

FURUNO

NAV*pilot*

NAVpilot-300 with Seastar Optimus



INDEX

Optimus Seastar

What is Seastar Optimus?

Seastar Optimus with Navpilot 300

NAVpilot-300

Interconnection

Initial Settings on NAVpilot-300

Optimus CANtrak Display

Status Indication on Optimus CANTrak Displays

OVRD Mode

Software Versions

Navpilot 300

Seastar Optimus

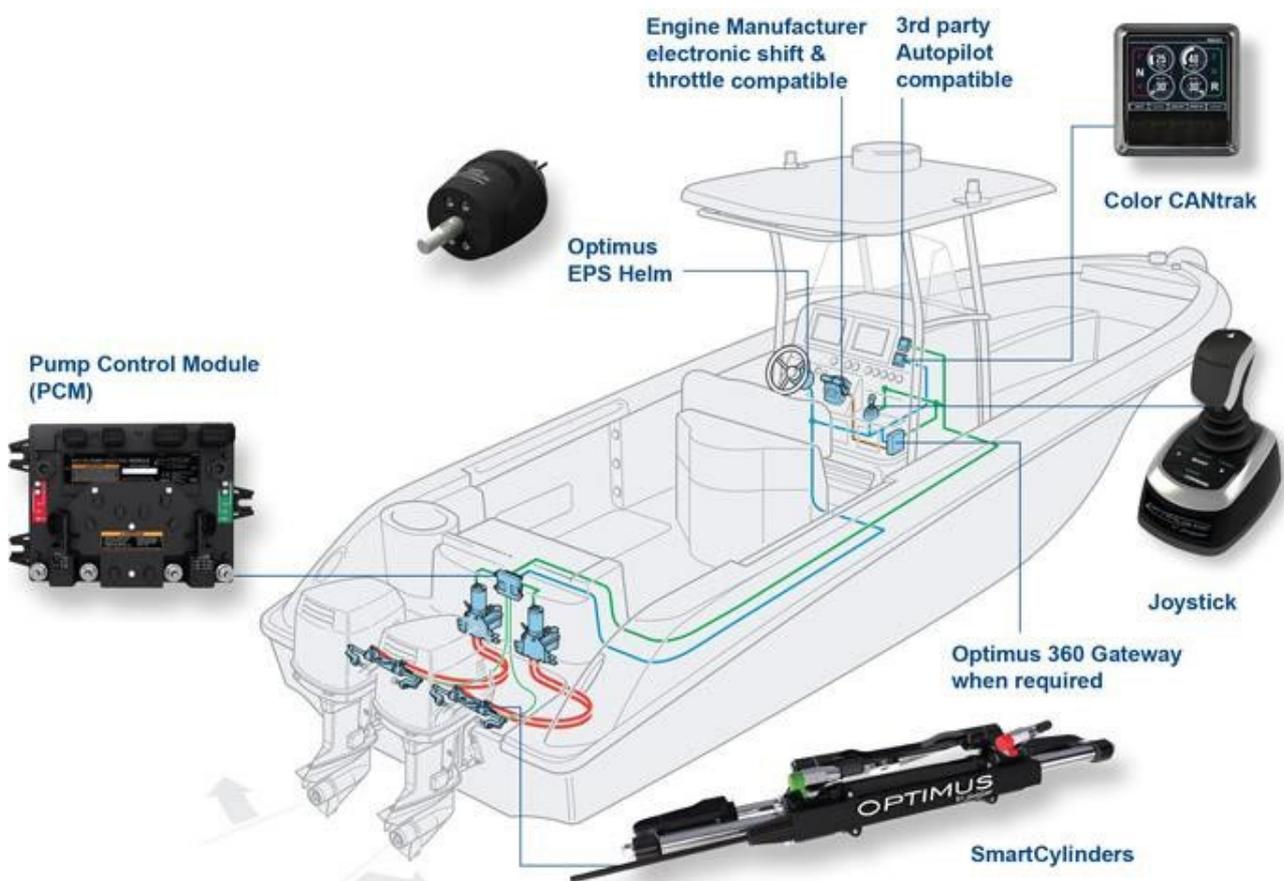
Connection Diagram

1

Seastar Optimus

What is Seastar Optimus?

Seastar offers electronically controlled steering systems called **Optimus**. The following drawing is of a Seastar Solutions **Optimus 360 Joystick Control System**.



<http://www.seastarsolutions.com/products/electronic-power-steering/optimus-360outboard-control-system/>

2

Seastar Optimus with NAVpilot-300

The Optimus system has three independent CAN bus networks, consisting of CAN1, CAN2 and CAN3. CAN1 network is for the Optimus steering network. CAN2 network is for Optimus communication, display units and for a connection to the autopilot. CAN3 network is for NMEA2000 certified devices. The NAVpilot 300 has a built-in "Drive-ByWire" (DBW) Gateway. Rudder control is achieved by simply plugging the DBW Cable of the Navpilot Processor unit into the Optimus CAN2 Network.

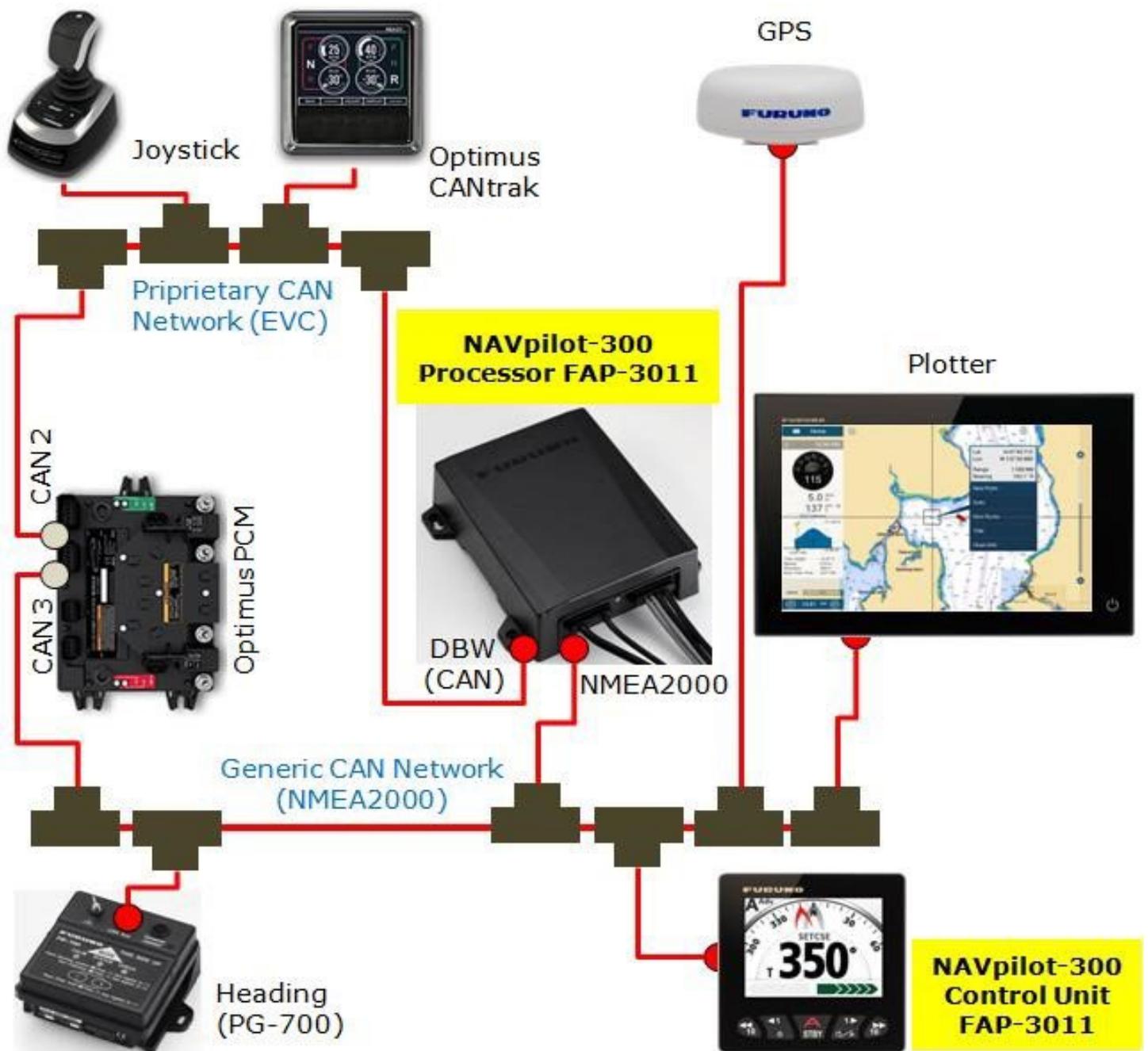
The NAVPILOT 300 (Processor version 1.06 - Display 1.07 or higher) is compatible with the Optimus PCM SW0250 software Rev T & Optimus CANtrak SW0292 Rev Q or later.

NAVpilot-300

Installation Overview

The following drawing shows an overview of NAVpilot-300 connected to a Seastar Optimus network. The NAVpilot-300 processor unit is directly connected from the **DBW (CAN) port to the Optimus CAN2 bus**. The NMEA2000 port is connected to the NMEA2000 backbone for navigation data.

1. Connect the NAVpilot 300 Processor's NMEA2000 cable and Control Unit to the NMEA2000 network.
2. Connect the NAVpilot 300 Processor's "DBW" cable to the Optimus CAN2 network.
 - a This connection method is the same for 12VDC Optimus and 24VDC Optimus systems.



NAVpilot-300 Initial Settings

Enter the NavPilot 300 Installation Menu by holding down the back/tools



button while quickly pressing

the STBY key  3 times. In the

NavPilot Installation Menu locate, and select [Ship's Characteristics].



Set [Boat Type] to appropriate EVCS selection. Outboard, In/Out, or Inboard

Set the [Boat Length], [Cruising Speed], and [Rate of Turn] to fit the customer's boat characteristics.

A "Detection failure" message should not appear. This confirms that the connection with the Optimus Steering system has been established.

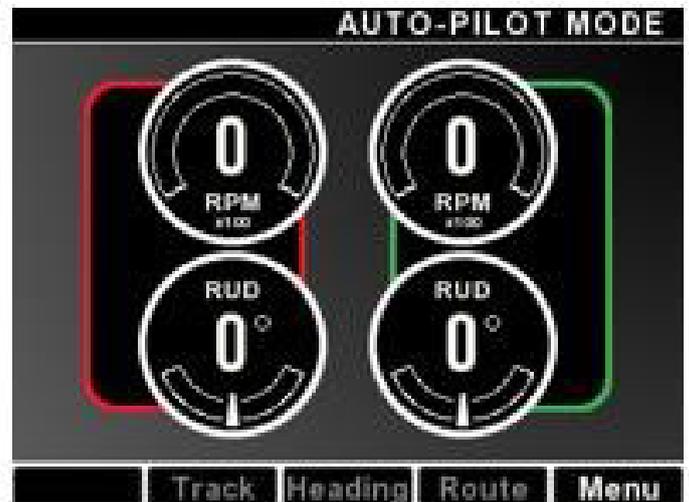
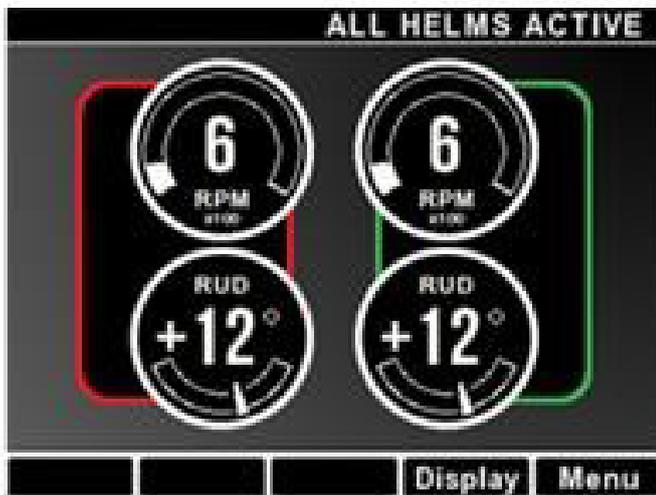


This completes the NavPilot 300 initial settings for use with a Seastar Optimus steering system. Other basic NavPilot 300 settings still need to be set, such as the **Heading source**, **Position source**, etc.

Please see the NavPilot 300 Installation Manual for complete instructions.
Optimus CANtrak Display

Status Indication on Optimus CANtrak display

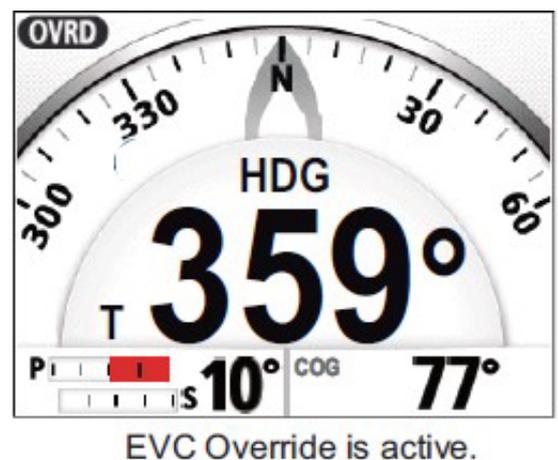
The Optimus CANtrak display will show the current mode status at the top of the screen. Under normal operating conditions, "ALL HELMS ACTIVE" is displayed. The CANtrak display will show "AUTO-PILOT MODE" when the NAVPILOT is engaged in either the AUTO or NAV mode.



Override (OVRD) mode of NavPilot

The NavPilot will display OVRD mode during the following conditions. When operating the Helm or Joystick, or in one of the Optimus operating modes such as Position Hold, Heading Hold or Position and Heading Hold.

Seastar Optimus incorporates a safety feature called "Override". When a user turns the helm or uses the joystick, an override signal generated by the Seastar Optimus system automatically sets the NAVpilot 300 to STBY (standby). When this happens, the NAVpilot-300 will display the [OVRD] icon on the top of the screen.



Note: Two rudders are controlled separately during Optimus operation modes. Consequently, the Optimus PCM alternatively outputs two rudder angles. The NavPilot will toggle the display of the rudder angles during Override (OVRD) mode.

The following photo shows how operation modes of the Seastar Optimus system are shown on Optimus CANtrak displays: POSITION HOLD (left), HEADING HOLD, and POSITION & HEADING HOLD (right).



Compatible software versions

Navpilot 300

Items	Versions
Processor Unit FAP-3012	01.06 or higher
Control Unit FAP-3011	01.07 or higher

Seastar Optimus

Make sure that the **Optimus PCM SW0250 software is Rev T or later**. Optimus CANtrack SW0292 Rev Q or later.

In the Product Information page:
 Access [Menu] – [Devices] – [Main Display] – [Product Information].

PRODUCT INFORMATION

Part Number:

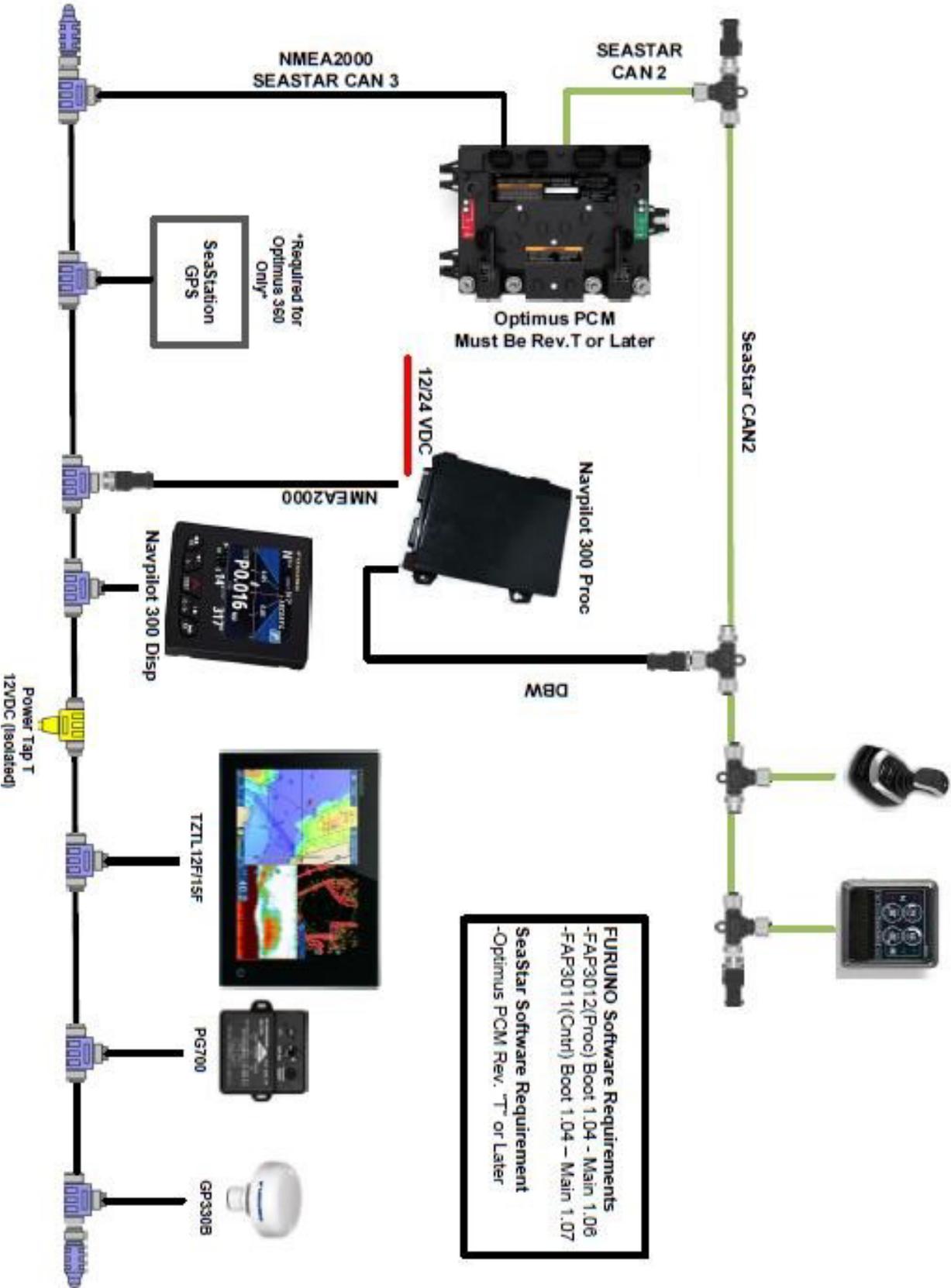
Serial Number:

Software:
 *****Rev *

Bootloader:
 *****Rev*

Navpilot 300/Seastar Optimus Interface Diagram

NAVPILLOT 300 OPTIMUS STEERING SYSTEM INTERFACE



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