



# IMD-900 MODULE

## HARDWARE MANUAL

Version 1.00  
Revision A  
December 2018

## Legal Notices

### Agriculture Business Area

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This is the December 2018 release (Revision A) of the *IMD-900 Module Hardware Manual*. It applies to Version 1.00 of the Trimble IMD-900 Module.

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Class B Statement – Notice to Users. This equipment 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 generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. 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 the 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 and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.

## EMC/Safety

Trimble declares that the IMD-900 Module complies with the essential requirements and other relevant provisions of the EMC directive 2014/30/EU (EMC) and 2014/35/EU (LVD).



# Safety Information

Always follow the instructions that accompany a Warning or Caution. The information they provide is intended to minimize the risk of personal injury and/or damage to property. In particular, observe safety instructions that are presented in the following format:



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**DANGER!** THIS ALERT WARNS OF A POTENTIAL RISK OF ELECTRIC SHOCK, AND POSSIBLY INJURY OR DEATH BY ELECTROCUTION.

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**WARNING** – This alert warns of a potential hazard, which, if not avoided, can cause severe injury.

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**CAUTION** – This alert warns of a hazard or unsafe practice which, if not avoided, can cause injury or damage.

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**NOTE** – An absence of specific alerts does not mean that there are no safety risks involved.

## Restrictions on use

The IMD-900 Module is for agricultural use only.

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# Introduction

The IMD-900 Module is a 9-degree of freedom Inertial measuring device, designed specifically for agriculture applications.



It is suited for:

- Guidance
- Tilt compensation
- Wheel angle measurements

## Product features

The features of the IMD-900 Module include:

- 9-16V input
- J1939 CAN interface
- Mounting in any Pitch, Roll, and Yaw combination

## Compliance:

- FCC Part 15 Class B
- RCM
- e-Mark
- CE-Mark
- CAN ICES-3(B)/NMB-3(B)
- EAC

The IMD-900 Module is compatible with the Trimble Autopilot™ steering system.

## Technical support

If you have a problem and cannot find the information you need in the product documentation, contact your local reseller. Otherwise, go to the Support area of the Trimble website ([https://www.trimble.com/Support/Support\\_AZ.aspx](https://www.trimble.com/Support/Support_AZ.aspx)). Product updates, documentation, and any support issues are available for download.

# Installation

▶ Components

▶ Example installation

## Components

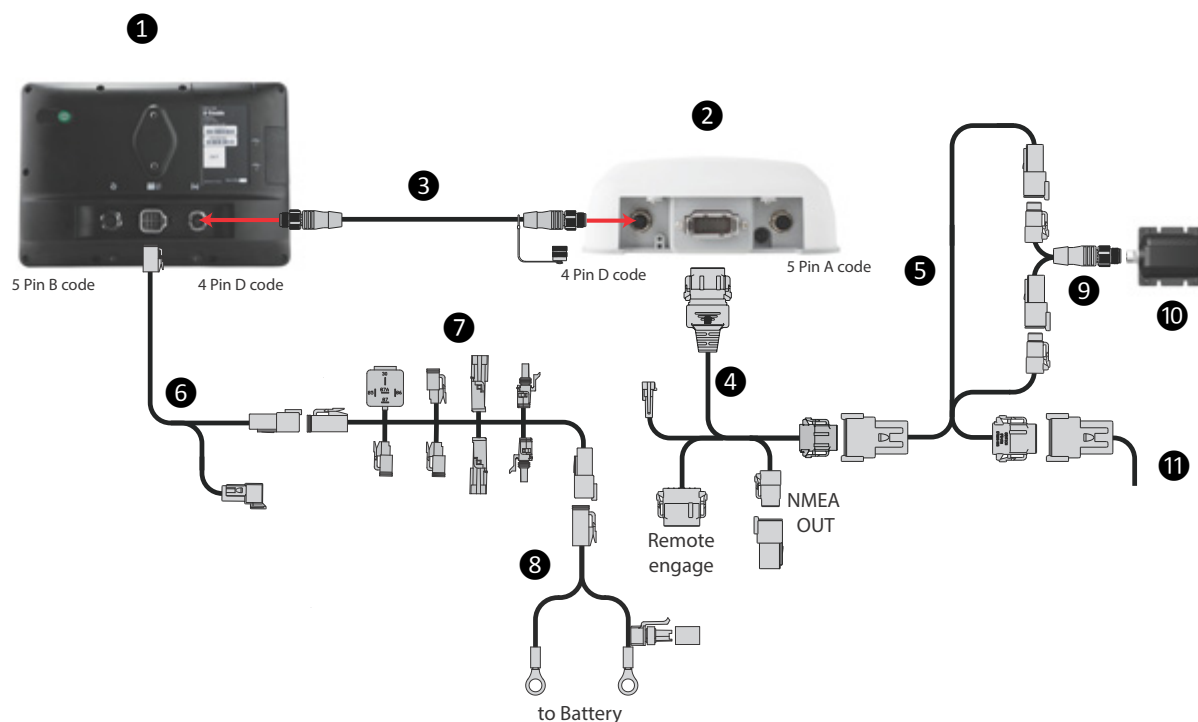
The core components include:

- IMD-900 module
- Interface cabling
- Application specific mounting plate with associated hardware



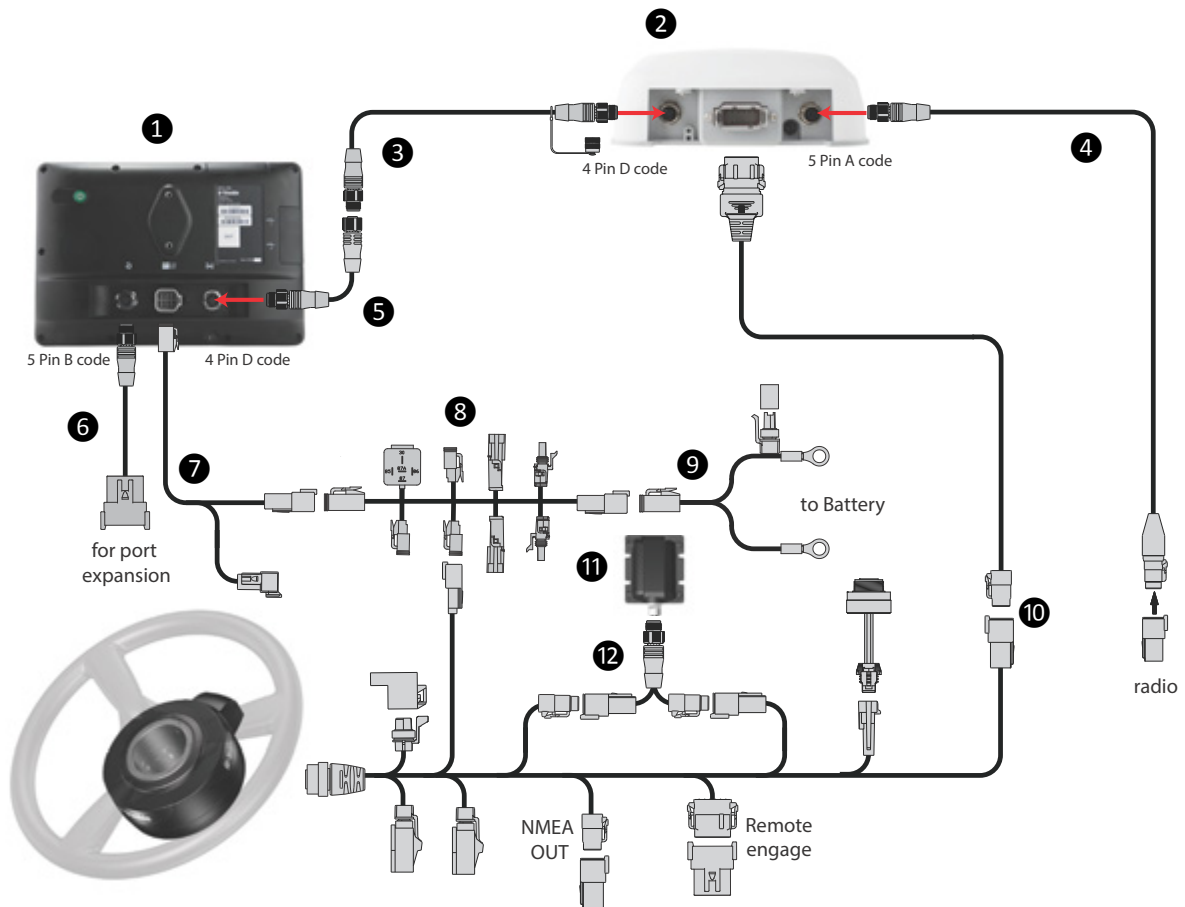
## Example installation

### System layout with an example CAN IMD-900 system



Item	Description	Part Number
<b>1</b>	GFX-750™/XCN-1050 display, with Precision-IQ™ Application	121000-**
<b>2</b>	NAV-900 Guidance controller	108993-**
<b>3</b>	Cable Assy, GFX-750/XCN-1050 to NAV-900, Power/Ethernet (BRR), 5 m	110540
<b>4</b>	Cable Assy, NAV-900 to in-cab RTK Radio, DTM06, 4.5 m	110550
<b>5</b>	Cable Assy, NAV-900 CAN Guidance, IMD900, Adapter	113261
<b>6</b>	Cable Assy, GFX-750, Power to display, CAN, 2.5 m	110551
<b>7</b>	Cable Assy, GFX-750/CFX-750™/FM-750™/FmX® Power with Relay and Switch (Acc)	67259
<b>8</b>	Cable Assy, GFX-750/CFX-750/FM-750/FmX Basic Power, 4 m	67258
<b>9</b>	Cable Assy, CAN Extension, IMD-900	112759
<b>10</b>	IMD-900 Inertial Measurement Unit	109256-00
<b>11</b>	Vehicle Specific CAN cable	Varies per application

## System layout with a typical EZ-Pilot™ PRO/APMD IMD-900 system addition



Item	Description	Part Number
<b>1</b>	GFX-750/XCN-1050 display, with Precision-IQ Application	121000-**
<b>2</b>	NAV-900 Guidance controller	108993-**
<b>3</b>	Cable Assy, GFX-750/XCN-1050 to NAV-900, Power/Ethernet (BRR), 5 m	110540
<b>4</b>	Cable Assy, NAV-900 to in-cab RTK Radio, DTM06, 4.5 m	110544
<b>5</b>	Cable Assy, GFX-750 to NAV-900, Power/Ethernet (BRR) Extension, 2.5 m. Optional extension for large vehicles	112082
<b>6</b>	Cable Assy, GFX-750, Expansion Port Basic, RS-232, Dig I/O, 2.5 m	110545
<b>7</b>	Cable Assy, GFX-750, Power to display, CAN, 2.5 m	110551
<b>8</b>	Cable Assy, GFX-750/CFX-750/FM-750/FmX Power with Relay and Switch (Acc)	67259
<b>9</b>	Cable Assy, GFX-750/CFX-750/FM-750/FmX Basic Power, 4 m	67258
<b>10</b>	Cable Assy, NAV-900 to SAM-200, Motor Drive (2 sections)	110549
<b>11</b>	IMD-900 Inertial Measurement Unit	109256-00
<b>12</b>	Cable Assy, CAN Extension, IMD-900	112759

1. Locate and remove the IMD-900 module and installation components (varies per kit) from the box.



2. Locate the mounting plate included with the specific kit being used. This varies by application. Install per kit instructions.



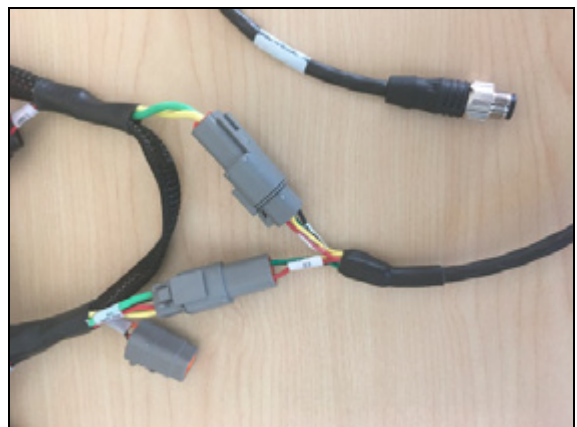
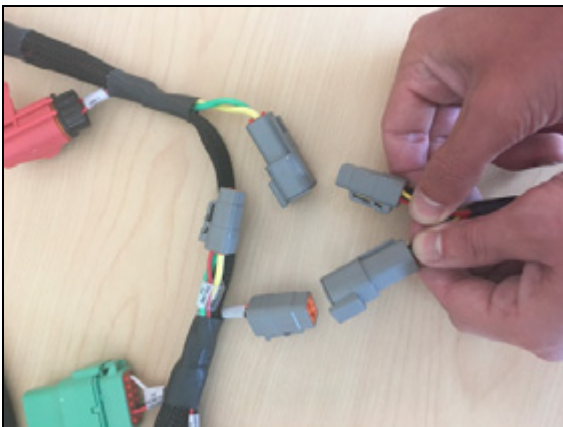
3. Attach the IMD-900 module to the mounting plate using the four Allen socket screws provided.



4. Attach the short interface cable.

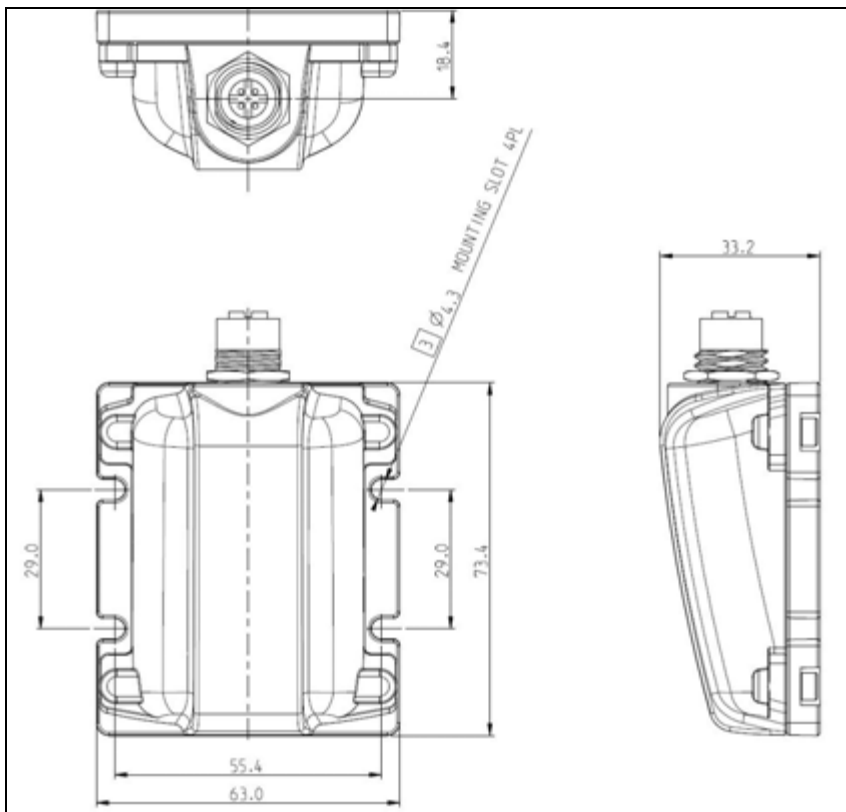


5. Connect the short interface cable to the power/communication cable as per application.



# Data Sheet / Operating Parameters

## Operating parameters



Item	Description
Size	73.4 mm (2.89") L x 63.0 mm (2.48") W x 33.2 mm (1.30") H
Weight	0.4 kg (1 lb)
Operating Temperature	- 30 °C to + 65 °C (-22 °F to 149 °F)
Storage Temperature	- 40 °C to + 85 °C (-40 °F to 185 °F)
Operational Current	nominal 50 mA@12 V
IP Rating	IP66/IP69K

## Connections

M12 DCODE connector	
Pin 1	CAN HI
Pin 2	Regulated Vbat +
Pin 3	CAN LO
Pin 4	GND

## Firmware

The IMD-900 firmware is automatically updated at startup if a new version is available from the connected controller, NAV-900 guidance controller or NavController II/III.

