

AXIS[®]

AX ONE

AX ONE ELD, GPS Tracking, Diagnostics, Wi-Fi Hotspot All-In-One Device



SUMMARY

AX-ONE is an all-in-one device Real-Time 4G LTE Gateway with Wi-Fi Hotspot. The device is dedicated to connecting your vehicle to the Axis TMS system. The AX ONE has multi-functionalities such as ELD Compliance, GPS Tracking, Diagnostics and Tablet Mobile App Connectivity for Driver Daily Operations.

WARRANTY

3-Year Manufacturer Warranty

REQUIREMENTS

Requires License and plug-n-play self-installation. Please visit www.axistms.com for pricing details. License includes cellular data connectivity, cloud software, mobile apps, ongoing firmware updates, maintenance, and support. Available in 1, 3, and month to month terms.

HIGHLIGHTS

- Wi-Fi Hotspot for in-vehicle devices (Tablet, Smartphone etc.)
- Secured with WPA2 Encryption
- Real-Time Data:
 - Odometer Reading to Axis Truck Monitor
 - Speedometer Reading to Axis Truck Monitor
 - Fault Codes & Diagnostics to Axis Truck Monitor
 - GPS Location Updates to Axis Truck Monitor
- Over-the-air Updates



TECHNICAL SPECS

CELLULAR

AT&T	LTE FDD Cat.1 B2 (1900), B4 (AWS1700), B5 (850), B12 (700) WCDMA B2 (1900), B5 (850)
Verizon	LTE FDD Cat.1 B2 (1900), B4 (AWS1700), B13 (700)
Sprint	LTE FDD Cat.1 B2 / B25 (1900), B4 (AWS1700) B5 / B26 (850), B12 (700)
Telstra	LTE FDD Cat.1 B1 (2100), B3 (1800), B5 (850), B8 (900), B28 (700) WCDMA B1 (2100), B5 (850), B8 (900)
Data Support	UDP / IP, TCP / IP, SMS over IMS
Antenna	Embedded cellular antenna

GPS

Receiver Type	72 channel engine
Location Technology	GPS & GLONASS
SBAS Support	WAAS, EGNOS, GAGAN, MSAS
Tracking Sensitivity	-167dBm
Acquisition Sensitivity	-148dBm
Location Accuracy	2.5m CEP 50%

ELECTRICAL

Operating Voltage	Vehicle 12V / 24V system
Current Consumption	Operating: 45-180mA @ 12V Deep Sleep: 1.4mA @ 12V
Backup Battery (Optional)	3.7V 920mAh

MEMORY

Internal Flash Memory	64 Megabit Up to 120,000 logs Up to 21,000 queues
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SENSORS

Accelerometer	3-axis ±16g
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ENVIRONMENTAL

Operating Temperature	-40 to +70 °C (without battery) -20 to +60 °C (with battery)
Humidity	95%RH @ 50° C non-condensing
Vibration/Shock	MIL-STD-810G

PHYSICAL

Dimension	152mm × 98mm × 30mm (5.98" x 3.86" x 1.18")
Weight	229g (0.50 lb)



Antenna Internal (Optional external antenna)

Enclosure
Mounting Method

Flame Retardant ABS+PC
Screw Mounting Bracket, Adhesive

INPUTS/OUTPUTS

Vehicle BUS Protocols ISO 15765-4 (CAN)
ISO 14230-4 (KWP2000)
ISO 9141-2
SAE J1850 VPW / PWM
SAE J1939 / J1587 / J1708

Digital Ignition Input 1 Positive Input

Digital Inputs Up to 8 (Configurable)

Digital Outputs Up to 5 (Configurable)
Max. sink current 300mA

Analog Inputs Up to 3 (Configurable)

DC 0~5V, DC 0~40V (12bits resolution)

1-Wire[®] Interface 1 (Driver ID, Temperature sensors)

LED Indicators 5 LEDs (Power, GPS, Cellular, Wi-Fi, BT)

Buzzer >80dB @ 10cm

Bluetooth (Optional) Bluetooth BLE 4.1

Wi-Fi (Optional) 2.4GHz IEEE 802.11b/g/n AP Mode
Data rate DL: 3Mbps UL: 1.5Mbps

CONNECTORS

I/O Connection Molex 14 Pin Connector

SIM Card Socket Mini SIM(2FF)

PC/Accessory Interface 4 Pin RS232 with 5V (±5%) Power

External GPS SMA

Configuration Interface Mini USB Port

Vehicle BUS Interface Molex 12 Pin Connector
Optional Wire Harness for OBD-II,
DEUTSCH 6Pin/9Pin Connector

DEVICE MANAGEMENT

Configuration ADM, SMS, USB Cable

Firmware Update ADM, FOTA, USB Cable

CERTIFICATIONS

Standards FCC, IC, PTCRB, NCC

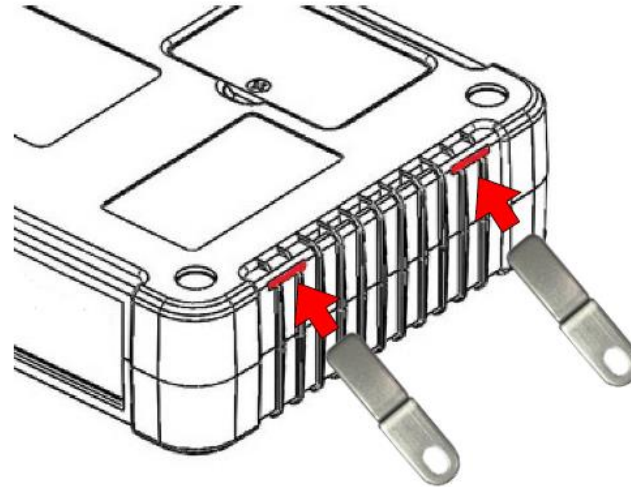
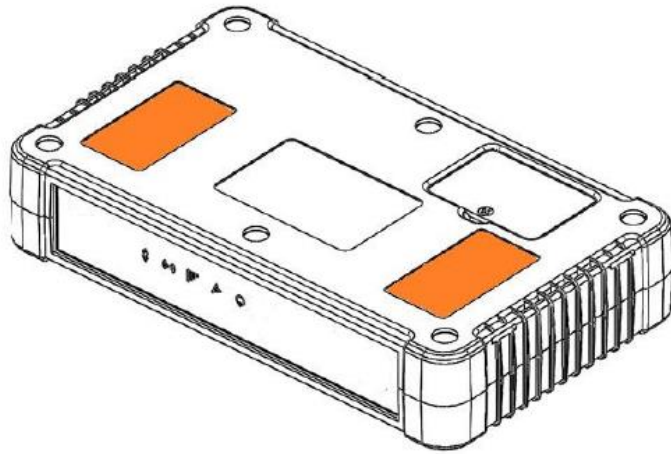
WHAT'S INCLUDED

Here's what's included out of the box:

- AX ONE Device
- 2x Double Sided Adhesive
- 4x Mounting Brackets and Screws
- 1x Truck Cable

INSTALLATION

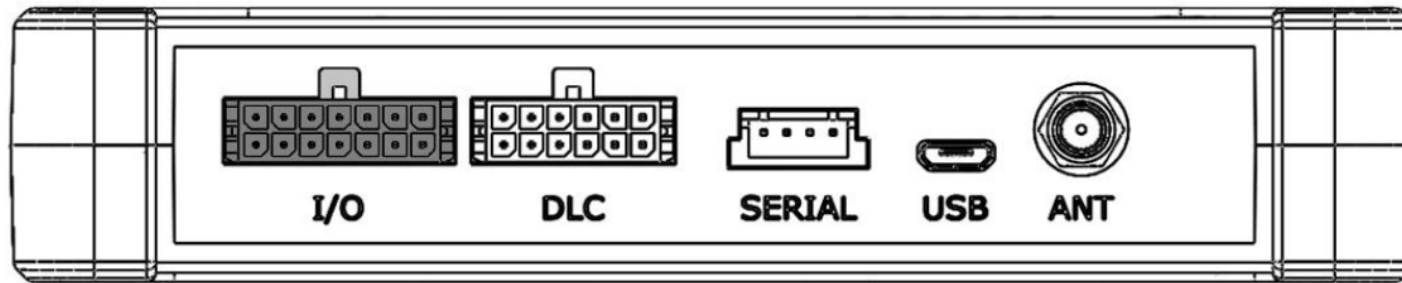
The AX ONE can be installed on most trucks in just minutes, you can use the double-sided adhesive or the mounting bracket on the sides:



POWER I/O CONNECTION

The following describes the function of each bare wire:

WARNING: Connecting of the input wires can be hazardous to both the installer and your vehicle's electrical system if done by an inexperienced installer. This document assumes you are aware of the inherent dangers of working in and around a vehicle and have qualified understanding of electrical behaviors.



Pin1 Yellow	Pin3 Purple	Pin5 Pink	Pin7 White	Pin9 Dark Brown	Pin11 Light Blue	Pin13 Red
Pin2 Dark Green	Pin4 Blue	Pin6 Light Brown	Pin8 Orange	Pin10 Gray	Pin12 Green	Pin14 Black

POWER I/O CONNECTION CONTINUED

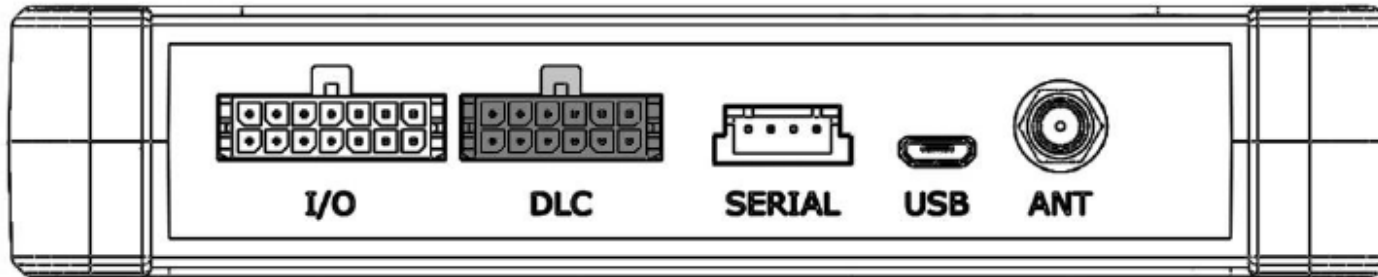
The following table describes the function of each bare wire:

Power I/O Connector				
Pin#	Function	Color	Designation	Note
1	ACC Input	Yellow	ACC	Ignition status positive trigger input
2	General Input1	Dark Green	IN1	Positive trigger input
3	General Input2	Purple	IN2	Negative trigger input
4	General Input3	Blue	IN3	Negative trigger input
5**	General Input4 (Default) General Output5 Analog Input1	Pink	IN4/O5/A1	Positive trigger input Open collector output (Max.300mA) Analog input (DC0V~40V)
6	General Input5	Light Brown	IN5	Negative trigger input
7**	General Input6 General Output1 (Default)	White	IN6/O1	Negative trigger input Open collector output (Max.300mA)
8**	General Input7 General Output2 (Default) Analog Input2	Orange	IN7/O2/A2	Positive trigger input Open collector output (Max.300mA) Analog input (DC0V~40V)
9	General Output3	Dark Brown	O3	Open collector output (Max.300mA)
10**	General Input8 General Output4 (Default)	Gray	IN8/O4	Negative trigger input Open collector output (Max.300mA)
11	Analog Input3	Light Blue	A3	Analog input (DC0V~5V)
12	1-Wire Protocol Input	Green	1W	1-Wire Data Input
13	Main power input	Red	PWR	DC 8V~40V DC input
14	Common ground	Black	GND	Ground



DLC CONNECTION

The following table describes the function of each bare wire:



Pin1	Pin3	Pin5	Pin7	Pin9	Pin11
Pin2	Pin4	Pin6	Pin8	Pin10	Pin12

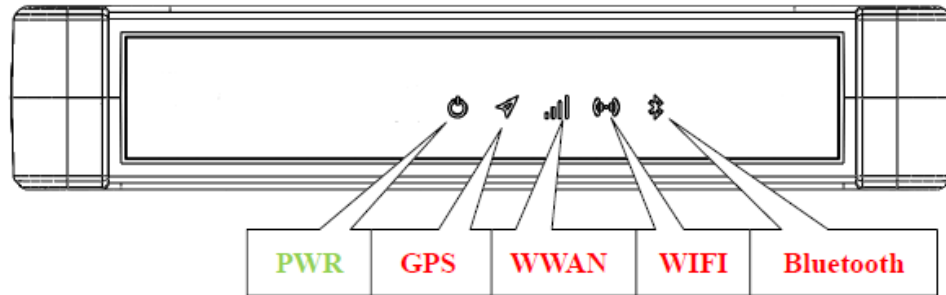
DLC CONNECTION CONTINUED

The following table describes the function of each pin:

Power I/O Connector				
Pin#	Function	Color	Designation	Note
1	Main power input			DC 8V~40V DC input
2	Power ground			Ground
3	J1850BUS+			
4	J1850BUS-			
5	K-line			
6				
7	RS485_A+/ J1708+			
8	RS485_B-/ J1708-			
9	CAN HI/ J1939+			
10	CAN Lo/ J1939-			
11				
12				

LED INDICATORS

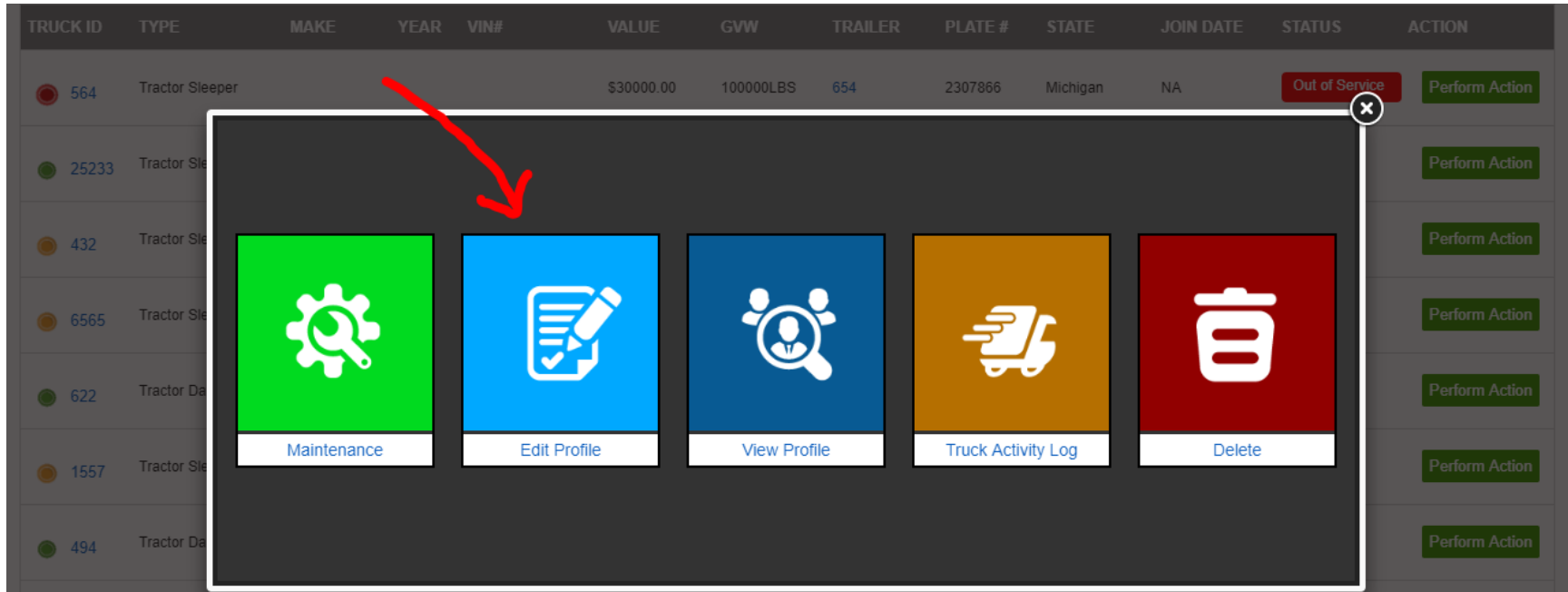
The following figure shows the LED statuses



LED	Indication	Description
PWR (Green)	Solid On	In full operation mode
	1 blink (0.1 sec.) in every 8 sec.	In sleep mode
GPS (Red)	0.7 sec. On, 0.7 sec. Off	Searching for GPS signal
	Solid On	Position fixed
WWAN (Red)	Off	WWAN module off
	0.7 sec. On, 0.7 sec. Off	Searching for WWAN signal
	0.2 sec. On, 2 sec. Off	Registered to WWAN network
	2 blinks in every 2 sec.	Connected to WWAN network
	Continuous blinking	SIM PIN Error
WIFI Hotspot (Red)		
Bluetooth	Solid On	If a BT gadget is connected
	Off	No BT gadget is connected

CONFIGURATION – STEP 1

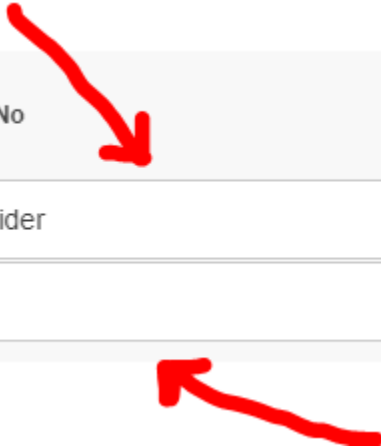
STEP 1. The AX ONE can be configured in the truck profile by clicking Perform Action and selecting Edit Profile.



CONFIGURATION - STEP 2

STEP 2. Select Telematics Equipped and set it to Yes. Then under telematics provider please select Axis TMS.

Telematics Equipped?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Telematics Provider	Select Provider ▼
Serial ID	Serial ID



CONFIGURATION – STEP 3

STEP 3. Then enter the IMEI ID in the back of the device into Serial ID field as seen on point 2 above.





WIFI & BLUETOOTH

1 connection is permitted to connect via WiFi & Bluetooth to the AX ONE Device.

WiFi Name: AXIS

Default WiFi Password: 12345678

Bluetooth Name: AXIS

Bluetooth PIN: 123456



NOTICE

FCC REGULATIONS

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



NOTICE

RF EXPOSURE INFORMATION

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.



NOTICE

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