

Defence iQ

Maritime Patrol Aircraft  
Market Report  
2017-18



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**MARITIME  
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# SUMMARY

The maritime domain plays host to some of the greatest threats to international security. As Mediterranean nations continue to tackle illegal migration — nearly 16,000 migrants have arrived on Italian shores since January — the wider ISR community must do battle with piracy, drug smuggling and illegal fishing. The operational in-tray is overflowing, with commanders requiring multi-role capabilities that can deliver persistent surveillance for a range of missions.

Industry has worked hard to realise a networked, multi-platform approach to maritime intelligence-gathering. Now more than ever, operators can take advantage of a range of sophisticated sensors, which can plug in to the broader network to deliver high-resolution coverage.

As data linkage approaches maturity, data exploitation takes a front seat. Maritime ISR cannot afford to ignore the need for a robust PED function, capable of processing multiple data sources to support intelligent and rapid decision-making. For the operators who are not supplanted by intuitive data analytics, effective training will be key. Only then can they meet the challenge of delivering accurate surveillance to support global maritime security, no matter the challenge at hand.

Ahead of the 15th annual [Maritime Reconnaissance and Surveillance](#) summit (Rome, Italy; 27-28 September), where over 150 members of the ISR community will gather, this report explores the latest acquisitions, requirements and holdings of maritime patrol aircraft across international forces...

*Note: All information herein is intended as a guide and is not to be considered exhaustive. We rely on the input from our community and such, if readers have updates or insight we may have missed, or note any inaccuracies, we encourage them to contact us. Defence IQ accepts no responsibility for how this information is used.*



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# Key MPA and maritime UAV Programmes & Requirements

## Australia

Australia's first Boeing P-8A Poseidon maritime multi-mission aircraft completed its maiden flight in the United States on the 24th May 2016 and was flown to Australia in late 2016.

The first eight aircraft, replacing part of the Royal Australian Air Force's fleet of 19 AP-3C Orion maritime patrol aircraft, are expected to be fully operational by 2021.

They will work in conjunction with up to seven Northrop Grumman MQ-4C Triton unmanned aerial systems, the first of which is unlikely to enter service until the early 2020s following developmental testing.

The Royal Australian Navy (RAN) has opened a competition for an unmanned rotorcraft, which may be filled by the UMS Skeldar V200 design.

One system will be acquired for land-based risk-reduction testing and training ahead of a full-scale acquisition of an unmanned air vehicle for shipborne operations aboard new frigates.

## Brazil

FT Sistemas SA has sold an FT-100 unmanned aerial vehicle (UAV) to the Brazilian Navy, marking its first sale to the service.

The UAV is to be used by the Brazilian Marine Corps for patrol and surveillance operations.

## Chile

IMP Aerospace of Halifax, Nova Scotia, announced on the 17th October 2016 that it was contracted by the Chilean Navy to provide service-life extension, depot maintenance, and avionics upgrades for the service's two Lockheed P-3A Orion maritime patrol aircraft under the Orion III programme.

The aircraft are also to receive a cockpit upgrade.

## Colombia

The Colombian Navy (ARC) has established a new unmanned aerial vehicle (UAV) centre at the Marine Training Base (BEIM) near its Caribbean operating base for counter-narcotics and offshore security operations.

So far two UAV types are operated from Coveñas; the small Bravo and larger Terraco UAVs, both of which have been designed and manufactured by



the ARC.

## Costa Rica

The Costa Rican Air Surveillance Service (SVA) has received two new Harbin Aircraft Industries Group (HAIG) Y-12E Harbinger twin-turboprop light transports.

## Germany

A naval vertical take-off UAV is planned to enter service from 2018. Schiebel and Diehl are offering the former's Camcopter UAV for ship-borne operations.

## Greece

Lockheed Martin has begun work on the mid-life upgrade (MLU) of Greece's P-3B Orion maritime patrol aircraft (MPA) fleet.

The launch of the effort to modernise and refurbish four of the five P-3B aircraft that are owned jointly by the Hellenic Air Force and Hellenic Navy follows the awarding of a \$141.9 million contract.

This provides for the reactivation of one aircraft, as well as the procurement of software and hardware kits for the modernisation of a total of four aircraft.

This MLU is planned to complete by the end of July 2019.

## India

Deliveries of the four additional Boeing P-8I Neptune long-range maritime multi-mission aircraft ordered for the Indian Navy (IN) in July for \$1 billion are expected to begin in 2020.

The aircraft will supplement eight P-8Is the IN ordered in 2009 for \$2.1 billion. All eight were delivered by 2015.

The purchase of six multi-mission aircraft for the Indian Coast Guard (ICG) for INR55 billion received acceptance of necessity (AON) clearance on the 23rd December 2016 from India's Defence Acquisition Council (DAC).

A ceremony was held at Indian Naval Station Rajali, Arakkonam, on the 29th March 2017 to officially retire the Tu-142M from Indian Navy Service. The type is being replaced by the Boeing P-8I Poseidon.

## Israel

The Israeli Air Force (IAF) has revealed plans to increase the number of Hermes 900 Kochav unmanned aerial vehicles (UAVs) that it operates by a factor of six during 2017.

## Italy

The Italian Air Force has received its first two examples of the Leonardo P-72A maritime patrol aircraft.

Four P-72As are on order. Final deliveries are due to be completed this year.

## Japan

The P-1 is replacing the Japan Maritime Self-Defense Force's (JMSDF's) current Kawasaki (Lockheed Martin) P-3C platform, with 65 planned for the service.

Kawasaki Heavy Industries has so far delivered 10 P-1s to the JMSDF.



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*“ New Zealand plans to replace its fleet of six Lockheed P-3K2 Orion maritime patrol aircraft by 2026. ”*

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## Malaysia

Malaysia has reportedly asked Japan for some of its retired Lockheed Martin P-3 Orion anti-submarine aircraft, as the Southeast Asian nation seeks improved maritime domain awareness.

## Mexico

The Mexican Secretariat of the Navy (SEMAR) has deployed Arcturus T-20 JUMP unmanned aerial vehicles (UAVs) to the coast of Sonora for maritime surveillance operations.

The Arcturus T-20 JUMP surveillance system includes three UAVs.

## New Zealand

New Zealand published its New Defence Capability Plan in November 2016, which includes plans to replace its fleet of six Lockheed P-3K2 Orion maritime patrol aircraft by 2026.

Japan's Kawasaki Heavy Industries (KHI) is offering its P-1 maritime patrol aircraft (MPA) to New Zealand.

SAAB has also confirmed that New Zealand has been identified as a potential customer for its Swordfish maritime patrol aircraft (MPA).

## Norway

The US State Department has approved the sale of five Boeing P-8A Poseidon maritime multi-mission aircraft to Norway.

## South Korea

In September 2015, it was reported that South Korea is advancing plans to procure an initial 12 retired S-3 Vikings to augment the Republic of Korea Navy's P-3C/CK Orion fleet, following the retirement of its Grumman S-2 Trackers.

## Taiwan

Delivery of the final Republic of China Air Force (RoCAF) P-3C was expected in July 2016.

Taiwan acquired 12 surplus US Navy P-3Cs, which have been refurbished and upgraded by Lockheed Martin.



### UAE

Work has commenced at Saab to modify a pair of Bombardier Global 6000 business jets to its “swing-role” GlobalEye configuration for lead customer, the United Arab Emirates.

A \$1.27 billion contract was signed with the UAE at the Dubai air show in November 2015 and the aircraft will operate in airborne early warning and control (AEW&C), maritime and land surveillance and electronic intelligence roles. No delivery schedule has yet been revealed.

### Ukraine

The United States delivered 24 AeroVironment RQ-11B Raven unmanned aircraft systems to Ukraine on the 27th July 2016.

The package included 72 hand-launched Raven intelligence surveillance, and reconnaissance (ISR) unmanned aerial vehicles and associated equipment.

### U.K.

The UK Ministry of Defence is to continue its research and development work on a rotary-wing unmanned air system (RWUAS) with Leonardo. Valued at £8 million (\$9.8 million), the jointly funded, two-year activity covers a second phase of capability concept demonstrator activity with an optionally piloted AgustaWestland SW-4 Solo helicopter.

The Royal Navy is looking to use its Unmanned Warrior exercise, taking place later this year to assess “all options” for replacing its Boeing/Insitu ScanEagle unmanned air vehicles.

Procured under a two-year urgent operational requirement deal in June 2013 to support operations in Afghanistan, the ScanEagle contract has been renewed, but limitations to further extensions mean the system will retire from UK service at the end of 2017.

### U.S.A.

The USAF operates 27 Lockheed Martin U-2 reconnaissance aircraft and 28 Northrop Grumman RQ-4 Global Hawk Block 30 unmanned aerial vehicles (UAVs). Under its latest plan the USAF is making upgrades to the RQ-4 in anticipation of U-2 retirement in 2020.

For Asia-Pacific countries seeking a smaller ASW/ASuW platform, Lockheed Martin is proposing ex-USN S-3 Viking aircraft, up to 100 examples of which are kept in flyable storage in Arizona.

Procurement quantities for the US Navy’s Northrop Grumman MQ-4C Triton are to be reviewed, following initial operational test and evaluation (IOT&E) and operational deployment.

The navy currently plans to purchase 70 MQ-4Cs, which is sufficient to maintain an operational fleet of 20 to mount continuous patrols over 5 surveillance orbits. Another 40 are to replace attrition losses.

Northrop has been contracted to build 10 more MQ-8C Fire Scout unmanned rotorcraft for the USN, taking its total orders for the ISR UAV to 29.

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*“ USAF is making upgrades to the RQ-4 in anticipation of U-2 retirement in 2020. ”*

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# Global Airborne ISR / MPA Inventories

The following tables outline current known holdings of manned ISR and maritime patrol aircraft across the major armed forces of the world as of December 2016. Information herein has been sourced from *Flight International* and independent consultants. Information is subject to change.

Country	Type	Active	Ordered
Algeria (Air Force)	King Air 200/350	3	
Angola (Air Force)	C212	4	
Argentina (Navy)	King Air P-3B S-2	4 4 2	
Australia (Air Force)	737 (P-8A)	1	5+4
Bahamas	King Air 350	1	
Bangladesh (Navy)	Dornier 228NG	2	
Brazil (Air Force)	EMB-110	10	
Canada (Air Force)	P-3 (CP-140)	17	
Chile (Navy)	C295 EMB-110 P-3A P68	3 5 3 1	6

Country	Type	Active	Ordered
China (Air Force)	737	2	
China (Navy)	Y-8	5	
Colombia (Air Force)	Citation Ultra	5	
Colombia (Navy)	CN325	3	
Denmark (Air Force)	Challenger 604	3	
Ecuador (Navy)	King Air 200/300 CN325	5 2	
Equatorial Guinea (Air Force)	C295		1
France (Navy)	ATL-2 Falcon 20/200 Falcon 50	22 5 8	
Germany (Navy)	Dornier 228/NG P-3C	2 8	
Honduras (Air Force)	King Air 200	1	
India (Navy)	737 (P-8I) BN-2 Dornier 228 Il-18 Tu-142	8 11 25 5 8	12 12
Indonesia (Air Force)	737 CN325	3 2	
Indonesia (Navy)	C212 CN325 Nomad	6 3 28	2+3



Country	Type	Active	Ordered
Iran (Air Force)	F-27 P-3F	1 5	
Iran (Navy)	F27	2	
Ireland (Air Corps)	CN325	2	
Israel (Air and Space Force)	1124 Westwind	3	
Italy (Air Force)	ATL-1	4	
Japan (Maritime Self Defence Force)	P-1 P-3C	8 78	2+60
Malaysia (Air Force)	King Air 200	4	
Mali (Air Force)	F406 Caravan II		3
Malta (Air Wing)	BN-2 King Air 200	1 2	1
Mauritania (Air Force)	BN-2 Cessna 208 PA-31T	3 2 2	1
Mexico (Air Force)	ERJ-145	2	
Mexico (Navy)	C212 CN325	8 6	1
New Zealand (Air Force)	P-3K	6	
Nigeria (Air Force)	ATR 42	2	

Country	Type	Active	Ordered
Norway (Air Force)	737 (P-8A) P-3C/N	6	5
Oman (Air Force)	C295 Skyvan	4 3	
Pakistan (Navy)	F27 P-3C	7 6	
Peru (Navy)	F60 King Air 200	2 3	
Poland (Navy)	An-28	9	
Portugal (Air Force)	C295 P-3C	5 5	
Russia (Navy)	Il-28 Il-38 Tu-142	1 20 24	
Singapore (Air Force)	F50	5	
South Africa (Air Force)	DC-3	5	
South Korea (Navy)	P-3C/CK S-3	16	12
Spain (Air Force)	C212 CN325 P-3A/M	4 8 5	
Sri Lanka (Air Force)	King Air 200/1300	2	
Taiwan (Air Force)	P-3C S-2	8 11	
Thailand (Navy)	Dornier 228 F27 P-3T	7 2 1	

Country	Type	Active	Ordered
Trinidad & Tobago (Air Guard)	Merlin IV/Metro	2	
Turkey (Air Force)	CN325	2	
Turkey (Navy)	CN325	6	
Ukraine (Navy)	An-148		1
UAE (Air Force)	Dash 8	2	
United Kingdom (Air Force)	737 (P-8A)		9
United States (Navy)	737 (P-8A) P-3C	53 78	27+11
Uruguay (Air Force)	C212	4	
Uruguay (Navy)	King Air 200	1	
Venezuela (Navy)	C212	3	
Vietnam (Air Force)	An-28	1	
Vietnam (Navy)	DHC-6 Guardian 400	3	

# Global UAV Inventories

The following tables outline current known holdings of unmanned ISR aircraft across the major armed forces of the world as of December 2016. Tables include both air forces and navies as maritime tasks are occasionally conducted by both services. Information herein has been sourced from *Flight International* and independent consultants. Information is subject to change.

## EUROPE



Country	Type
Belarus	Grif-100
Belgium	B-Hunter (12)
Croatia	Hermes 450 Skylark I
Czech Republic	Raven
Denmark	Raven-B Sperwer Aerovironment UAVs on order
France	Heron TP MQ-9A Reaper (6 + 3 on order + 3 more required) 14 Patrollers on order for delivery by 2019 (Army) Sperwer II (30 + 5 on order) Skylark I
Georgia	Hermes 450

# EUROPE



Country	Type
Germany	Heron I (3); 3-5 Heron TPs to be leased from 2018; K20; Luna; Aladin; Mikado; Camcopter (Navy); MQ-4C Triton on order
Hungary	Skylark I
Ireland	Orbiter
Italy	MQ-1B Predator (9); MQ-9B Reaper (6); P.1HH Hammerhead [6] Raven-B; Camcopter S-100 (1- Navy); Scan Eagle (Navy)
Lithuania	Scan Eagle
NATO	Falco (20); Shadow 200 (12); 5 RQ-4 Global Hawk on order
Netherlands	Scan Eagle; Raven; Sperwer; Skylark I; Aerostar; Aladin; Raven B; Puma AE; Wasp AE
Norway	Aladin

# EUROPE



Country	Type
Poland	Scan Eagle; Orbiter (12); Heron (2 on loan); Skylark I; Aerostar; Flyeye (Mini-Army)
Romania	Shadow 600; Scan Eagle
Russia	Searcher; I-View; Bird Eye 400
Serbia	Orbiter
Spain	RQ-11B Raven; SIVA (3); Searcher; 4 Predator B on order
Sweden	Sperwer; Shadow 200 (2 Systems); Puma AE/Wasp (12 + 18 on option)(Army)
Switzerland	Ranger (24); Hermes 900 (6 on order for delivery by 2020)
Turkey	Heron (10); MQ-1B Predator (6); Shadow 600; Gnat 750 (6); I-Gnat ER (16); Searcher II; Aerostar; Bayraktar (200+); Anka (10 on order, delivery 2016-2018); Karayel; Anka (15 on order – Police); Bayraktar (15 on order – Police)

# EUROPE



Country	Type
UK	Watchkeeper (54 on order); Hermes 450 (10 on loan); MQ-9A Reaper (10); 20+ Certifiable Predator B (Protectors) to be ordered; T-Hawk (18 were operated in Afghanistan); Desert Hawk III (239 were operated in Afghanistan); Raven B; Black Hornet (Micro UAV (324) – 64 were operated in Afghanistan); Scan Eagle (Navy) [to be retired by end 2017]
Ukraine	RQ-11B Raven (24)

# MIDDLE EAST & NORTH AFRICA



Country	Type
Afghanistan	65 Scan Eagle on order for delivery by mid-2018
Egypt	Patroller on order
Iran	H-110; Fotros; Shahed 129; Yasir
Iraq	4+ Rainbow CH-4B; Scan Eagle on order
Israel	Heron 450; Aerostar; Hermes 900 Kochav; Skylark I
Jordan	Camcopter; Falco
Lebanon	Raven; 4 Scan Eagle
Saudi Arabia	Falco
Tunisia	Scan Eagle
UAE	Camcopter (80 + 20 on option); Predator XP; P.1HH Hammerhead (8)



## SUB-SAHARAN AFRICA



Country	Type
Angola	Aerostar
Cameroon	Scan Eagle on order
Kenya	Scan Eagle on order
Nigeria	Indigenous Gulma TUAV
South Africa	Vulture; Seeker II

# ASIA-PACIFIC



Country	Type
Australia	Heron (3); Raven; Skylark I
Azerbaijan	Heron
China	Vulture (1) Cloud Shadow Note: many indigenous designs operated and under development
India	<b>Navy:</b> Heron (50 Air Force + more Searcher II; Rustom I & II (100+); <b>Air Force:</b> Heron TP (10 on order)
Indonesia	Searcher
Japan	3 RQ-4 Block 30 Global Hawk on order
Malaysia	Scan Eagle
Pakistan	Falco; Shahpar (Army); Burraq; Luna X-2000; Scan Eagle on order?
Singapore	Heron; Hermes 450; Searcher; Aerostar; Scan Eagle
South Korea	Global Hawk (4 on order); Searcher; Skylark II

## ASIA-PACIFIC



Country	Type
Sri Lanka	Searcher; Blue Horizon
Thailand	Searcher II; Aerostar
Turkmenistan	Falco

# NORTH AMERICA



Country	Type
Canada	Heron (3); Sperwer; Skylark I & II; Scan Eagle; RQ-21A Blackjack [5] on order for delivery in 2017
USA	<p><b>Army:</b> MQ-1C Gray Eagle (131+);                      RQ-11 Raven (1,272);                      I-Gnat ER; MQ-5B Hunter;                      RQ-7B Shadow;                      RQ-16; RQ-20 Puma;                      Wasp (22,000 requirement)</p> <p><b>Navy:</b> MQ-4C Triton (70 on order) – IOC 2016;                      Heron (2);                      MQ-8B Fire Scout (168);                      MQ-8C Fire Scout (29 planned);                      RQ-16 T-Hawk (372);                      Scan Eagle, RQ-21A Blackjack (6 on order – IOC achieved)</p> <p><b>Air Force:</b> RQ-4 A/B Global Hawk (66 – 28 Active);                      MQ-1B Predator (up to 268 delivered);                      RQ-11B Raven (108);                      Wasp (442);                      Scan Eagle;                      MQ-9B Reaper (319);                      RQ-170 Sentinel</p> <p><b>SOCOM:</b> Camcopter;                      RQ-21 Integrator;                      Puma</p> <p><b>Marines:</b> RQ-11B Raven;                      RQ-7B Shadow;                      K-Max; Wasp III;                      Scan Eagle;                      RQ-20A Puma on order</p>


# LATIN AMERICA & THE CARIBBEAN




Country	Type
Argentina	Yarara
Brazil	Heron (15); Hermes 450 (more on order); Hermes 900; FT-100 Horus
Chile	Hermes 900
Colombia	Hermes 450 and 900; Scan Eagle; Iris; Bravo [Navy]; Terraco [Navy]
Ecuador	Heron (2) (Navy); Searcher II
Mexico	Hermes 450 (4?); Heron (3); Hermes 900 (2); Skylark 1; Orbiter
Venezuela	Arpia; Gavilan

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