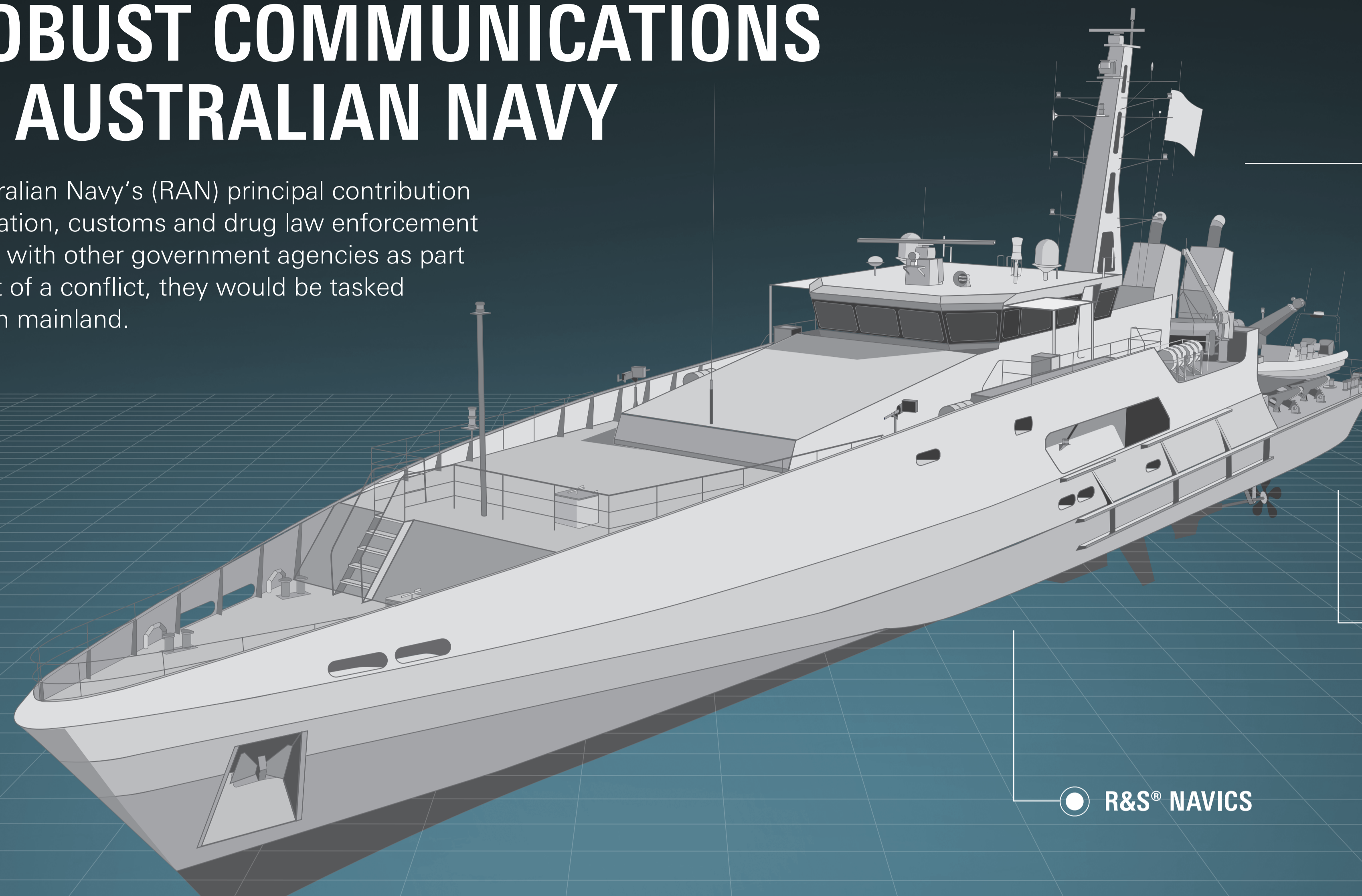# SECURE AND ROBUST COMMUNICATIONS FOR THE ROYAL AUSTRALIAN NAVY

Cape Class Patrol Boats are the Royal Australian Navy's (RAN) principal contribution to the nation's fisheries protection, immigration, customs and drug law enforcement operations. The vessels work hand-in-hand with other government agencies as part of the Australian Border Force. In the event of a conflict, they would be tasked to control the waters close to the Australian mainland.

HIGH FREQUENCY (HF) BEYOND LINE-OF-SIGHT (BLOS) COMMUNICATIONS

VERY-/ULTRA HIGH FREQUENCY (V-/UHF) LINE-OF-SIGHT (LOS) COMMUNICATIONS

R&S® NAVICS

KEY FACTS

- ▶ Displacement: 400 t
- ▶ Length: 58.1 m
- ▶ Beam: 10.6 m
- ▶ Speed: 25 knots
- ▶ Draught: 3.1 m
- ▶ Crew: 21

"As a communications systems integrator, we have unique perspective and capability along with clear technical superiority of our solutions, particularly NAVICS. One of the exciting aspects of this system is its true VoIP switching, it's not a hybrid TDM solution. This makes it both future-proof and scalable. NAVICS also reduces the integration effort and risk associated with incorporating third party components using its versatile IP gateways."

Gareth Evans, Managing Director of Rohde & Schwarz (Australia)

PROTECTION FOR AUSTRALIA'S BORDERS

The Cape class is a ship class of 18 large patrol boats operated by the Marine Unit of the Australian Border Force and the Royal Australian Navy (RAN). Ordered in 2011, the vessels were built by Austal and entered service from 2013 onwards. Cape Class patrol boats are a primary enabler of the Australian Defence Force contribution to Operation Sovereign Borders, which is a whole of government effort to protect Australia's borders and offshore interests.

OVERVIEW

Rohde & Schwarz (Australia) signed a contract with Austal Limited (ASX: ASB) to deliver integrated communications systems for eight Evolved Cape class patrol boats (ECCPB) contracted by the Australian Department of Defence for use by RAN.
The independent company supplies line-of-sight (LOS) and beyond-line-of-sight (BLOS) communications for various RAN vessels. Rohde & Schwarz has provided more than 40 navies with state-of-the-art communications technology.

THE COMMUNICATIONS SYSTEM: NAVICS

NAVICS by Rohde & Schwarz is a secure and fully-IP based system solution for internal and external communications (voice and data) across all security domains for all classes of ships working in a joint or combined environment. The systems interconnect the distributed on-board voice terminals as well as all other subsystems for internal and external communications via a uniform IP network. The communications systems use ruggedized, conventional IT technology with accreditable security provided by Rohde & Schwarz.

THE COMMUNICATIONS SYSTEM: NAVICS MLS

NAVICS MLS uses state-of-the-art VoIP and Ethernet standards. The systems interconnect the distributed on-board voice terminals as well as all other subsystems for internal and external communications via a uniform IP network. Following market tendencies, Rohde & Schwarz has decided to abandon outdated TDM technology, which required heavy proprietary hardware. Instead, NAVICS MLS relies on widely spread industry standards and commercial-of-the-shelf hardware, thus eliminating the risk of expensive obsolete equipment. A multilevel security architecture allows secure, trusted and tamper-proof communications between multiple domains with different security classifications. The communications systems use ruggedized, conventional IT technology with accreditable security provided by Rohde & Schwarz.

EXTERNAL COMMUNICATIONS: ROHDE & SCHWARZ VHF/UHF LOS

LOS communications by Rohde & Schwarz consist of R&S®M3SR software defined radios and R&S®Series4400 VHF/UHF (part of the SOVERON radio family). The R&S®M3SR Series4400 SDR is designed for stationary civil and military secure voice and data communications. It features high modularity and offers military customers a wide range of interfaces as well as radio-communications in line with NATO standards.