	External, IPEX connector onboard (Default Support Active Antenna) * Optional SKU Support Passive Antenna
Software	Driver Support	Microsoft Windows 7 / 8 / 8.1 / 10 Linux Ubuntu 16.04 LTS, Kernel 4.4 and Later SocketCAN (Source Code)
	SDK Support	Microsoft Windows 7 / 8 / 8.1 / 10 Linux Ubuntu 16.04 LTS, Kernel 4.4 and Later
Environment	Operating Temp	-40°C ~ 85°C (without Li-Coin Battery) -20°C ~ 60°C (with Li-Coin Battery)
	Vibration Test	Pass 7.69G@ 20~2000Hz, compliant with MIL-STD-810G category 24
	ESD Protection	8kV Contact, 15kV air
	Certification	CE, FCC Class B
Dimension	L x W x H	50.9 x 30 x 13.2mm

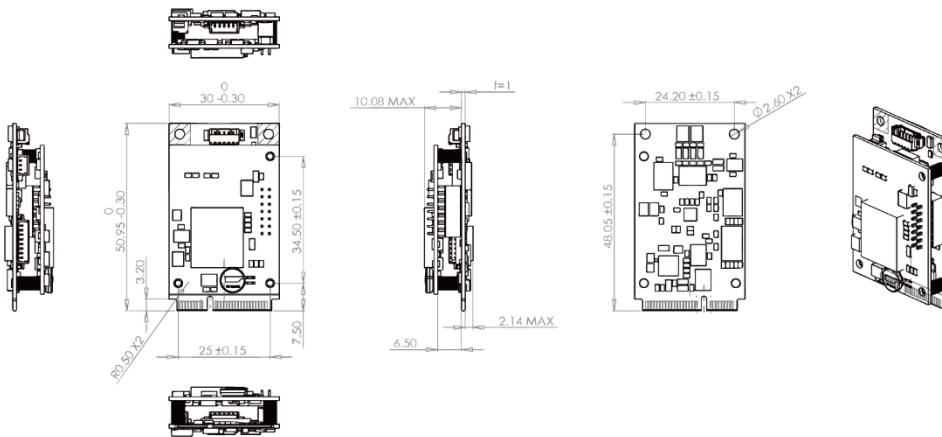


## I/O Connectors



- a. CAN Function Switch
- b. 2-Channel CAN Connector
- c. J1708 Connector
- d. GNSS Antenna Connector
- e. Extension Connector

## Dimensions



## Pin Assignment

Pin	Function	Pin	Function
1	NC	2	+V3.3
3	NC	4	GND
5	NC	6	NC
7	NC	8	NC
9	GND	10	NC
11	NC	12	NC
13	NC	14	NC
15	GND	16	NC
Mechanical Key			
17	NC	18	GND
19	NC	20	NC
21	GND	22	NC
23	NC	24	+V3.3
25	NC	26	GND
27	GND	28	NC
29	GND	30	NC
31	NC	32	NC
33	NC	34	GND
35	GND	36	USB_DM
37	GND	38	USB_DP
39	+V3.3	40	GND
41	+V3.3	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	NC
49	NC	50	GND
51	NC	52	+V3.3



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## Ordering Information

Part Number	Description
GADN-FG7U0	2 channels CAN 2.0 A/B, OBDII, J1939, Gyroscope, Accelerometer, u-blox NEO-M8U GPS (UDR)
GADN-FG7L0	2 channels CAN 2.0 A/B, OBDII, J1939, Gyroscope, Accelerometer, u-blox NEO-M8L GPS (UDR/ADR/ CAN-to-ADR)

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