



# ZF TotalCommand

Unrivaled Vessel Control



# Genuine ZF

Your control is our passion

TotalCommand is a new propulsion control family from ZF - a company whose control systems have always been at the leading edge of electronics development. TotalCommand includes advanced functionalities to complement ZF's industry-leading transmission technology, including improved clutch responsiveness, optimized control of proportional valves, and adaptive gear engagement. The system can also provide telematics data (temperature, pressure, and output speed) via embedded sensors in ZF transmissions, so the captain has complete visibility to the health and function of the entire propulsion system. ZF TotalCommand provides captains unprecedented control and precision with smooth shifting and seamless transitions between operating modes.

ZF collaborated with the world-famous Italian designers Giorgetto and Fabrizio Giugiaro for the design of the new TotalCommand control levers and joystick. The Giugiaro name is legendary in the automotive world, with styling and design credits that include countless supercars and popular everyday vehicles.

The collaboration between ZF and Giugiaro has produced new lever and joystick designs that are as functional as they are elegant.

## Main characteristics

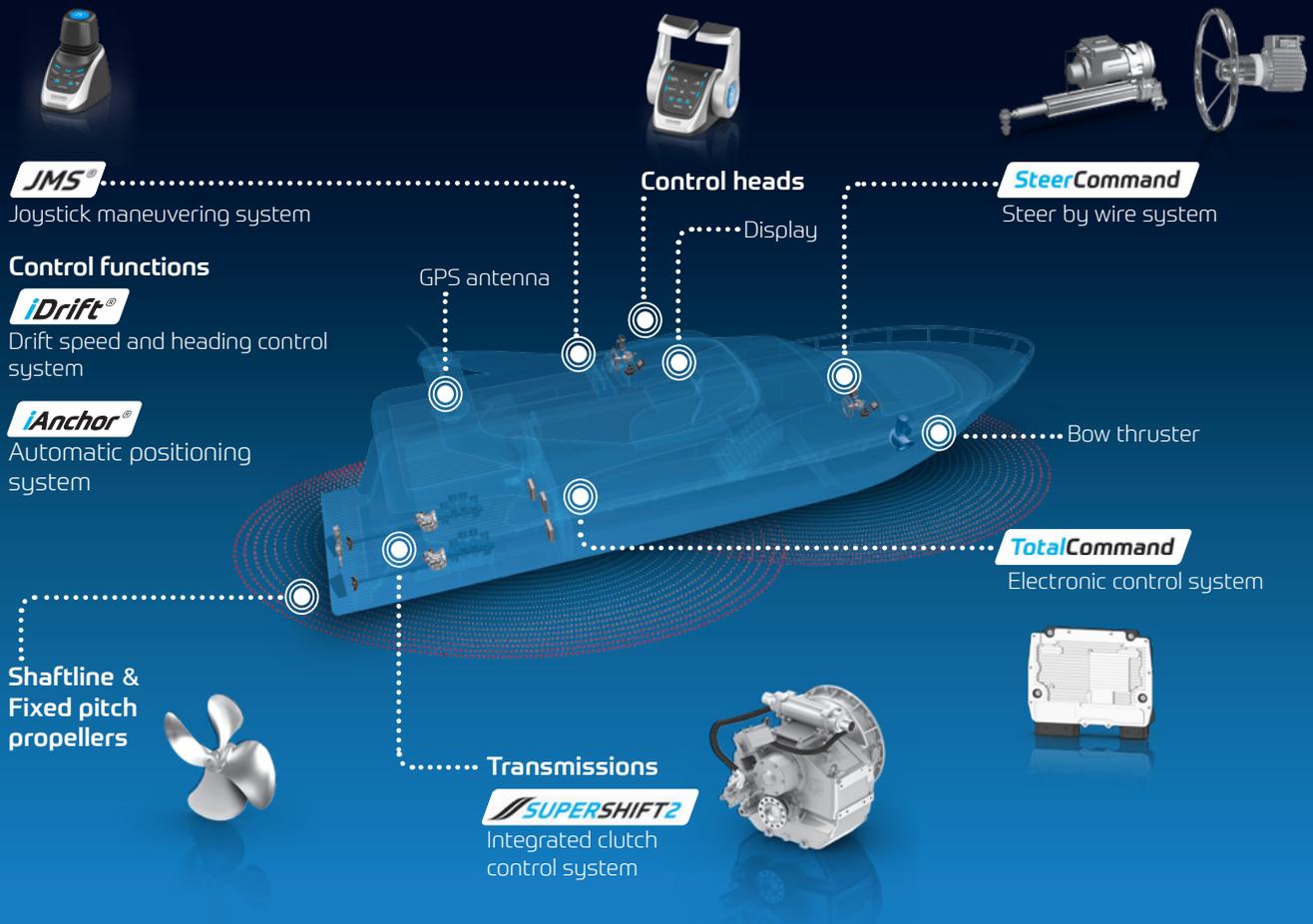
- Industry-leading shifting performance
- Adaptive gear engagement
- Unmatchable clutch responsiveness and precision
- CE marking, USCG and ABYC compliant
- IACS compliant and FULL class (ABS, DNV, Lloyds, etc)
- Assisted joystick and DP functions with automatic current and wind compensation
- Main engines, thrusters and monitoring systems supported
- Reduced complexity (plug and play, fewer harnesses, transmission-mounted processor option)

## Above and beyond

- Wifi ready
- Electronic manuals, diagnostics, and maintenance data available on mobile devices
- Combined and independent trim controls
- Smart Transmission enabled with predictive maintenance

Controls designed by Giorgetto and Fabrizio Giugiaro, world-famous Italian automobile designers





### Plug-and-Play installation

ZF Marine control systems utilize plug-in connectors that simplify vessel integration and reduce installation time significantly. Determine cable length, engine and transmission requirements, and you're ready to Plug-and-Play. To simplify things further, we can provide custom designed kits for production boat builders.

### System is fully configurable from the bridge

Configuring the parameters for your controls has never been easier. Simply enter the parameter code on the control lever and instantly load the adjustment.

### Emergency reversal protection

Speed/shift sequence protection allows shifting from full ahead to full astern in one motion while preventing damage to the engine or transmission. Designed with safety in mind, this sequencing technology allows you to respond safely to emergency situations.

### Synchronization

TotalCommand automatically maintains the same speed on multiple engines, thereby increasing operating efficiency, improving fuel economy, and reducing noise and vibration. Synchronization also allows for one lever operation – allowing the control of multiple engines and transmissions with a single lever.

### Multiple control stations

Up to 6 control stations on a vessel.

### Troll

TotalCommand precisely regulates trolling valves, ZF AutoTroll® and the latest ZF shifting technology through proportional valves.

### EasiDock®

Allows the user to balance clutch engagement and engine rpm to obtain the optimum propeller speed for safe docking and precise maneuvering in confined areas.

### AutoTroll®

Delivers constant propeller speed using a closed loop feedback sensor. This feature automatically regulates clutch slippage while maintaining slow engine speed.

### Warm up

Allows the captain to increase engine rpm while locking the transmission in neutral.

### One lever operation

It allows you to enjoy the benefit of multi-engine operation with full shift and throttle control by operating a single lever.



# Inspiration for Recreational Vessels

TotalCommand is the result of sixty years of experience in designing vessel control systems.

A powerful control system for modern electronic engines and ZF transmissions, TotalCommand integrates the latest CAN-bus communication technology with the industry's best multifunction control heads to accommodate up to six stations.

The compact control head design combines an ergonomic lever shape with a user-friendly touch pad allowing all system functions to be easily selected using soft-touch push buttons.

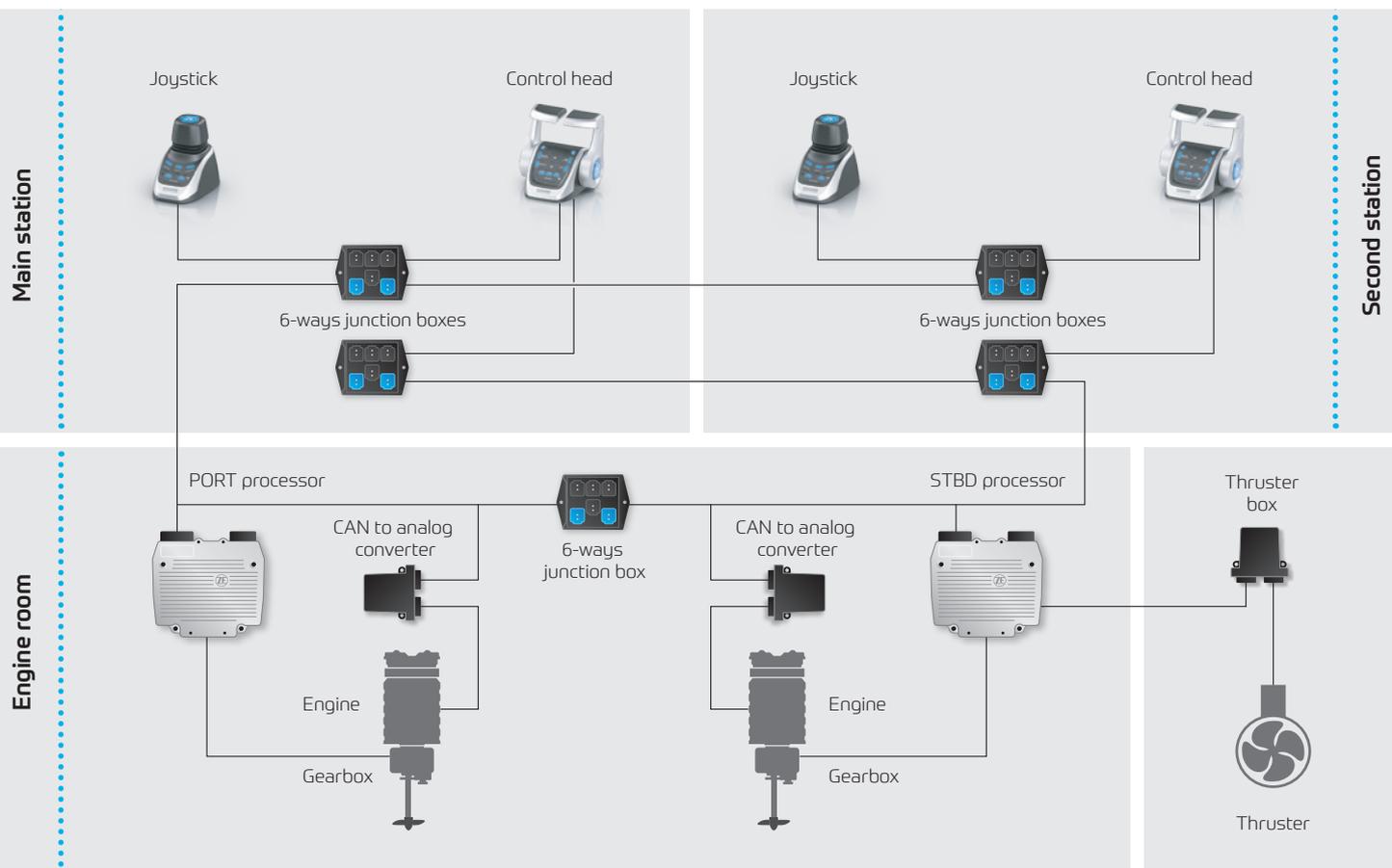
Visual indicators allow the user to locate the neutral detent position and two color LEDs indicate station in command, and transmission engagement. TotalCommand puts you in "total" control with dedicated modes like EasiDock® and AutoTroll®.

**EasiDock®** allows the user to balance clutch engagement and RPM engine rpm to obtain the optimum propeller speed for safe docking and precise maneuvering in confined areas.

**AutoTroll®** is the best solution for sport fishing but also for navigating inside channels with stringent speed limits. A full range of low speed control is allowed thanks to embedded shaftline speed sensor for closed loop control able to grant specifically demanded vessel speed.

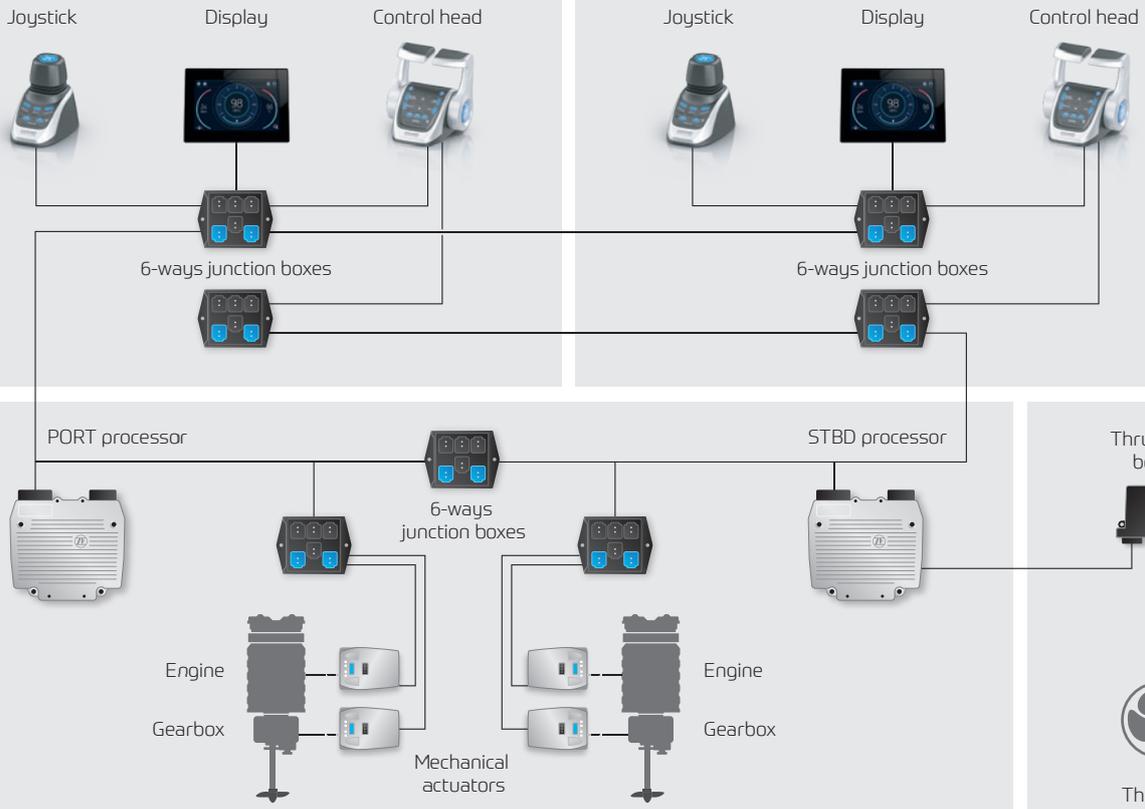
The function allows controlled clutch slippage while maintaining minimum engine speed.

TotalCommand's CAN-bus communication automatically synchronizes engines in all modes without the need for dedicated buttons or switches.



Main station

5  
Second station



# Reliable for Professional & Commercial Vessels

The reliable and customizable solution for professional users

TotalCommand controls are robust successors of our well-known and time-proven ZF ClearCommand and ZF MicroCommand systems. These early pioneering systems established industry standards in electronic controls technology – TotalCommand goes to the next level. TotalCommand can be used in a wide variety of commercial applications including mechanically actuated engines and transmissions or any combination of electronic throttle or shift. The system has been rigorously tested to meet the highest marine industry standards and is 100% compliant with all major classification societies, such as ABS and DNV. As an added bonus, DP0 (dynamic positioning) and joystick maneuvering are now available for professional vessels.



# Combining Control with Comfort

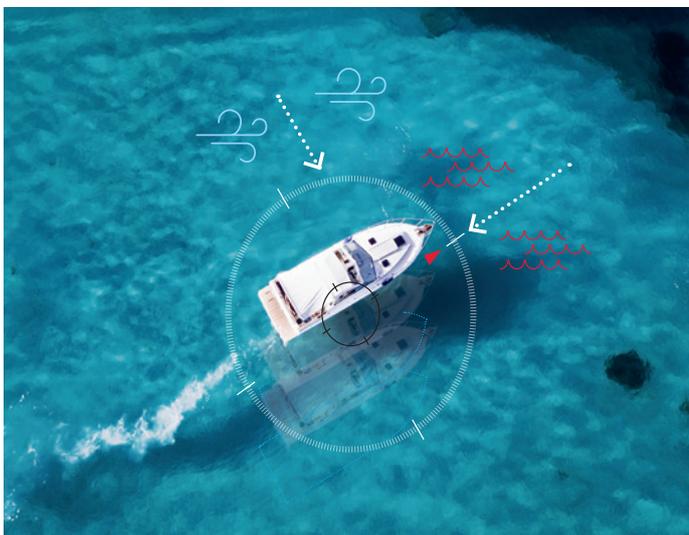
## Unparalleled vessel control

### ZF JMS®

The joystick system provides the helmsman with simple and intuitive vessel control. Engines, transmissions and thrusters in a shaft-line vessel are automatically controlled together providing smooth, unbeatable "ease of control". Moving parallel to the dock, 360° rotation on the spot and other complex maneuvers are now easy operations. JMS® regulates engine speed and transmission engagement through automatic trolling valves to provide the precise speed needed for smooth maneuvering and easy docking. This means driving a pleasure craft becomes less stressful, simple and safe!

### Basic & Premium

ZF JMS® is available in basic configuration without automatic heading control (open-loop) or in premium configuration (closed-loop) in which the integrated electronic compass maintains the desired vessel heading. The closed-loop premium configuration keeps the vessel moving in the selected direction while automatically compensating for current, wind or other external forces.



### Boost

If severe environmental conditions such as strong wind and current are encountered, boost mode can be activated to deliver a more aggressive vessel response.

### Thruster only

Offers the possibility to control the thrusters without activating the transmissions. This allows the user to power the bow thruster to achieve precise heading adjustments without having to use a dedicated thruster control panel.

### iAnchor®

Provides stable and seamless station keeping at the press of a button. The system holds a vessel's position and heading using an integrated GPS receiver and proprietary algorithms to compensate for wind and current.

### iDrift®

Offers the ability to control both drift speed and direction when the vessel is in windy conditions and/or active current – all while maintaining the bow's heading. It is the perfect solution to control the vessel's drift speed and heading when kite fishing, bottom fishing, or wreck fishing.

# Advanced Solutions for Challenging Applications

## Primary Components

<b>Control levers</b>	IP67, "one button-one function", premium plastic grip and soft touch, adjustable friction, dimmable LEDs, combined and independent trim control, calibration and diagnostic data. Design according Safety guidelines SIL2	
<b>Joystick</b>	IP67, 3-DOF proportional control, premium plastic grip and soft touch, "Boost", "Only thruster", "iAnchor" (Dynamic Positioning DP0) functions	
<b>5" Display</b>	Hi-resolution 5-inch projected capacitive touch colour screen, full sunlight view, IP 67	
<b>Processor / ECU</b>	Design according Safety guidelines SIL2. IP67 + IP69K, -40°C / +120°C operating temperature, 9 - 32V operating voltage range, bulkhead mounted and/or on transmission mounted	
<b>Extension modules</b>	IP67 CAN-bus and power supply splitter, completely potted. 4 channel connections and backbone. Power supply overload protection.	
<b>Harnesses / Accessories</b>	Pre-assembled electrical wiring harnesses for marine environment. Multi-port IP67 fast plug connectors. Halogen free / flame retardant material.	
<b>Analog interfaces</b>	CAN-bus device providing output for analog controlled engines. Fully sealed IP67 and extended power supply 9-31V. Provided with voltage, current, pwm and frequency output. Start interlock relay onboard. Dual out version available. Design according Safety guidelines SIL2.	
<b>Actuators</b>	Electromechanical push-pull actuator for gear engage and throttle command. Common used for classical mechanical interface with Bowden cable. Fully sealed IP67 and extended power supply 9-31V. Configuration display onboard. Force up to 260N. Design according Safety guidelines SIL2.	
<b>Compass / Antenna</b>	TNMEA2000 accessories for dynamic position and joystick control.	

## ZF Group

ZF Friedrichshafen AG  
Marine & Special Driveline Technology  
Ehlersstr. 50  
88046 Friedrichshafen  
Germany  
Phone +49 7541 77-2207  
info.zfmarine@zf.com

ZF Padova s.r.l.  
Via Penghe, 48  
35030 Caselle di Selvazzano (PD)  
Italy  
Phone +39 049 8299 311  
info.zfmarine@zf.com

ZF Marine Krimpen B.V.  
Zaag 27, P.O. Box 2020  
2930 AA Krimpen aan de Lek  
The Netherlands  
Phone +31 180 331000  
info.zfmarine@zf.com

[www.zf.com/marine](http://www.zf.com/marine)



[twitter.com/zf\\_group](https://twitter.com/zf_group)  
[facebook.com/zffriedrichshafen](https://facebook.com/zffriedrichshafen)  
[youtube.com/zffriedrichshafenag](https://youtube.com/zffriedrichshafenag)