



NAV-900 GUIDANCE CONTROLLER

FOR GFX AND XCN DISPLAY SYSTEMS

CABLING GUIDE

Version 1.00
Revision A
November 2019

Corporate Office

10368 Westmoor Drive
Westminster, CO 80021
USA

Agriculture Business Area

Trimble Inc.
Trimble Agriculture Division
10368 Westmoor Drive
Westminster, CO 80021
USA
trimble_support@trimble.com
www.trimble.com

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Release Notice

This is the November 2019 release (Revision A) of the NAV-900 Guidance Controller for GFX/XCN Display Systems Cabling Guide.

This product is protected by US and international copyright, trademark, and patent law as described in "Legal Notices" in the *NAV-900 Guidance Controller Installation Guide*. Please refer to that manual for information on product warranties, and device notices.

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Introduction

This cabling guide describes various installation scenarios for the NAV-900 guidance controller for GFX and XCN display series. The GFX and XCN series of displays are in-cab touch screen displays that provide affordable guidance, steering and precision agriculture functionality.

NOTE – The GFX and XCN series include the GFX-350™/ GFX-750™ and the XCN-750 and XCN-1050 (the XCN-2050™ is not covered in this guide).

Technical assistance

Go to the Guidance & Steering webpage on the Trimble website (agriculture.trimble.com/precision-ag/products/displays/) for the latest support information, including:

- support notes detailing support issues
- documentation
- the latest files available for download

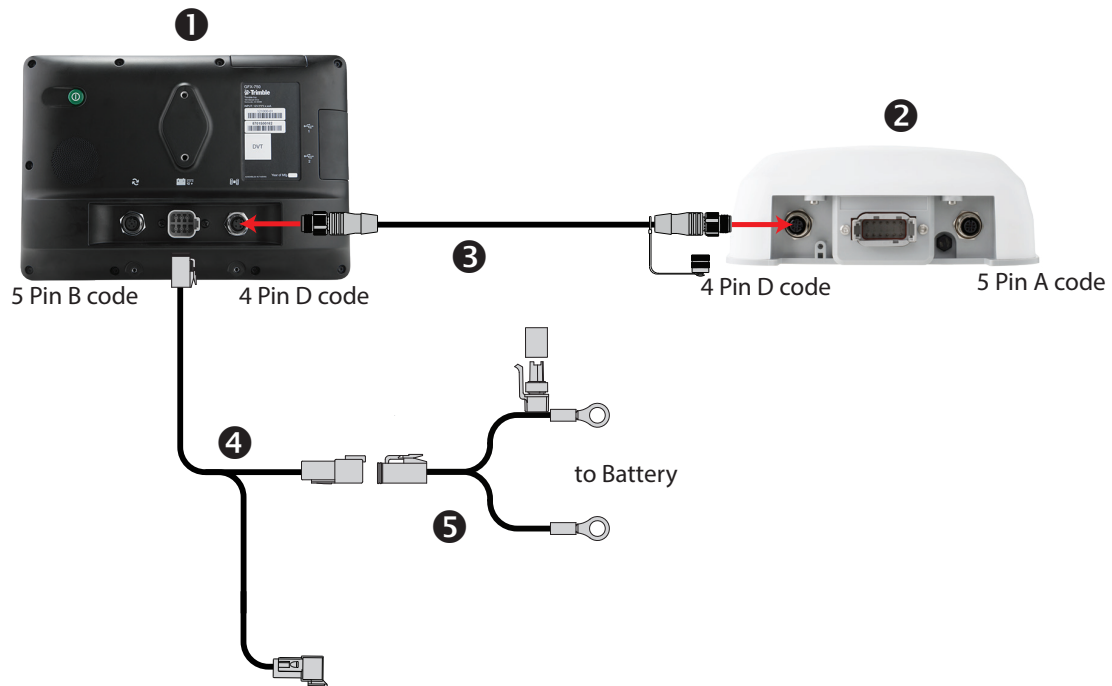
Additional help

If you still cannot find the information that you need, contact your Trimble reseller.

Cabling Diagrams

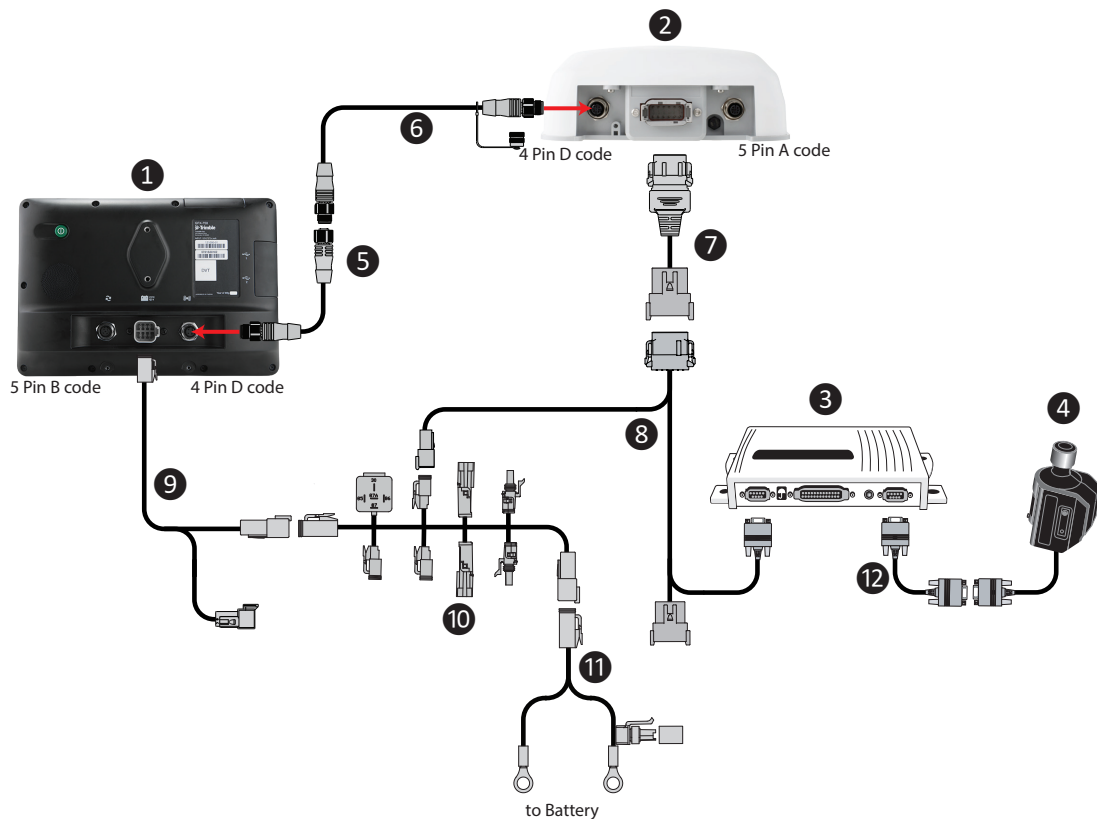
- ▶ Basic setup (manual guidance)
- ▶ EZ-Steer with NAV-900 Guidance controller
- ▶ EZ-Pilot with NAV-900 Guidance controller
- ▶ EZ-Pilot Pro and Autopilot Motor Drive
- ▶ Autopilot CAN Steer Krone (in-cab connection)
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- ▶ Autopilot (using NavController II/III) as an external guidance device
- ▶ Autopilot CNH, CAN/AGR Hybrid
- ▶ Autopilot CNH Hybrid
- ▶ Field-IQ
- ▶ Field-IQ – Full harness
- ▶ ISOBUS Universal Terminal – In-cab connector
- ▶ ISOBUS Universal Terminal – In-cab connector with switch boxes
- ▶ ISOBUS Universal Terminal – Full harness
- ▶ ISOBUS Universal Terminal with switch boxes
- ▶ Expansion Port Basic Cable
- ▶ Expansion Port Multi-Use Cable
- ▶ External RTK radio
- ▶ Ag-820 radio

Basic setup (manual guidance)



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500™/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
5	Cable Assy, GFX/CFX-750™/FM-750™/XCN-750/1050/FmX®/FM-1000™ Basic Power, 4m	67258

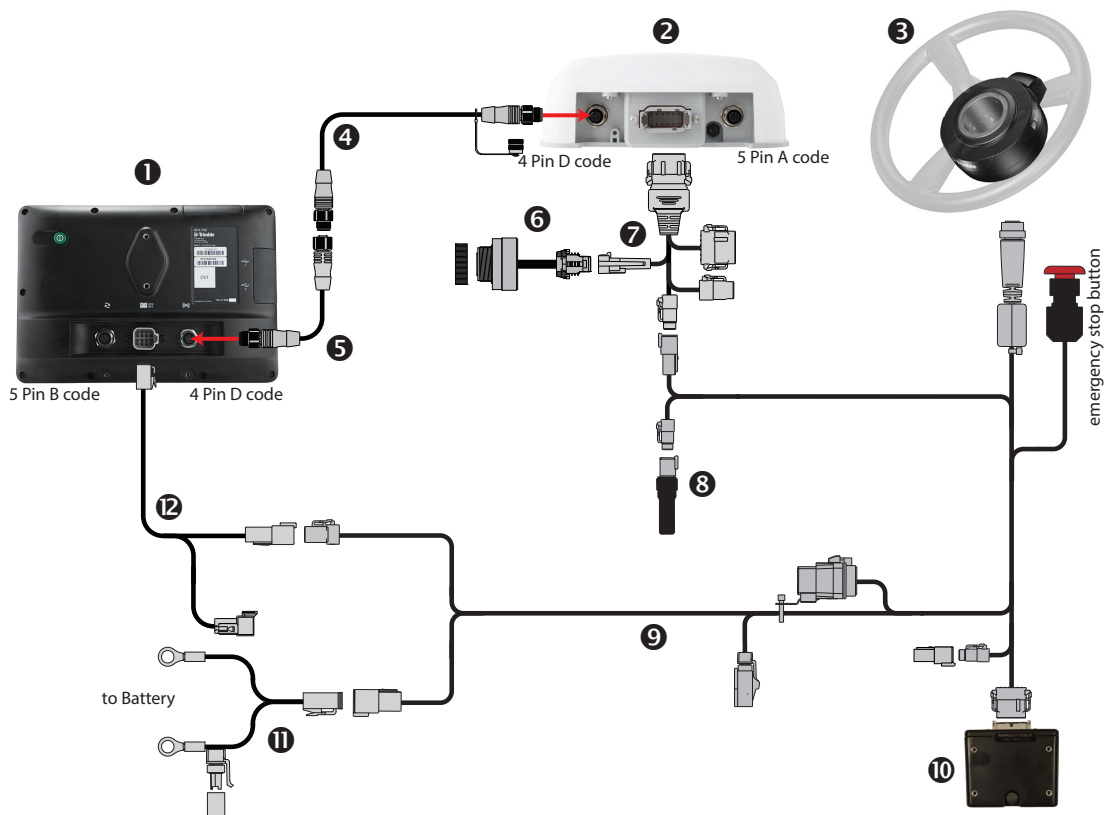
EZ-Steer with NAV-900 Guidance controller



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	EZ-Steer® T2 controller	
4	EZ-Steer motor	
5	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m	112082
6	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
7	Cable Assy, NAV-500/900 to EZ-Steer	111329
8	Cable Assy, FmX/FM-1000 Display to EZ-Steer w/2 PIN Power Input	75742

Item	Description	P/N
9	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
10	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259
11	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
12	EZ-Steer Motor Cable	62257

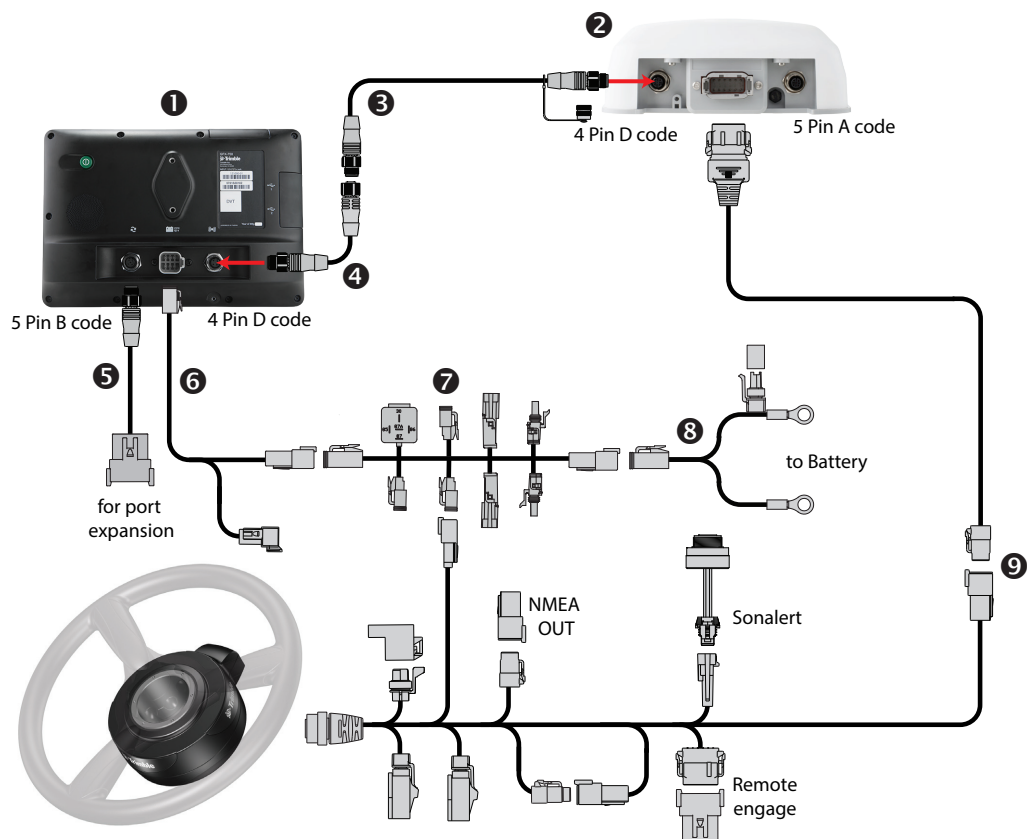
EZ-Pilot with NAV-900 Guidance controller



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	SAM-200 motor	
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
5	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m, optional extension for large vehicles	112082
6	Sonalert	43104
7	Cable Assy, NAV-900 to EZ-Pilot®	119793
8	CAN terminator	59783

Item	Description	P/N
9	Cable Assy, EZ-Pilot, SAM-200 Display to NAV-900	76351
10	IMD-600 Inertial Measurement Unit	
11	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
12	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551

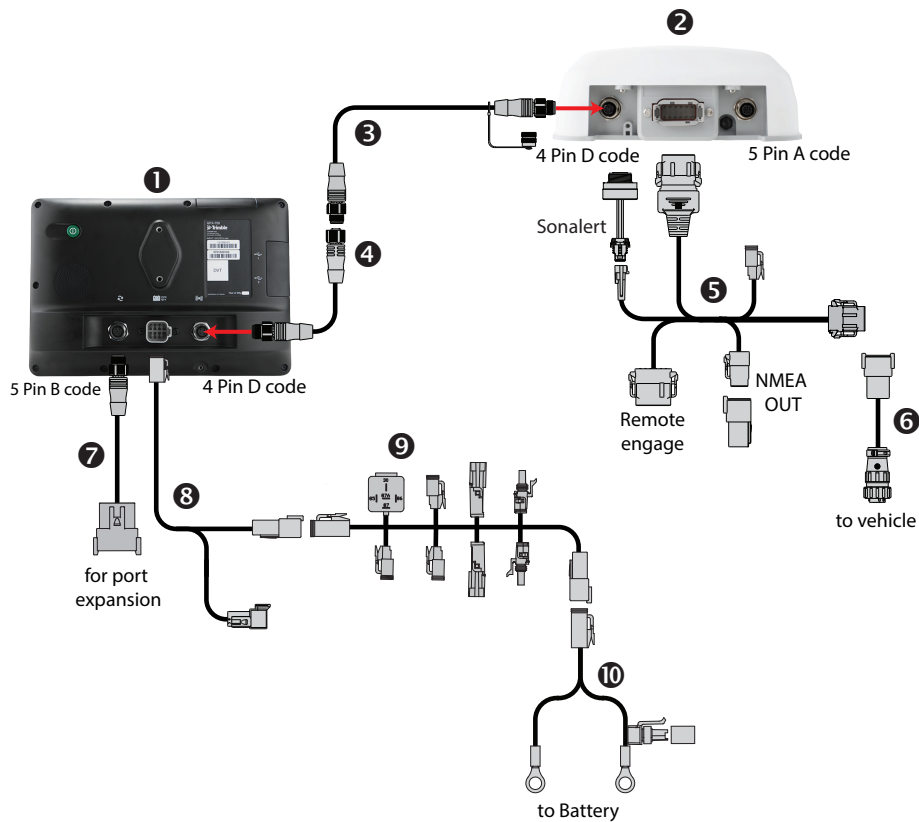
EZ-Pilot Pro and Autopilot Motor Drive



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Basic, RS232, Dig I/O, 2.5m	110545
6	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259

Item	Description	P/N
8	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
9	Cable Assy, NAV-500/900 to SAM-200, Motor Drive	110549

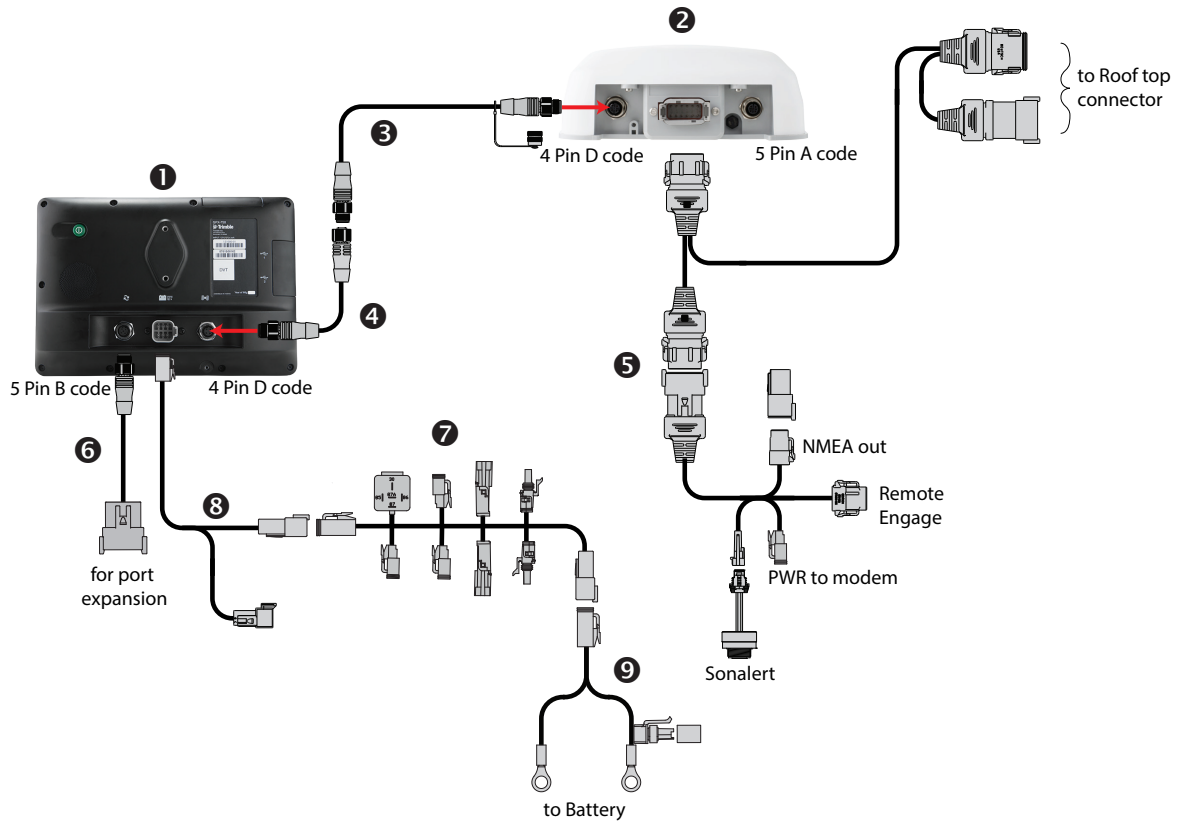
Autopilot CAN Steer Krone (in-cab connection)



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m	112082
5	Cable Assy, NAV-500/900, CAN ISO to cab Guidance, 4m	110550
6	Cable Assy, NAV-500/900, CAN ISO in-cab ext, Guidance, 2m	112611
7	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Basic, RS232, Dig I/O, 2.5m	110545

Item	Description	P/N
8	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
9	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc) (optional)	67259
10	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

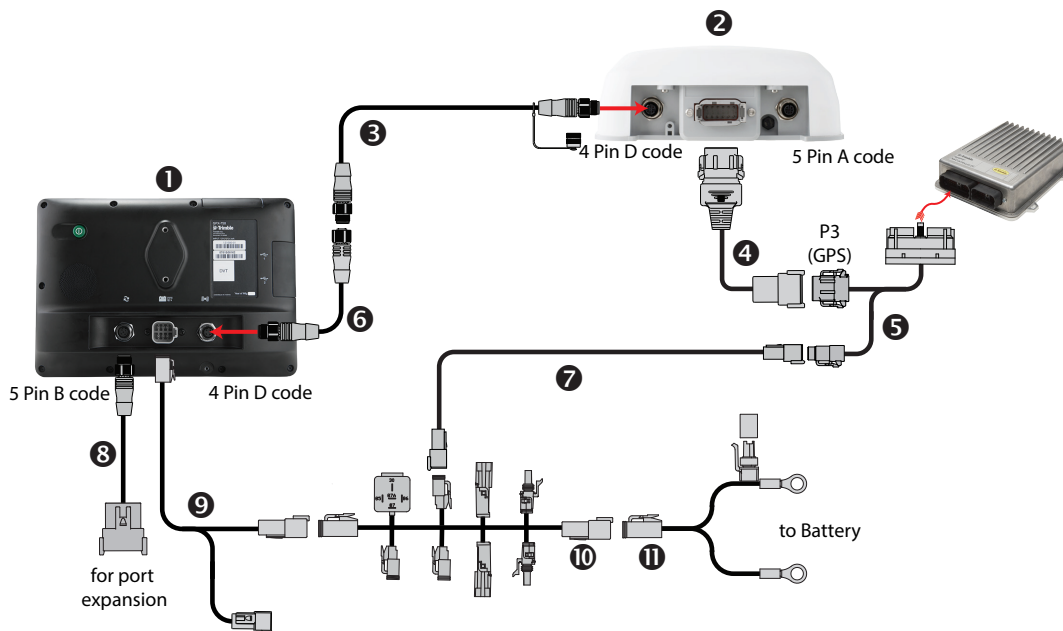
Autopilot CAN Steer (on-roof connection)



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m	112082
5	Cable Assy, NAV-900, CAN - ISO, JD, Roof-Top, Guidance	113699
6	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Basic, RS232, Dig I/O, 2.5m	110545

Item	Description	P/N
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259
8	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
9	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

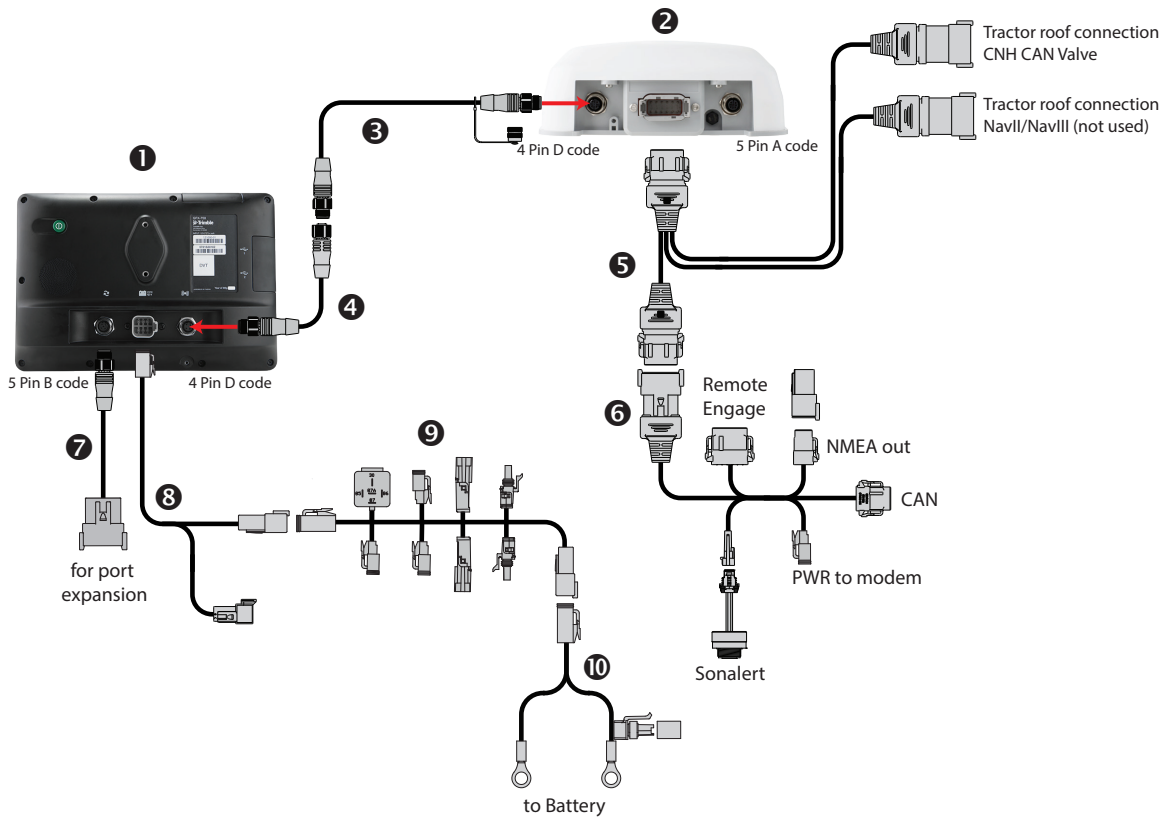
Autopilot (using NavController II/III) as an external guidance device



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, NAV-500/900 to Nav II/III, AutoPilot™	110547
5	Cable, NavController II/III, Main	54601
6	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
7	Cable Assy, 2 PIN DTM to 2 PIN DT Power Adapter	67095
8	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Basic, RS232, Dig I/O, 2.5m	110545

Item	Description	P/N
9	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
10	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259
11	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

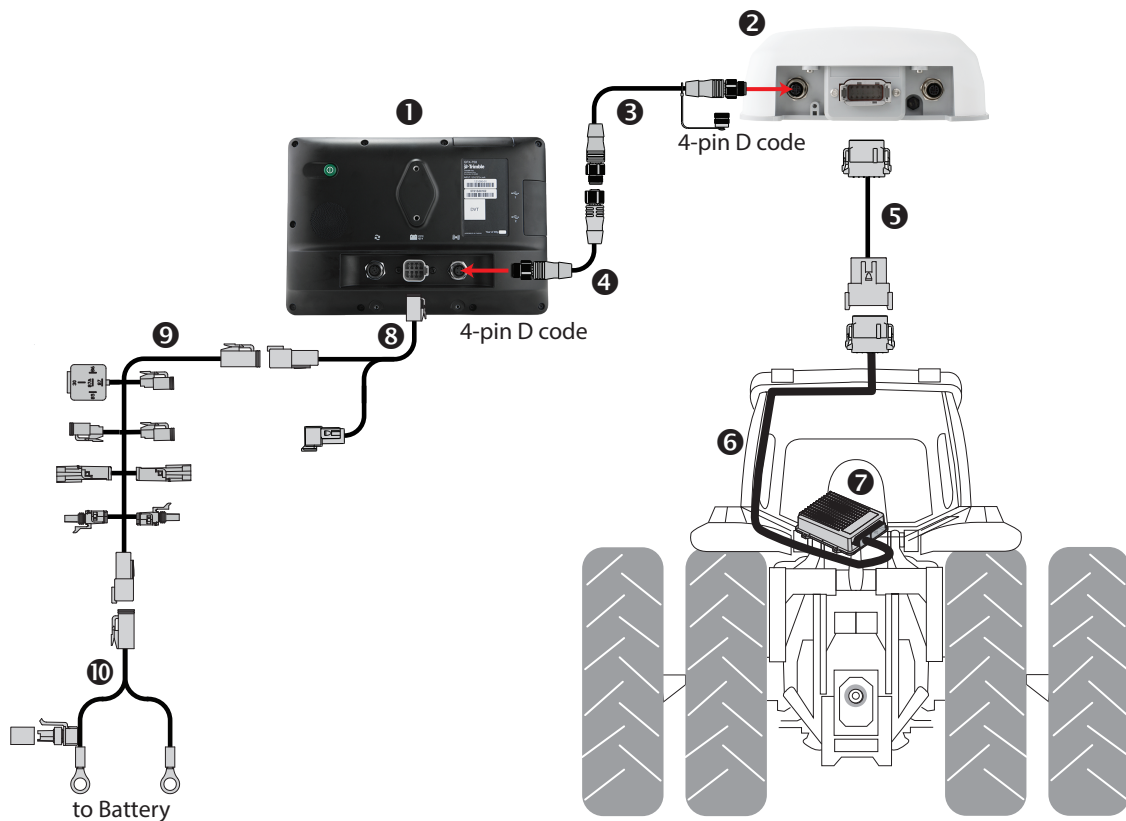
Autopilot CNH, CAN/AGR Hybrid



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5, 6	Cable Assy, NAV-900, CNH, CAN/AGR Hybrid	114728
7	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Basic, RS232, Dig I/O, 2.5m	110545
8	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551

Item	Description	P/N
9	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc) (optional)	67259
10	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

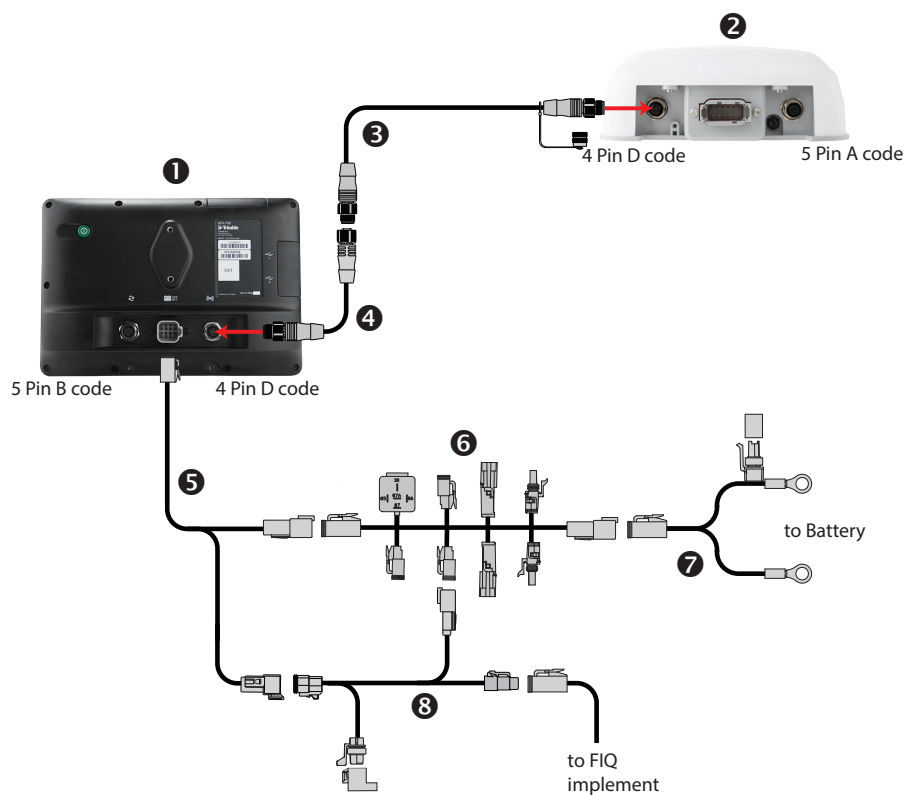
Autopilot CNH Hybrid



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, NAV-900, CNH AGR non CAN	114705
6	CNH vehicle factory harness	
7	NavController III	55566-00

Item	Description	P/N
8	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
9	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc) - optional	67259
10	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

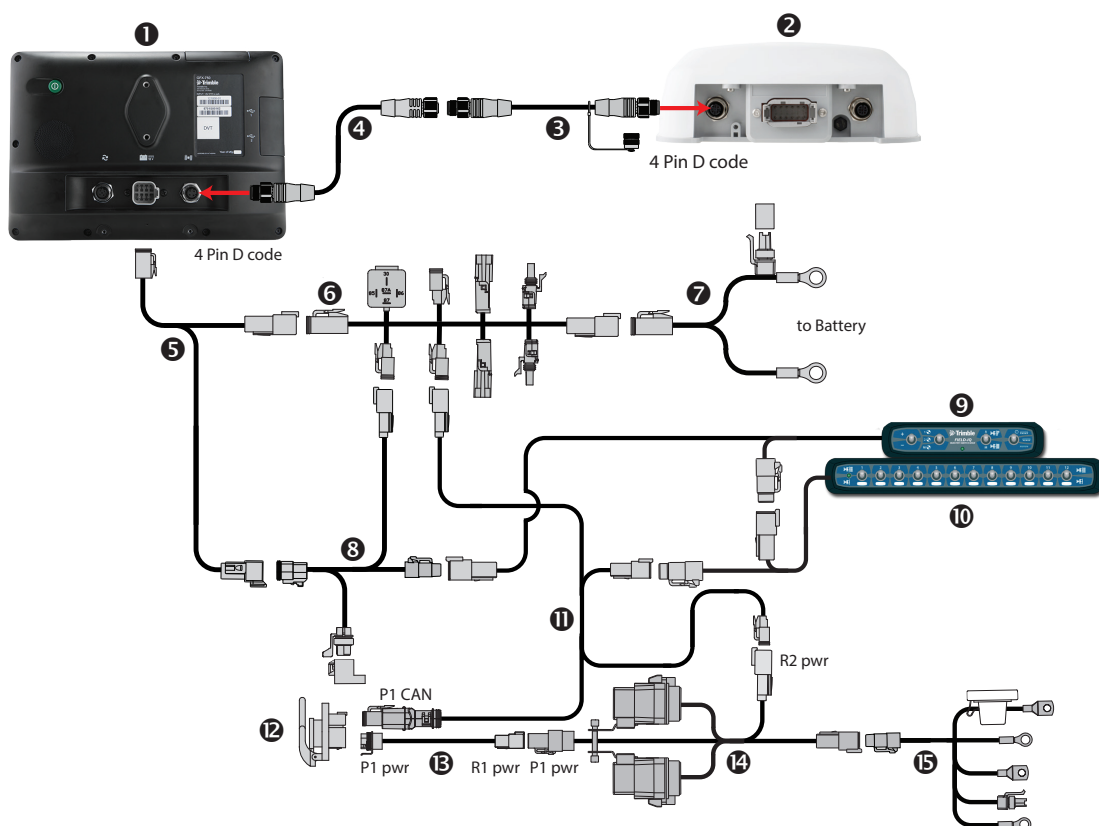
Field-IQ



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259

Item	Description	P/N
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
8	Cable Assy, GFX-350/750/XCN-750/1050, Field IQ, Active CAN terminator	111083

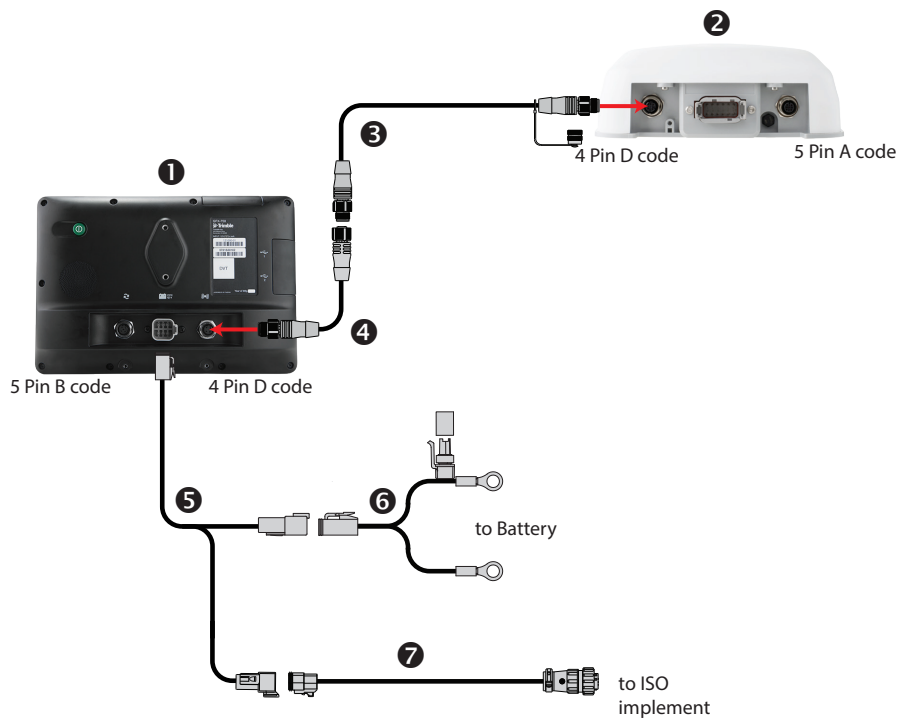
Field-IQ – Full harness



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259

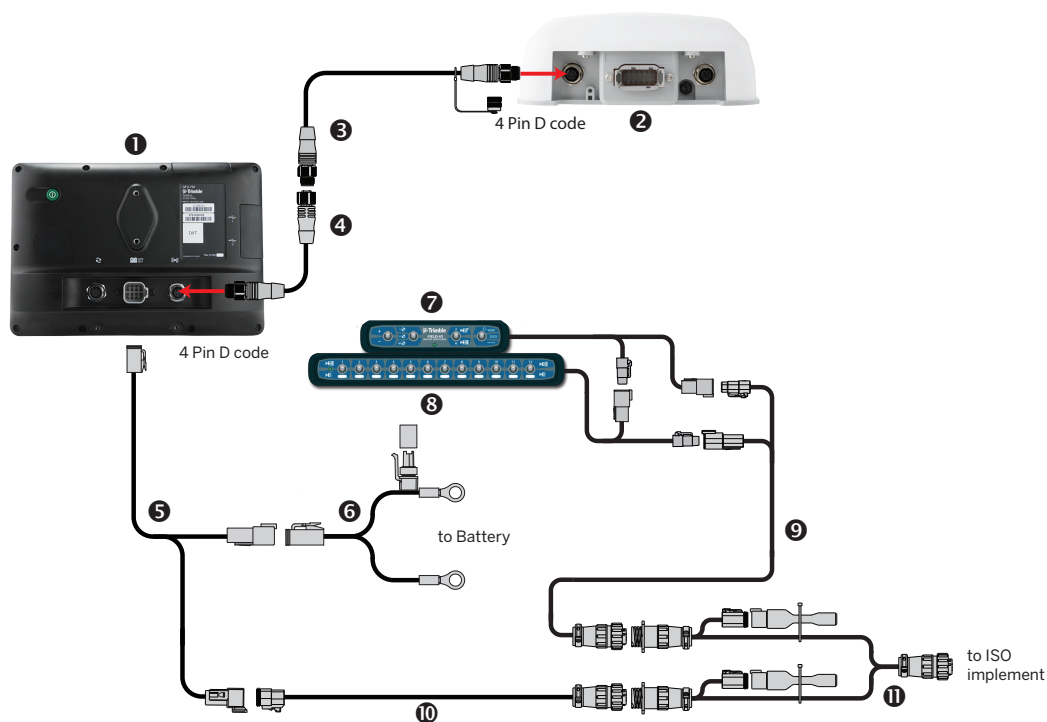
Item	Description	P/N
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
8	Cable Assy, GFX-350/750/XCN-750/1050, Field IQ, Active CAN terminator	111083
9	Field-IQ Master switch box	75050-01
10	Optional: 12 section switch box	75060-01
11	Cable Assy, Field IQ, CAN CAB to Hitch	77368
12	Powell Connector	
13	Cable Assy, Powell Quick Disconnect - Tractor Side	77413
14	Cable Assy, Dual Relay Pwr Cutoff, Field IQ	77533
15	Cable Assy, PWR To Cab, Field IQ	76941

ISOBUS Universal Terminal – In-cab connector



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
7	Cable Assy, GFX-350/750/XCN-750/1050, ISO connector, CAN, power, 2.5m	110553

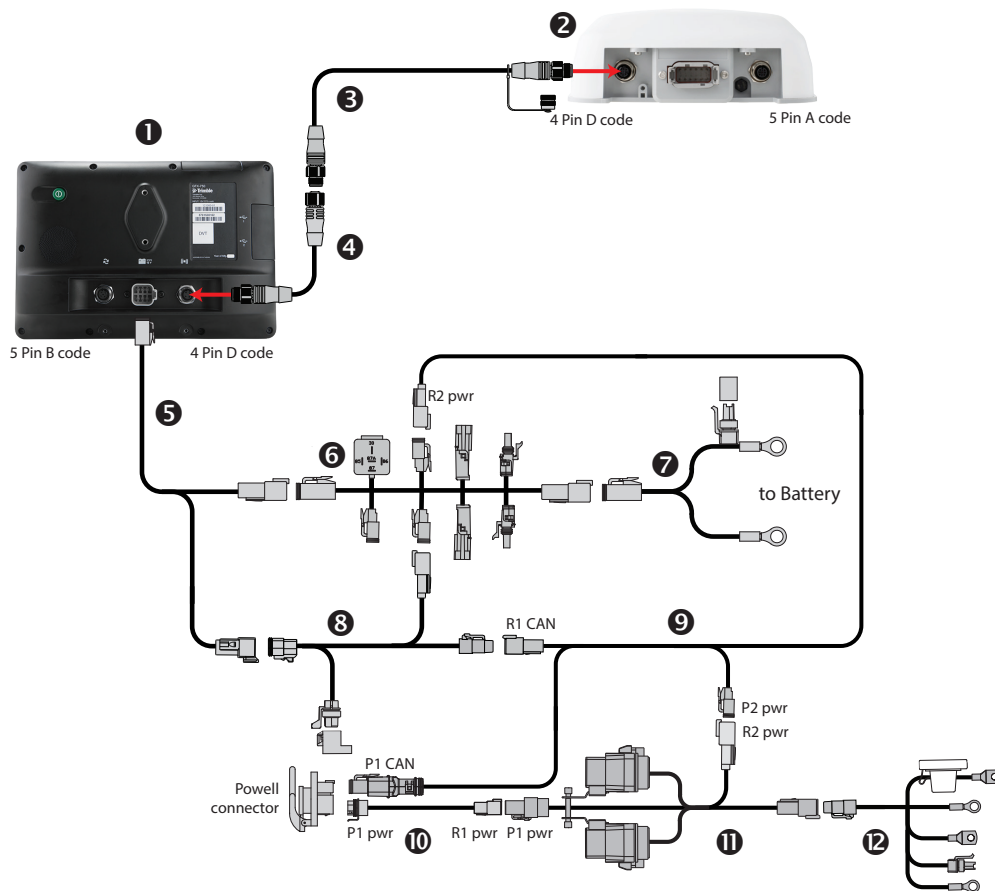
ISOBUS Universal Terminal – In-cab connector with switch boxes



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551

Item	Description	P/N
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
7	Field-IQ Master switch box	75050-01
8	Optional: 12 section switch box	75060-01
9	Cable Assy, Field-IQ ISO, In-Cab ISO Connector adapter	119627
10	Cable Assy, GFX-750/XCN-1050, ISO Connector, CAN, Power, 2.5m	110553
11	Cable Assy, In-Cab Y Adapter, ISOBUS	97256

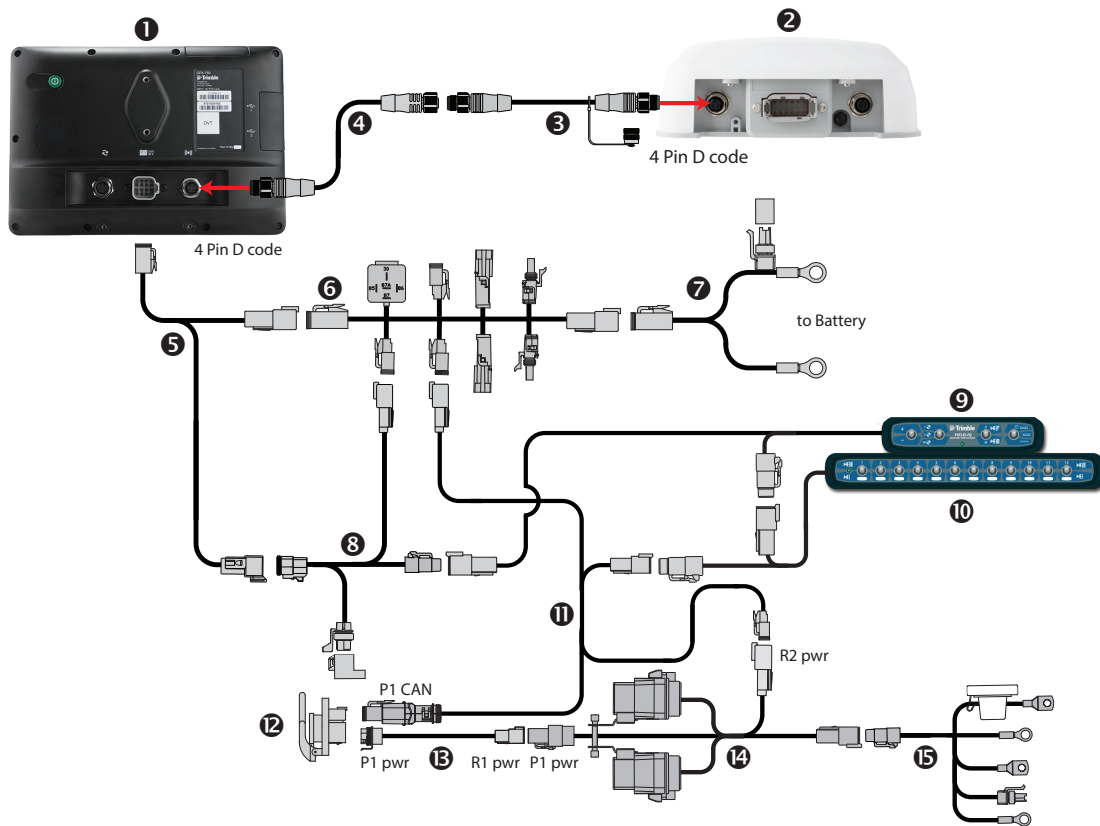
ISOBUS Universal Terminal – Full harness



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551

Item	Description	P/N
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
8	Cable Assy, GFX-350/750/XCN-750/1050, Field IQ, Active CAN terminator	111083
9	Cable Assy, Field IQ, CAN CAB to Hitch	77368
10	Cable Assy, Powell Quick Disconnect - Tractor Side	77413
11	Cable Assy, Dual Relay Pwr Cutoff, Field IQ	77533
12	Cable Assy, PWR To Cab, Field IQ	76941

ISOBUS Universal Terminal with switch boxes

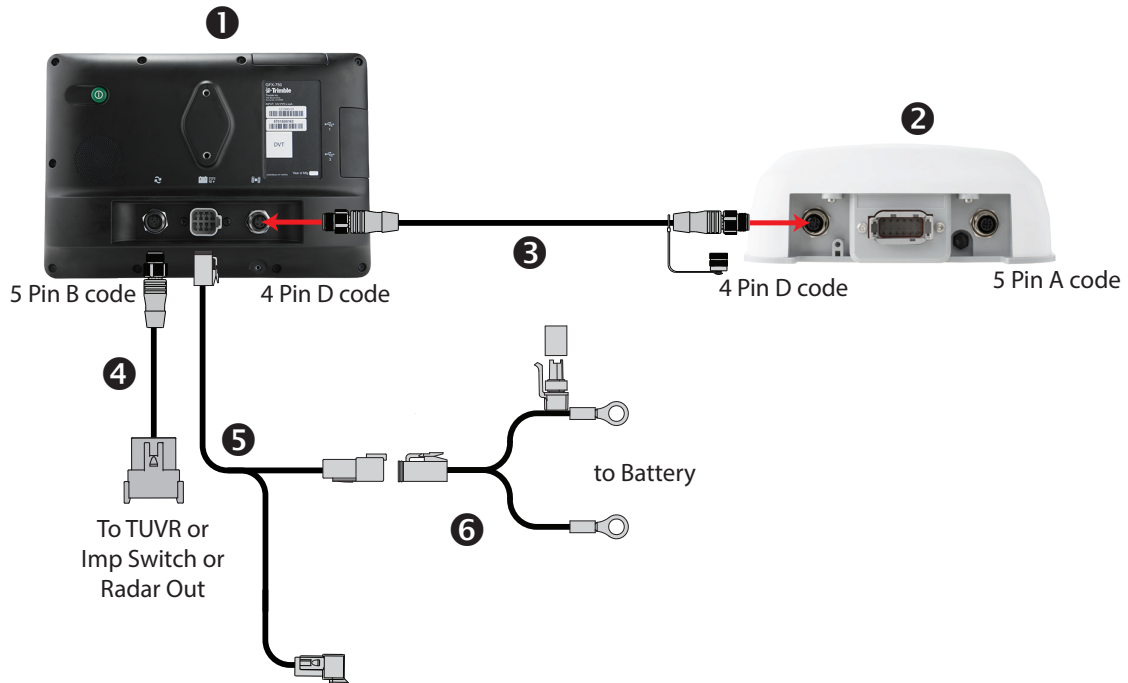


Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259

Item	Description	P/N
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258
8	Cable Assy, GFX-350/750/XCN-750/1050, Field IQ, Active CAN terminator	111083
9	Field-IQ Master switch box	75050-01
10	Optional: 12 section switch box	75060-01
11	Cable Assy, Field-IQ, CAN CAB to Hitch	77368
12	Powell Connector	
13	Cable Assy, Powell Quick Disconnect - Tractor Side	77413
14	Cable Assy, Dual Relay Pwr Cutoff, Field-IQ	77533
15	Cable Assy, PWR To Cab, Field-IQ	76941

Expansion Port Basic Cable

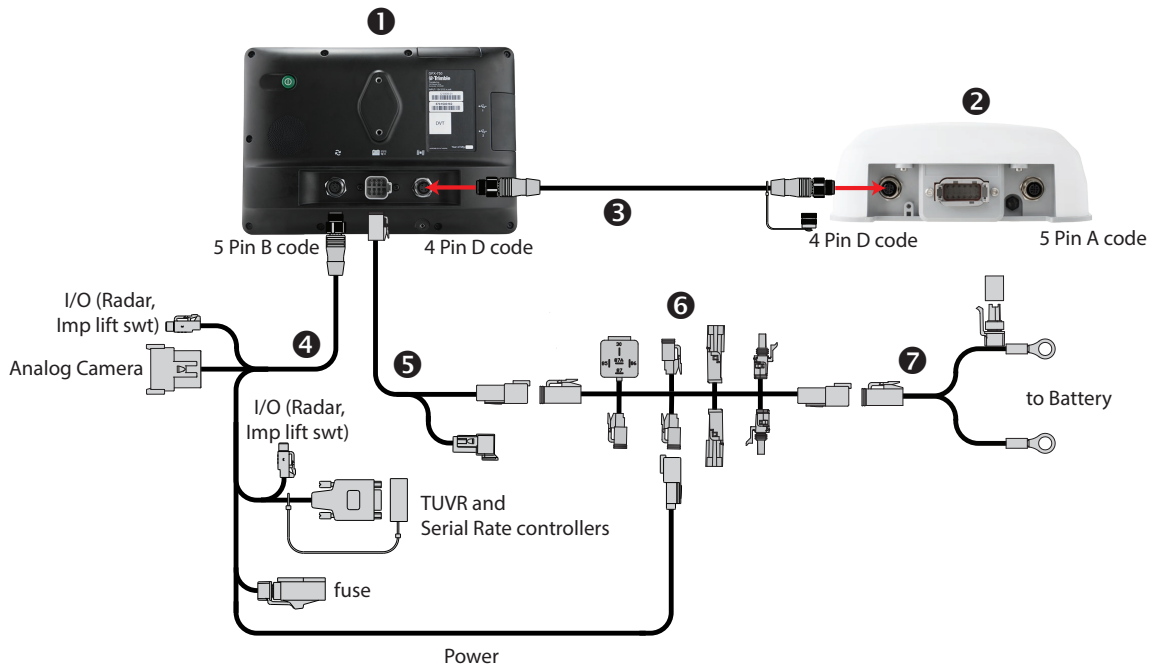
Use for TUVR (serial) or Implement Lift switch or radar output.



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Basic, RS232, Dig I/O, 2.5m	110545
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

Expansion Port Multi-Use Cable

Use for camera and/or Implement Lift switch and/or radar output and TUVR and serial rate controllers.



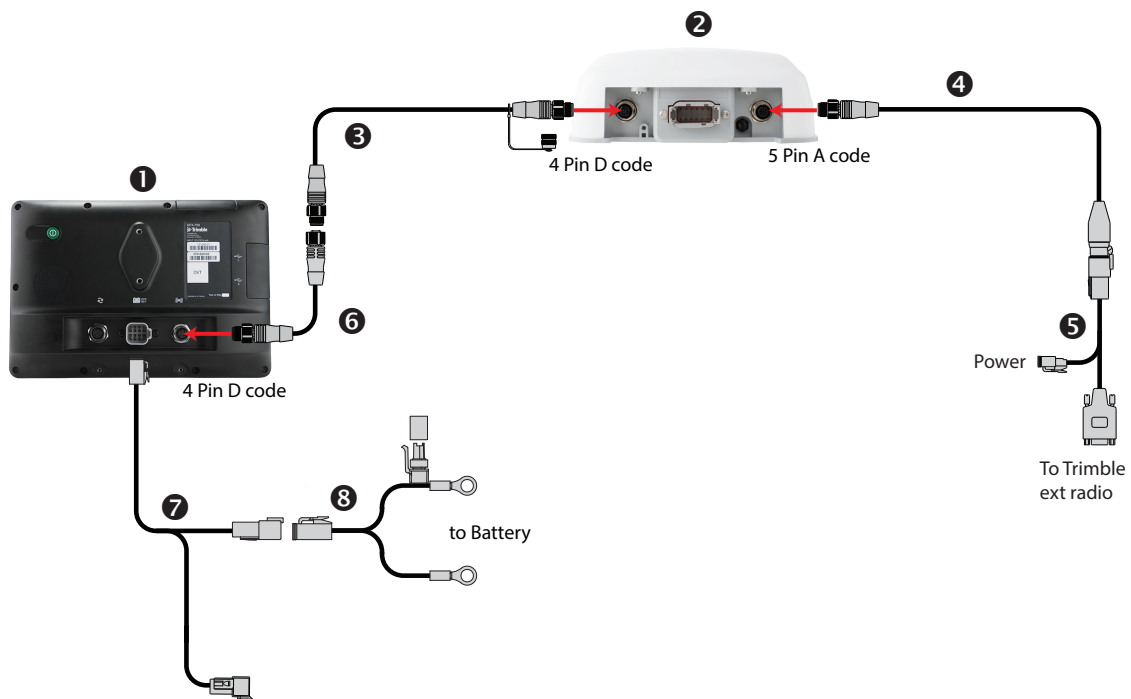
Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, GFX-350/750/XCN-750/1050, Expansion Port Multi, Dig I/O, RS232, Analog AgCam, 2.5m	114078
5	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
6	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Power with Relay and Switch (Acc)	67259
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

Radar and serial/TUVR adapters

Controller type	P/N
Raven	69729
Amazone (ISOBUS)	59043
Amazone (AMABUS)	59043
LH-Agro LH5000	59043
Vaderstad	428017
Bogballe	59043
Hardi 5500 and 6500	59043

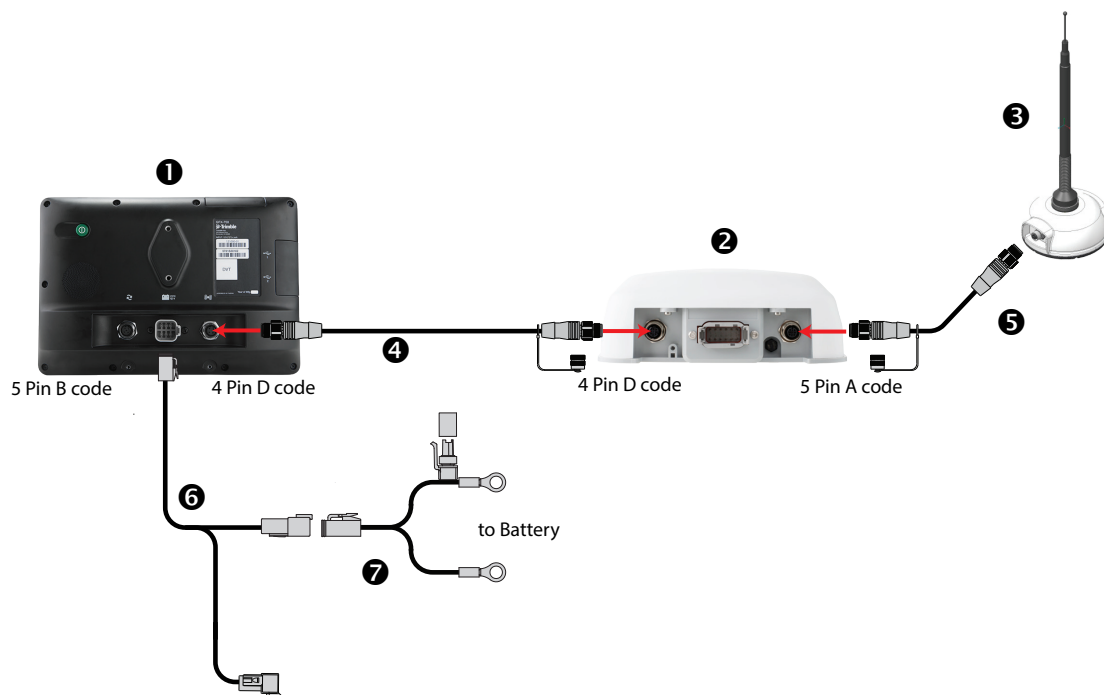
NOTE – These adapters integrate with the DB9 port on the Expansion Port Multi-Use Cable (P/N 114078).

External RTK radio



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
4	Cable Assy, NAV-900 to in-cab RTK Radio, DTM06, 4.5m	110544
5	Cable Assy, NAV-900, RTK Radio, DTM06 to DE9, Adapter	113633
6	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR) Extension, 2.5m. Optional extension for large vehicles.	112082
7	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
8	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

Ag-820 radio



Item	Description	P/N
1	GFX and XCN series displays, with PIQ App	
2	NAV-900 Guidance controller	
3	Ag-820 radio	
4	Cable Assy, GFX-350/750/XCN-750/1050 to NAV-500/900, Power/Ethernet (BRR), 5m	110540
5	Cable Assy, NAV-900 to Ag-820	113295
6	Cable Assy, GFX-350/750/XCN-750/1050, Power to display, CAN, 2.5m	110551
7	Cable Assy, GFX/CFX/FM-750/XCN-750/1050/FMX/FM-1000 Basic Power, 4m	67258

