

New

F180 series™

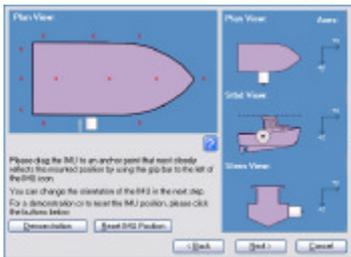
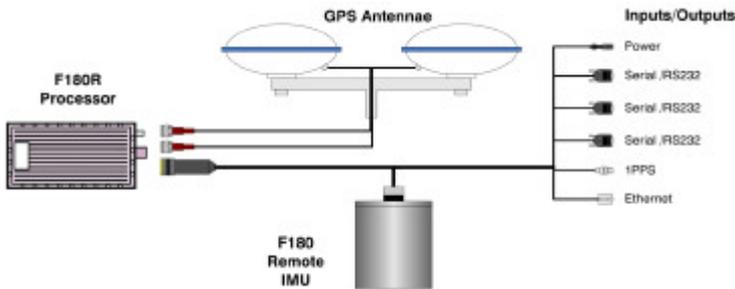
F180R - Remote IMU



The Octopus F180R™ Remote IMU is an optional extension of the standard F180series precision attitude and positioning system enabling the motion sensing elements or inertial measurement unit (IMU) to be located remotely from the main processor.

Housed in a waterproof pod with waterproof connector, the remote IMU can be mounted right at the point of interest such as next to a multibeam transducer head. In larger vessels, the remote IMU allows greater flexibility of installation with the motion sensing elements located deep in the vessel's hull. All other components of the F180 system remain unchanged, with the processor and GPS housed in the same rugged box as the standard F180. In common with the standard one-box F180 all GPS variants are supported (see reverse for details).

To aid installation and configuration, an all-new click-and-drag configuration wizard allows the remote IMU to be placed and oriented graphically making setting-up the F180R fool-proof and quick.



Click and drag configuration wizard



Octopus F180 Remote IMU unit, mounted on an over-the-side multibeam transducer pole

FEATURES

- ⚡ Waterproof IMU housing
- ⚡ High accuracy heave, roll and pitch
- ⚡ Precise heading & position
- ⚡ Position accuracy up to 1cm with RTK
- ⚡ Extremely compact and rugged
- ⚡ Simple to install and configure
- ⚡ WAAS & EGNOS enabled
- ⚡ Remote lever-arm
- ⚡ Intelligent heave processing
- ⚡ Standard data formats and interfaces
- ⚡ Specific high performance variant for:
 - inland waterways
 - ports and harbours

BENEFITS

- ⚡ Precise measurements at multibeam head
- ⚡ Easier installation on large vessels
- ⚡ One system – three functions

CodaOctopus Ltd

www.codaoctopus.com

sales@codaoctopus.com

tel +44 131 553 1380 or +44 1869 337570, USA & Canada +1 888 340 2627

24hr support: support@codaoctopus.com

Support USA & Canada +1 888 340 CODA; worldwide +44 131 553 7003



Remote IMU option

General Performance and Specifications

(Remote IMU option only, for full details refer to standard specifications for Octopus F180)

Performance	F180R/F185R	F190R
Positional accuracy (CEP)	0.5 - 4.0m stand-alone, 20cm - 1cm with RTK	20cm with subscription*, 1cm with RTK
Velocity	0.03 ms ⁻¹	0.03 ms ⁻¹
Roll and Pitch	<0.025°	<0.025°
True Heading	1m baseline - 0.1° 2m baseline - 0.05° 4m baseline - 0.025°	1m baseline - 0.1° 2m baseline - 0.05° 4m baseline - 0.025°
Heave	5% of heave amplitude or 5cm	5% of heave amplitude or 5cm
Physical	Remote IMU Housing	Main Processor
Dimensions	120mm (4.73") diameter x 150mm (5.9") long	As standard F180 one-box housing 120 x 234 x 80mm (4.73 x 9.2 x 3.15")
Weight	2.2 kg (4.85lb)	2.5kg (5.5lb)
Power	9-18 Vdc, 5 watts	9-18 Vdc, 25 watts
Temperature	-10 to 60° C	-10 to 60°C
Humidity	waterproof	splash proof
Vibration	0.1g2/Hz, 5-500Hz	0.1g2/Hz, 5-500Hz
Connection	Burton multi-pin water-proof	Standard F180 break-out cable
Interfaces		
Ethernet 100base-T	Full control and configuration, high speed full functionality data output (MCOM)	
Serial port 1	User configurable for position and heading or attitude strings: TSS1, TSSHRRP, EM1000, EM3000, ZDA, VTG, GGA, HDT, PASHR, PRDID, MCOM	
Serial port 2	User configurable for position and heading or attitude strings – as above	
Serial port 3	Differential correction input (RTCM, RTCA, CMR and CMR+)	
Other	1 PPS on BNC	
Remote IMU	6 way multipin connector on main F180 interface cable for remote IMU cable connection	

Product	RT20, 20cm RTK input capability, L1 only	L1 & L2 on primary antenna	RT2, 2cm RTK input capability	Satellite-broadcast differential receiver built-in*	L1 & L2 on secondary antenna	Description
F180R	✓					Standard F180R with up to 20 cm positional accuracy when used with a suitable external RTK receiver and base-station
F180R+	✓	✓			✓	As standard F180R but with L1 & L2 on both antenna for rapid heading initialisation
F185R	✓	✓	✓			As standard F180R but with improved positional accuracy capability to 1cm when used with a suitable external RTK receiver and base-station
F185R+	✓	✓	✓		✓	As F185R but with L1 & L2 on both antenna for rapid heading initialisation
F190R	✓	✓	✓	✓		As F185R but with integral satellite-broadcast differential correction receiver, specifically developed for inland waterways, ports and harbours. Provides up to 20cm positional accuracy without any additional DGPS receive hardware. Additional subscription required*
F190R+	✓	✓	✓	✓	✓	As F190R above, but with L1 & L2 on both antenna for rapid heading initialisation

* Notes

- ☛ F190R requires subscription to satellite broadcast service (Fugro OmniSTAR) and is only available for use in rivers and harbours. See the standard F190 datasheet for further information.
- ☛ F180R remote IMU variant is designed for operation in a closely coupled configuration with GPS and is not suitable for operations on ROV or AUV platforms.
- ☛ Lateral separation (IMU to antenna, X and Y distance) of more than 10m is not recommended.
- ☛ F180R is intended to be mounted on or close to multibeam transducers to provide optimum motion measurement in hull-mounted or over-the-side configurations.
- ☛ Wherever possible, the mounting arrangement should be rigid and robust so as to minimise secondary motion at the IMU due to movement of the pole, and also independent movement of the IMU with reference to the antennae.
- ☛ In common with all motion reference systems, F180R cannot compensate for the effect on multibeam data of poorly mounted transducers.

F180R™, F180™, F185™, F190™, the F180series logo, Octopus™ and the Octopus logo are Trademarks of CodaOctopus

F180R 20060225

www.codaoctopus.com
sales@codaoctopus.com

Edinburgh tel +44 131 553 1380 fax +44 131 554 7143 Oxford +44 1869 337570 fax +44 1869 337571, USA/Canada +1 888 340 2627
24hr support: USA & Canada +1 888 340 CODA; worldwide +44 131 553 7003; support@codaoctopus.com

A  product. We reserve the right to change equipment specifications without notice.


OCTOPUS
Leading GeoSurvey Solutions