

COLOMBIAMAR PRESENTATION

HamiltonJet – Waterjet Applications



HamiltonJet

1954



The pioneer of the modern waterjet in 1954
Solely waterjet manufacturers since the 1980's. Family owned.

All in house production



All R&D and manufacturing done in house.
Based in Christchurch New Zealand

Jets from 80-7,500 hp



22 models of water jets.
From 210mm to 1,200 mm in diameter. Advanced electronic control systems for all jets.

The worlds #1 waterjet



More jets in operation than any other manufacturer.
Backed up with a professional global support network of distributors.

HamiltonJet

HJ Global Headquarters in Christchurch,
New Zealand



HJ AMERICAS Regional Office



HJ EMEA Regional Office



HJ ASIA Regional Office

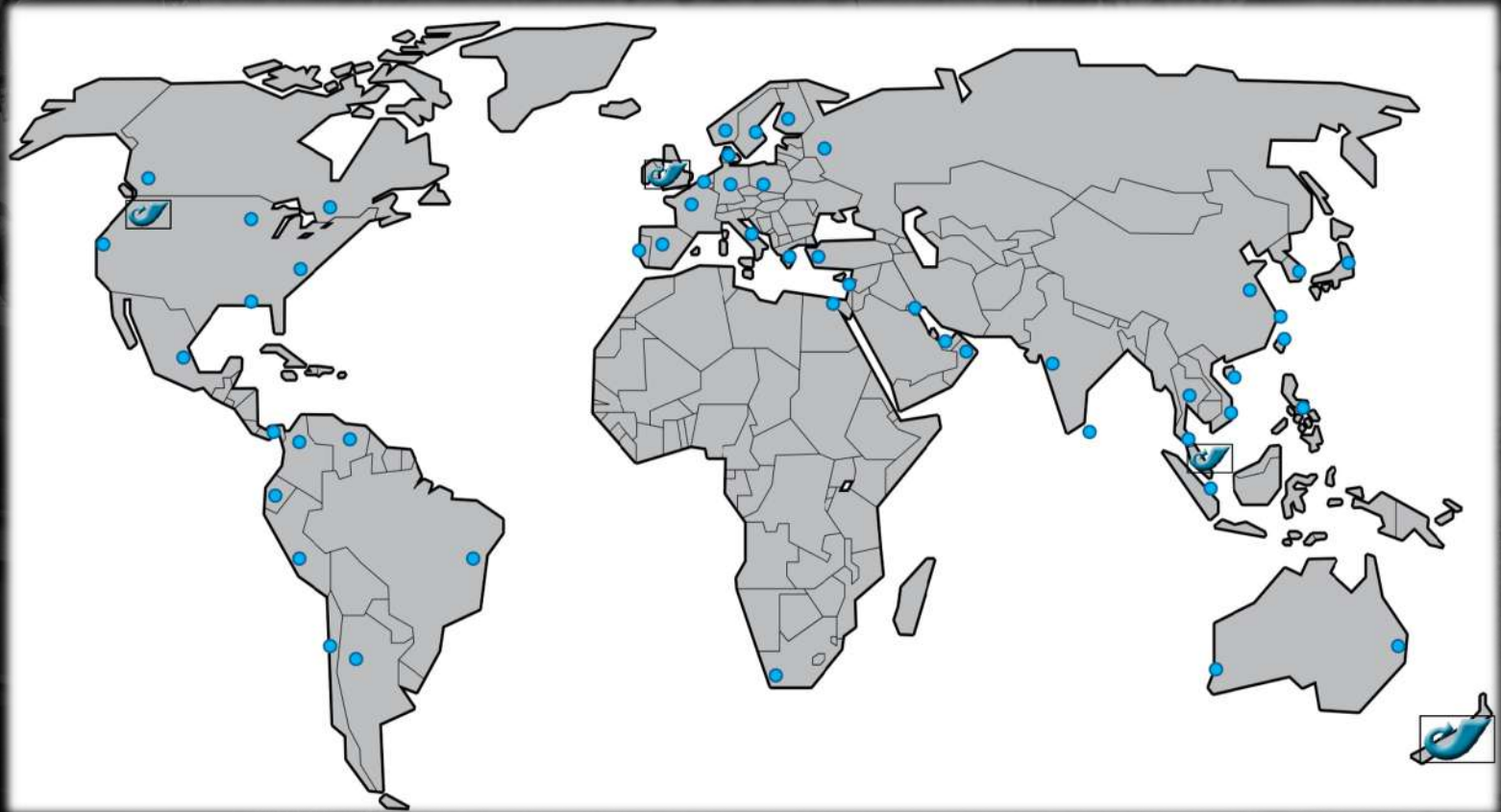


Distributor Network

51 distributors

4 regional offices

Additional Service agents



TRUSTED GLOBALLY

TRUSTED GLOBALLY

Over

50%

of the global waterjet
population

Trusted globally by

63

Navies worldwide

HamiltonJet

Waterjets for all applications

5.5-18m

- HJ212 up to 260kW
- HJ213 up to 260kW
- HJ241 up to 260kW
- HJ274 up to 330kW
- HJ292 up to 400kW
- HJX29
- HJ322 up to 500kW
- HTX-30 up to 680kW
- HJ364 up to 670kW
- HJ403 up to 900kW
- HJ422 up to 1000kW

18-50m

- HM461 up to 1,100 kW
- HTX42
- HM521 up to 1,400 kW
- HTX52
- HM571 up to 1,700 kW
- HM651 up to 2,200 kW
- HM721 up to 2,700 kW
- HM811 up to 3,500 kW

40-90m

- HT810 up to 4,000 kW
- HT900 up to 5,000 kW
- HT1000 up to 7,500 kW

All models from HJ213 upwards available with advanced electronic controls*.

NEW JETS

Next generation design

Increased high efficiency
Increased bollard pull
4 new models



NEW JETS

Next generation design

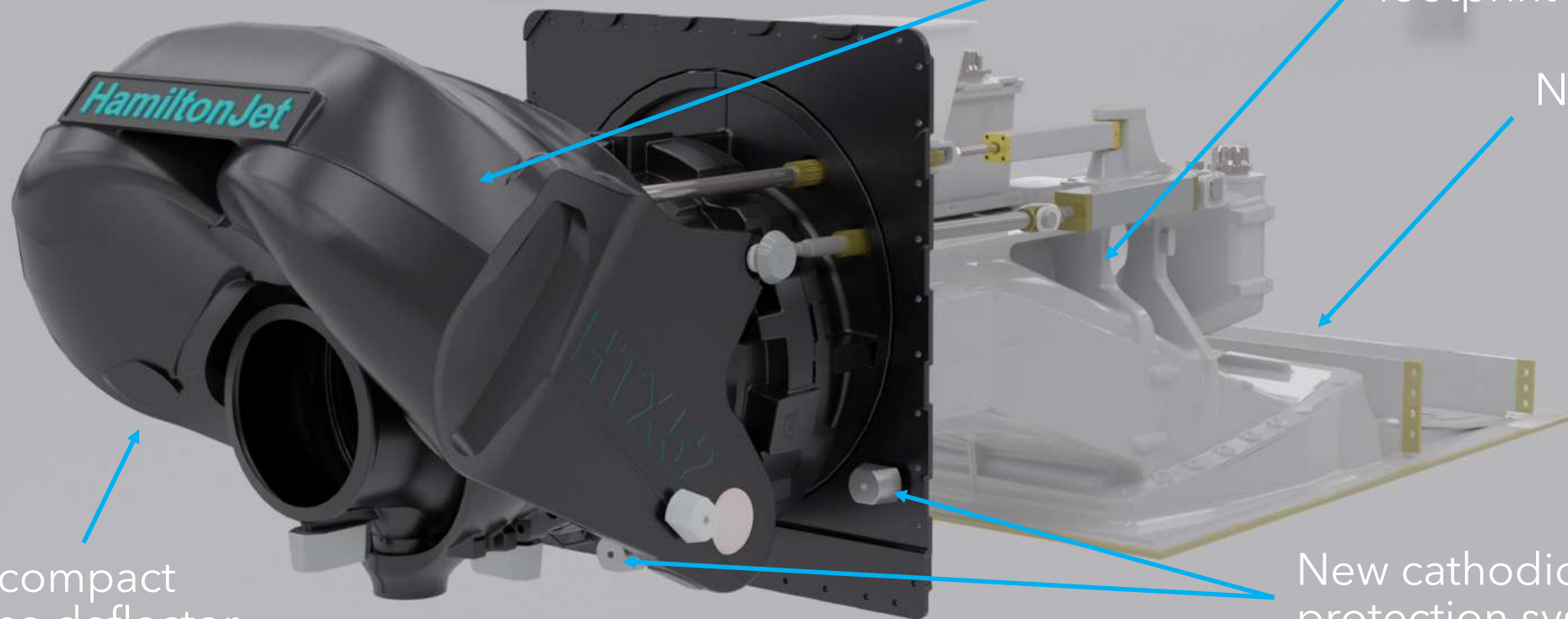
New steering system

Compact inboard
footprint

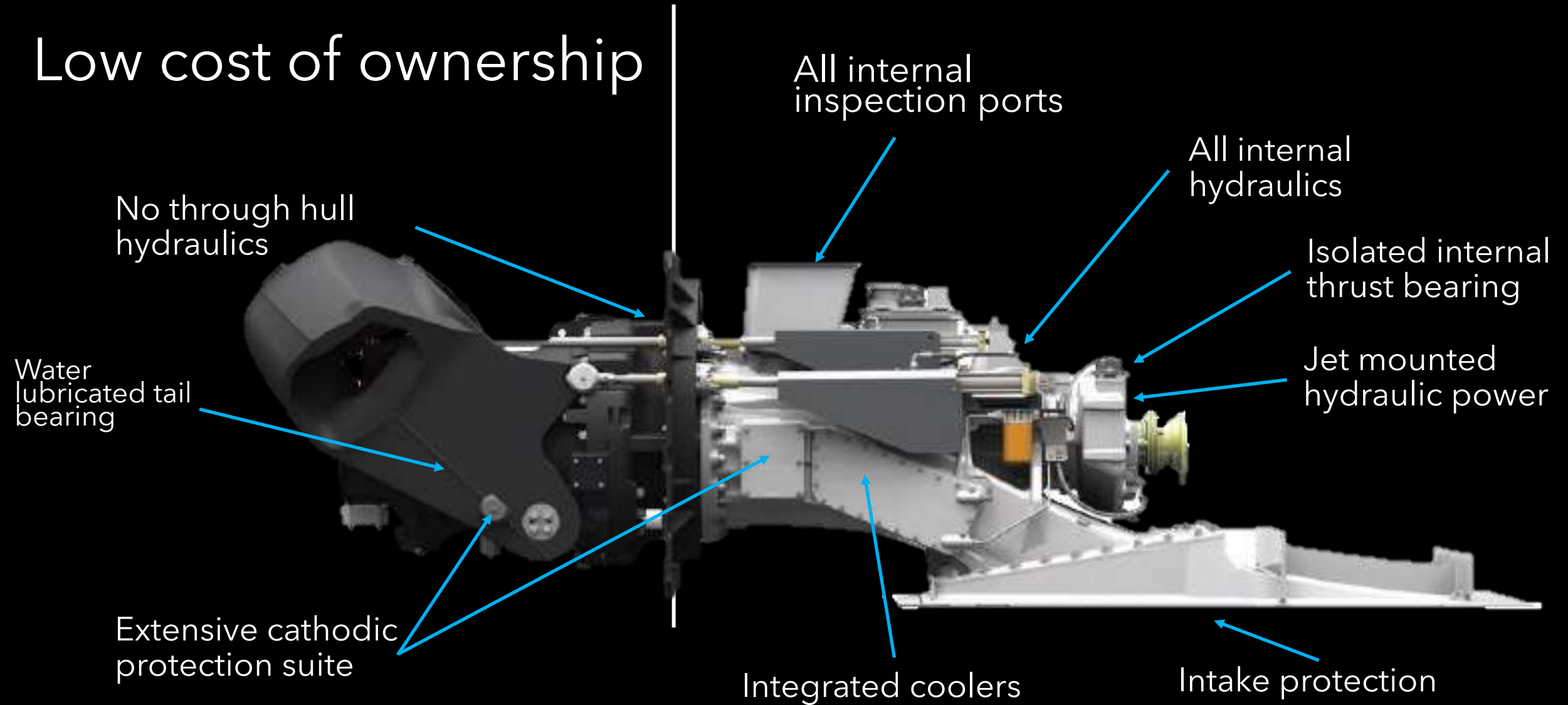
New intake design

New compact
reverse deflector

New cathodic
protection system



Low cost of ownership





PATROL & MILITARY VESSELS

SUPERIOR BOARDING

- Pump design provides superior thrust and resistance to aeration at transfer speeds.
- The combination of high thrust and resistance to aeration makes aggressive boarding operations safe, fast and predictable.
- High accuracy steering and reverse help crews exploit maximum control of the vessel

SUPERIOR BOARDING



EHX HYBRID DRIVE

Main propulsion engines
Conventional marine diesel engines

Marine gearbox
Conventional marine gearbox

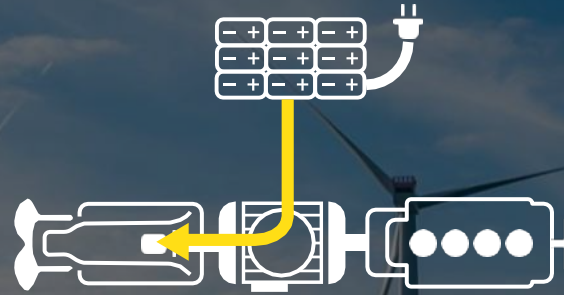
Waterjets
Standard HJ, HTX, HM or HT jets

AVX with EHX controller
AVX vessel control with additional EHX hardware to control operation modes. The system retains all the standard AVX CID's with the main system control interface through the SDU. This is a considerable advantage over other systems

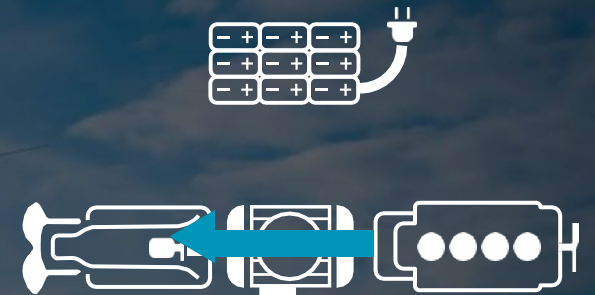
Battery bank
Cooled battery bank (water or air cooled) for running electric machine in propulsion mode, and/or hotel loads.

Electric machine
Danfoss electric motor that can be run both as propulsion motor (in electric only, hybrid and boost modes), or run as a generator to charge onboard batteries

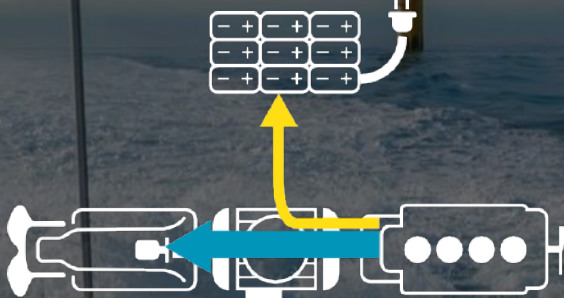
EHX HYBRID DRIVE



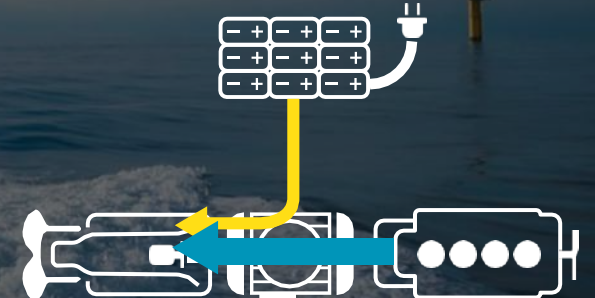
ELECTRIC ONLY



DIESEL ONLY



CHARGING



ELECTRIC BOOST



AVX

Next generation controls

- Reduced footprint
- Flexible station layout
- From small scope vessels to large multi-station multi-jet configurations

AVX

Next generation controls



- Intuitive user interface
- Plain language messaging
- Intelligent station transfers

A close-up, high-angle shot of a HamiltonJet control panel. The panel is dark grey and features a variety of controls. In the foreground, there's a large, curved joystick with a silver-colored base and a black grip. To its right is a smaller joystick with a black grip. Above these, there's a rectangular panel with a circular display and several buttons. Further back, there's a panel with a grid of colored buttons (red, orange, yellow, green, blue). The overall design is sleek and modern, typical of marine electronics.

AVX

Future ready

- JETAnchor
- JETLink - Interface for autonomous or remote control systems
- Glass-bridge integration
- EHX

HamiltonJet

Controls for all missions

JetLink

blueARROW

- Plug and play CANbus digital network for control of water jets, engines and gearboxes.
- Advanced control features for manoeuvring, station keeping and autonomous operation.

AVX

- The next generation of vessel control.
- Unrivalled levels of redundancy and system availability.
- Advanced control features such as station keeping, unmanned and autonomous operation.
- Advanced station keeping modes.
- EHX Hybrid propulsion solutions available

HamiltonJet

Why jets for USV

Low signature

Low acoustic transmission
Reduced radar signature

Simplified control
Direct control inputs,
steering and reverse.
No gear box rotation
changes required

Protected drivelines
No underwater appendages
prevent damage (accidental or
deliberate) from debilitating the
USV



HamiltonJet

Controls for all missions

Engine interface
Provides engine
throttle and gearbox
demand from main
control station

Dedicated GPS antenna
Provides positional input
for advanced position
control features*

Jet control module
Provides fast and
smooth control of
direction and thrust

All modules extensively environmentally tested
Control modules IP67 rated[†]
Cables factory supplied and tested
MILSPEC connectors and cables[†]

HamiltonJet

Controls for all missions

Helm devices

Wheel, tiller, joysticks

Station control panel

Information screen

Steering and reverse indication

Gearbox control

Dedicated backup control

Manoeuvring device

Innovative and intuitive Mouse Boat

3 - axis joystick

JetAnchor control

Levers

Combined (throttle & reverse)

Separate

HamiltonJet

Controls for all missions



HamiltonJet

Controls for all missions

JetLink

- Features a protocol and binding (to SAE J1939) that can be used from third party monitoring and control systems.

- Integration with JETanchor positioning system

Allows control of each Waterjet as function of:

- Steering, Reverse and Throttle
- Azimuth and Thrust

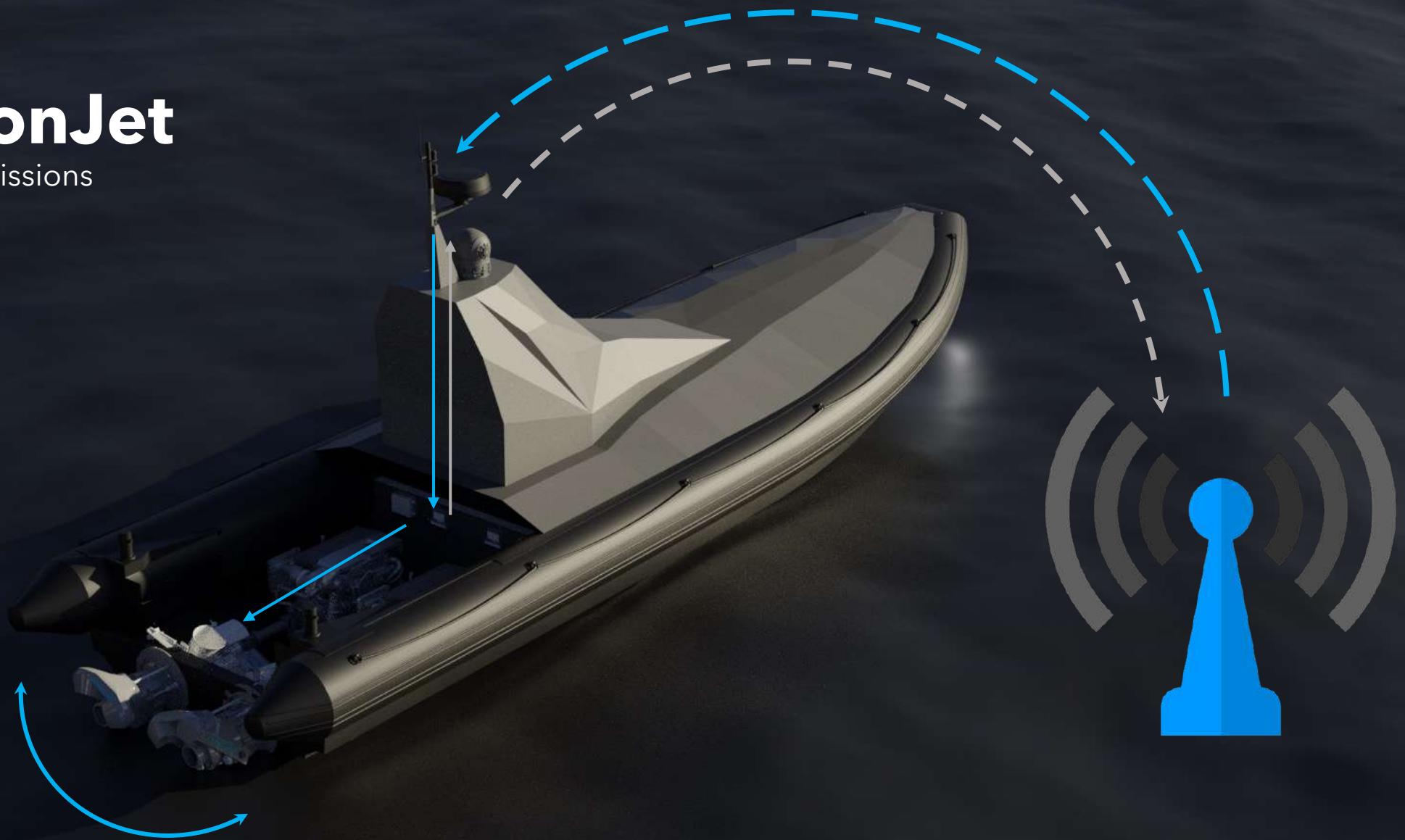
Allows control of Vessel as function of:

- Steering and Thrust
- Azimuth and Thrust
- Heading and Speed
- Heading and Thrust
- Waypoints and Speed (under development)



HamiltonJet

Controls for all missions



HamiltonJet

Controls for all missions



- “Bolt on” module allows third party integration of control system.
 - Enables flexible mission modules with the ability to easily change vessel from conventional control to USV.
 - Fully USV’s can still be manually controlled
-
- COTS parts – JetLink hardware is not vessel specific meaning replacement module can be sourced anywhere globally from any of HamiltonJet’s 55 distributors.
 - Retrofit option for existing bA and AVX systems
 - Over 10 years of experience in the unmanned control segment

Autonomous References

Rafeal/BAE/Lockhead Protector



Patrol.
Single HJ292

Atlas ARCIMS



MCM
Twin HJ292/322

FFI Odin



MCM
Twin HJ322

L3 Harris MAST-13



Patrol
Twin HJ292

Over 10 years experience in the USV market
170+ vessels using HamiltonJet autonomy systems

