



Click here or visit [www.epicos.com](http://www.epicos.com)

**Volume 8 Number 13** – Wednesday, 30 March 2016

#### **Part I: Israeli Defence Industry**

1. Israeli Aerospace and Defence Industry
2. Interview with Mr. Amihai Dekel , Business Development Manager of the Company Thermal Beacon Ltd.
3. Epicos “Industrial Cooperation and Offset Projects”
4. Incorporating proprietary software in Electronic Warfare systems
5. Provision of an advanced Thermal Imaging Camera with Zoom Lenses for Electro-Optical (EO) system manufacturer and integrators
6. News from our A&D Business Network

#### **Part II: Epicos Newsroom**

1. Boeing Forecasts Latin American Commercial Fleet to Triple By 2035
2. Harris Corporation Receives \$11 Million Order from African Nation for Falcon III Tactical Radios
3. UK defence chief says Qatar warplane deal 'on the table'
4. Air New Zealand mulls Virgin Australia exit
5. India to acquire Raytheon Stinger missiles

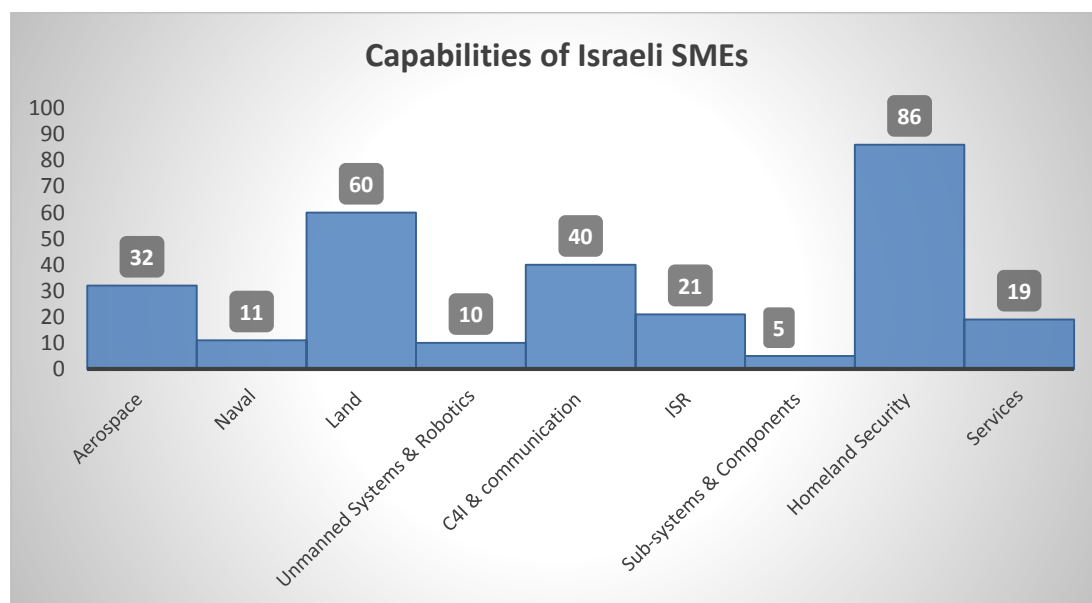
## Israeli Aerospace and Defence Industry



Despite its small size and overwhelming political problems, and perhaps even because of them, Israel has succeeded in developing what can someone probably, describe as a defence industry with comprehensive capabilities in ground, air and sea combat. This may be attributed to the unmatched pool of highly skilled workers and the world-renowned research and academic capabilities that the country has. The Israeli defence industry produces a wide range of products ranging from ammunition, small arms and artillery pieces to sophisticated electronic systems, UAVs and technological advanced tanks, such as the Metkava. The quality and flexibility of the products manufactured drew the attention of customers worldwide and currently more than 70% of the defence industry products are exported.

The starting point for the metamorphosis of the Israel's Aerospace and Defence industry infrastructure was the 1967 Six-Day War. During the war, France imposed an embargo on arms sales to Israel, including the Mirage planes already on order from the Dassault aircraft factory. As a result Israel started to develop its own industry capabilities. Driven from the outmost motive, survival, Israeli Aerospace and Defence industry flourished and progressively became one of the most important industries globally.

Engineers with combat experience gained from the obligatory serving in the Israel Defence Forces (IDF) gave a significant advantage in the national defence industry. There is an almost symbiotic relationship between the Israel Defence Forces (IDF) and senior defence industry engineers and in general employees. Most of them are former officers of IDF and many continue to serve in the reserves. This fact provides an extra advantage to the Israeli defence industry and the reason is that employees convert their accumulated combat experience to technological innovation. Additionally, the army plays the role of a "big school" as it actually performs a nationwide screening program through which identifies young people with talent in advance technologies and puts them through rigorous training via elite programs and other military functions. Furthermore, the army helps young people to establish personal networks that often form the basis for later partnerships in the industry.



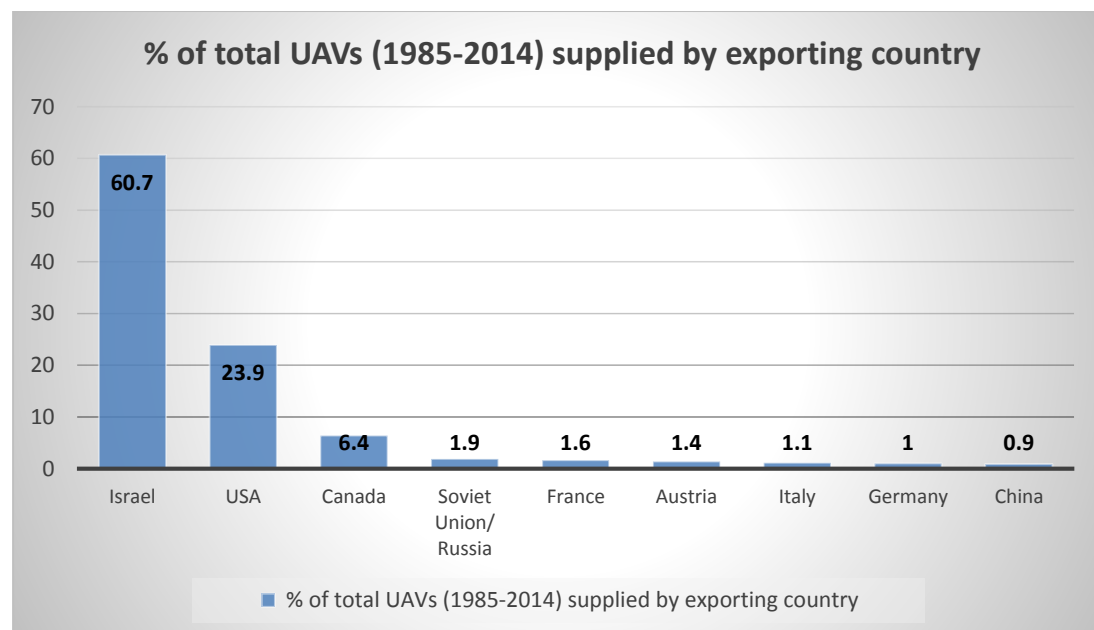
Source: <http://en.sibat.mod.gov.il/Industries/SMEs/Pages/SMEs.aspx>

According to SIBAT, the Israel MOD International Defense Cooperation directorate there are currently in the country 32 SMEs with capabilities in the aerospace sector, 11 with naval capabilities, 60 with Land sector capabilities, 10 in the unmanned systems and robotics, 40 in the C4I & communication sector, 21 in the ISR sector, 5 in the sub-systems and components sector, while 86 provide services and products to the homeland security (HLS) sector. Finally, there are 19 companies providing services.

Israel's innovative systems in the aerospace sector, include advanced aerostructures, weapon systems and wide range of sensors and avionics including EO, radar and electronic surveillance, used for targeting, reconnaissance and self-defence. All are integrated in the world's most advanced fighter aircraft, including Lockheed Martin's F-35 and F-16, Boeing's F-15 and F/A-18, Sukhoi Su-30, Dassault's Mirage 2000, Eurofighter Typhoon, Saab's Gripen and more.

One specific domain in which Israeli aerospace industry excels, is that of the production of UAVs. It is indicative that the country is the largest exporter of drones. Between 2010 and 2014, it delivered 165 units across the globe. The US came second with 132, followed by Italy's (37). Furthermore, Israel has accounted for the majority (60.7%) of drone exports worldwide since 1987.

Israeli unmanned vehicles are operating in Latin America, the Indian Ocean, Europe, Asia, Africa, and the South Pacific.



Source: <http://www.theguardian.com/news/datablog/2015/mar/16/numbers-behind-worldwide-trade-in-drones-uk-israel>

Additionally, the Israeli industry is building and equipping the manned and unmanned platforms used by navies around the world to maintain offensive and defensive naval capability, providing situational awareness, command and control for the combat systems and naval special operations.

In the land sector, Israeli industry provides a wide array of equipment ranging from the Merkava Mk4 and Namer armored Infantry Fighting Vehicles (IFS), to precision missiles and

guided projectiles, advanced electronics systems, robotic systems, lifesaving kits, sophisticated weapons and ammunition.

For Further information about the Israeli A&D industry visit:

<http://www.sibat.mod.gov.il/sibatmain/defense/index.html#p=3>

Kyriazis Vasileios,

Epicos Newsletter Head Editor

## Interview with Mr. Amihai Dekel , Business Development Manager of the Company Thermal Beacon Ltd.



**Thermal Beacon Ltd**  
**Secure Optical Signaling**



Mr. Amihai Dekel, Business Development Manager of the company Thermal Beacon Ltd., gave an exclusive

interview to Epicos, regarding the position of the company in the international and national markets. Among others, he stated that: "At the end of the 20<sup>th</sup> century thermal sights started to enter military operations in large scale. At this point, the company was founded on the understanding that there are no relevant identification tools for friend or foe using thermal sights."

➤ **Could you please describe the current position of Thermal Beacon in the national and international market?**

Thermal Beacon Ltd. is the owner of patented, combat proven, thermal beacons that save lives and allow identification of friendly forces. The company is a market leader in the field of optical recognition of forces and continues to develop new and advanced solutions.

➤ **Could you please describe briefly the history of Thermal Beacon?**

At the end of the 20<sup>th</sup> century thermal sights started to enter military operations in large scale. At this point, the company was founded on the understanding that there are no relevant identification tools for friend or foe using thermal sights. Thermal beacon developed thermal beacons in all spectrums (IR, SWIR, MidIR, LongIR) that allow identification of forces.

➤ **What are the main business sectors that Thermal Beacon is active in?**

Thermal beacons in general develops applications for the following sectors:

1. Military vehicles/tanks/APC.
2. SF/DEA/covert operations.
3. Naval boats, borders, and lighthouses.
4. Search and rescue operations.
5. Safety marking of friends forces.

➤ **Can you please describe the main projects that Thermal Beacon has implemented so far?**

Some examples of projects our beacons have been used are:

- **Military-** Identification of advancement in urban 3d theatre to answer the questions regarding ROE (Rules of engagement) where presence of friends/foes is uncertain.

When inside a building and support is requested for "one floor up", the beacon gives assured forces location.

- **Military/Navy**- Maneuvering forces that need to be identified by air or other units for progress in combat theatres.
- **Military**- Maneuvering forces boundaries to allow firing of parallel units.
- **Military**- Identification of forward line of allied forces to allow operation of units.
- **Military**- Identification of downed aircrew that are hiding. The RF on their emergency systems brings the rescue; the thermal beacon pinpoints their location (if they're in a bush for example).
- **Military**- Identification of dropped equipment in large distances to allow pickup.
- **Military**- while driving logistic trail in desert the beacon allows to see the vehicles even in the dust.
- **Military**- In combat fueling the beacon allows the tanker to know who needs fuel first.
- **Military**- Using the beacon APC can communicate to infantry which APC can carry personnel or injured.
- **SF/Police**- Covert identification of deep cover units, jammers do not affect the thermal beacons.
- **Naval**- lighthouse and oilrigs when there is a need to mark them in extreme weather condition.

Friendly fire is no longer considered as an inescapable result of the fog of war. Though fratricide accounts for a small percentage of casualties, it is often the most tragic, considering that it should and possibly can be avoided.

The modern battlefield and training zone, introduces growing challenge of identifying friendly troops, when the combination of growing distances, and confusing thermal imaging, is in fact: a disaster waiting to happen.

The increasing sophistication of weaponry and CQB (close quarter battle) practices, lead to a situation in which overall American soldiers' casualties in the late 20th and 21st centuries have diminished, yet overall percentage of deaths due to friendly fire on ground force actions and training has risen dramatically.

A side effect of this growing concern is the increase usage of combat proven **Thermal Beacons** as cost effective solution, yet simple to operate, way to identify friendly forces.

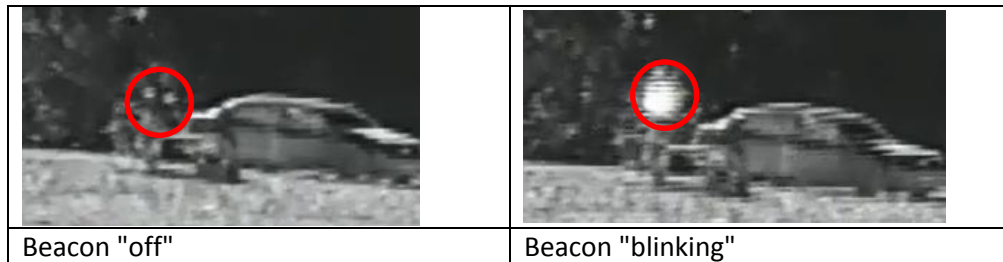
**Thermal Beacon Ltd.** is a private owned company that develops and produces high-end innovative thermal optical IFF (Identification Friend or Foe) emitters that can save lives.



The main problem our solution answers is identification of forces using thermal sights and observation systems. **Most deadly weapons and effective observations today are equipped with thermal sights**; we have the solution that allows identification in close and far distances in all thermal spectrums.

Thermal beacons are products that emit in the 3-12 (both MidIR and LongIR) micron spectrum and are visible using thermal cameras and sights through dust, mist, and rain to great distances.

Here is picture of the beacons radiating in 3-5 micron:



Our product has the benefit of operating in 8-12 LongIR spectrum; this is a huge advantage since most small thermal sights are Long IR.

Unlike RF products, this technology is not detectable by radios and intelligence capabilities. Since no RF are transmitted, it does not reveal its location to the foe.

➤ **Could you please tell us if Thermal Beacon has any affiliated companies?**

Thermal Beacon Ltd. works closely with several countries and industries with its array of products as OEM and direct selling. For example, many of our products received NATO Stock Number (NSN) because there were operational needs (examples in the applications above) for our product.

➤ **What are the next steps and priorities of your company?**

The next step and priority of the company is to find new partners and cooperation's that will help us expand our international network.

**For Further Information Contact:**

**Amihai Dekel**

**Business Development Manager**

Mobile: +972 50 7737722

Mail: [Amihai.d@thermalbeacon.com](mailto:Amihai.d@thermalbeacon.com)

Skype: Amihai.dekel

## Epicos "Industrial Cooperation and Offset Projects"



Epicos "Industrial Cooperation and Offset Projects" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met...

[For Further Information Press Here](#)

### Incorporating proprietary software in Electronic Warfare systems



A software company with extensive experience in the design and development of systems for the defense industry and complementary software solutions for Electronic Warfare (EW) systems, is offering collaboration in the frame of an offset program, for the enhancement of Electronic Warfare systems capabilities, as well as the thereafter cooperation in design and sales of new EW systems, by incorporation/integration of an off the shelf state of the art proprietary software application of the company, in/with associated products of the partnering company/organisation.

[For Further Information Contact our ICO Department](#)

Mail at: [a-kintis@epicos.com](mailto:a-kintis@epicos.com)

### Provision of an advanced Thermal Imaging Camera with Zoom Lenses for Electro-Optical (EO) system manufacturer and integrators



A company specializing in the development and production of Electro-Optical and Precision Motion Control Systems for the aeronautical and military industry, is proposing to Aerospace and Defense (A&D) primes or lower tier companies, an existing and fielded product of the company, a Thermal Imaging Camera (FLIR), with Zoom Lenses. The Thermal Imaging Camera can be used either as a stand-alone system, or be integrated in advanced Electro-Optical (EO) Surveillance systems/suites, weapon posts, or sites under development.

[For Further Information Contact our ICO Department](#)

Mail at: [a-kintis@epicos.com](mailto:a-kintis@epicos.com)

## News from our A&D Business Network

### BAE Systems Awarded Contract to Refurbish CV90 Vehicles for Sweden



The Swedish government has awarded BAE Systems a contract to refurbish 262 Combat Vehicles 90 (CV90) for the Swedish Army. The company's work will include refurbishing the chassis and upgrading the vehicle's survivability and turrets, as well as enhancing combat system performance. Together, these efforts will help increase the vehicles' lifespan in support of Army capabilities.

"This is a very important program for BAE Systems and the Swedish Army," said Lena Gillström, managing director of BAE Systems Weapons Systems in Karlskoga, which builds the turrets. "With this refurbishment and the introduction of the new Battlefield Management System, these vehicles will take a step into the era of digitized defense to strengthen the Army's capability to meet future threats."

BAE Systems will work closely with the customer throughout the program. Work starts immediately with deliveries beginning in 2018 and running through 2020.

"For the Swedish Army, CV90 has proven its value and capability over the years," said Tommy Gustafsson-Rask, president of BAE Systems Hägglunds AB in Örnsköldsvik. "CV90 is already in service in seven countries and now, with this refurbishment program, we'll further extend the CV90's contribution to Sweden's defense."

CV90 is a family of Swedish tracked combat vehicles designed by FMV, BAE Systems Hägglunds, and BAE Systems Weapons Systems, with more than 4 million engineering hours contributing to the development of this advanced Infantry Fighting Vehicle (IFV). The Swedish version of the IFV is outfitted with a turret equipped with a 40 mm autocannon.

The Swedish Army has a fleet of 509 CV90s. Other countries currently using the vehicle are Norway, Denmark, Finland, Estonia, the Netherlands, and Switzerland.

The contract was awarded to HB Utveckling AB, a joint venture between BAE Systems Bofors AB, part of BAE Systems Weapons Systems, and BAE Systems Hägglunds AB.

For Further Information [Click Here](#)



## SAAB and TATA Power SED to Jointly Develop and Manufacture Self-Protection Systems Forland-Based Platforms in India



Defence and Security Company Saab and Indian company Tata Power Strategic Engineering Division (Tata Power SED) have started the process of manufacturing Self-Protection Systems for Land-based Platforms, for the Indian market and for

export to Saab's global market.

The partnership will also involve joint development of the next generation Self-Protection System. The process of Transfer of Technology for production of initial orders for Saab's global customers has already commenced at Tata Power SED's facility in Bangalore. Tata Power SED will eventually manufacture a large part of the system in India and also do final assembly. Tata will also be responsible for marketing the system in India.

"Saab is fully committed to working with Indian industry to Make in India, and this partnership is another step in that direction. Tata Power SED's strengths in Defence Electronics manufacturing are a perfect complement to Saab's expertise in Electronic Warfare systems, sensors and self-protection systems for all domains", says Jan Widerström, Chairman and Managing Director, Saab India Technologies.

Land Electronic Defence System (LEDS) 50 MK2 is a subset of an integrated and modular, active defense system consisting of a Laser Warning Segment (LWS) and Effector Control Segment (OSCS). The solution provides combat personnel with vital situational awareness on laser threats and countermeasure availability and areas of coverage/protection offered under dynamic conditions, allowing manual or fully automatic responses against threats.

"Tata Power SED is excited to be a part of this synergetic collaboration that has already been kicked off by Saab and us. Given the long-term potential for self-protection systems for combat vehicles, both in India and abroad, we see this collaboration with Saab as an important milestone in boosting India's capabilities in building defence systems. It is perfectly aligned with the actual essence of "Make In India" initiatives being implemented by the Indian government", says Rahul Chaudhry, CEO, Tata Power SED.

For further information, please contact:

Saab Press Centre,  
+46 (0)734 180 018,  
[presscentre@saabgroup.com](mailto:presscentre@saabgroup.com)  
[www.saabgroup.com](http://www.saabgroup.com)  
[www.saabgroup.com/YouTube](http://www.saabgroup.com/YouTube)  
Follow on twitter: @saab

Saab serves the global market with world-leading products, services and solutions within military defence and civil security. Saab has operations and employees on all continents

around the world. Through innovative, collaborative and pragmatic thinking, Saab develops, adopts and improves new technology to meet customers' changing needs.

*Epicos NewsRoom***Boeing Forecasts Latin American Commercial Fleet to Triple By 2035**

Boeing projects Latin American airlines will need 3,050 new airplanes valued at \$350 billion in the next two decades, tripling the region's current fleet size. "Over the long term, Latin American economies will grow faster than the rest of the world," said Donna Hrinak, President, Boeing Latin America. "This growth will create increased passenger traffic in the region and drive Latin American airlines to expand and compete for business that has traditionally been dominated by foreign operators."

To meet increased passenger traffic, Boeing forecasts the region will require more than 2,500 new single-aisle airplanes over the next 20 years, reflecting the continued growth of low-cost carriers and further expansion of networks in the region. Widebody demand is forecasted at 340 new airplanes as regional carriers continue to compete more strongly on long-haul routes. Currently, over two-thirds of twin-aisle departures from Latin America are on Boeing products.

Latin America and the Caribbean now feature a younger fleet than the world average. Average airplane age in the region's fleet continues to drop, going from more than 15 years in 2005 to less than 10 years today. The region has been in a steady replacement cycle since the mid-2000s and that trend will continue as nearly 60 percent of the current fleet is replaced over the next two decades. The addition of the 787 Dreamliner to the LATAM, Avianca and Aeromexico fleets has allowed the airlines to open new routes and gain access to markets that were previously not possible. Aeromexico operates a nonstop 787 Dreamliner flight from Mexico City to Tokyo, a route that previously required a refueling stop.

In 2015, LATAM operated the world's first 787 ETOPS mission beyond 180 minutes from Santiago, Chile to Auckland, New Zealand. Later this year, LATAM will utilize the full 330 minute ETOPS on the same route, trimming 90 minutes off the flight time and saving up to 2,500 gallons of fuel per trip. The 787 Dreamliner's capability and low-cost economics allow Latin American airlines to unlock more point to point connections over remote regions of the world, allowing the airlines to expand their business and attract more customers.

"Boeing products will continue to help our Latin American customers succeed in a very competitive marketplace," said Hrinak.

**Contact:**

Ana Paula Ferreira

Boeing Latin America

+55 (11) 6644-5411

[ana.p.ferreira@boeing.com](mailto:ana.p.ferreira@boeing.com)

For Further Information [Click Here](#)

**Source:** Epicos, Boeing

## Harris Corporation Receives \$11 Million Order from African Nation for Falcon III Tactical Radios

Harris Corporation has received an \$11 million order from an African nation to supply its Falcon III® multiband, multimission radios as part of an ongoing modernization effort.

The order includes the RF-7800H-MP wideband tactical manpack radio, which delivers expanded data capabilities in long-range, beyond-line-of-sight environments; the RF-7850M-HH multiband networking handheld radio, the first international radio to offer wideband communications and mobile, ad-hoc networking along with legacy narrowband waveforms; and the RF-7800V-HH VHF Combat Net Radio (CNR), which provides the ability to communicate with greater speed and range, achieving information superiority on the battlefield.

"Harris' Falcon III radios will support the customer's need for simultaneous, secure voice and high-bandwidth data across a wide range of military missions," said Chris Young, president, Harris Communication Systems. "Our strong presence in the region, coupled with our ongoing investment in advancing Falcon® solutions, enables us to transition customers from their legacy, voice-dominated tactical radios to networked wideband tactical radios."

### About Harris Corporation

Harris Corporation is a leading technology innovator, solving our customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports customers in more than 125 countries, has approximately \$8 billion in annual revenue and 22,000 employees worldwide. The company is organized into four business segments: Communication Systems, Space and Intelligence Systems, Electronic Systems, and Critical Networks. Learn more at [harris.com](http://harris.com).

### Contact Information:

Tim White  
Harris Communication Systems  
[tim.white@harris.com](mailto:tim.white@harris.com)  
260-451-7145

Jim Burke  
Harris Corporation  
[jim.burke@harris.com](mailto:jim.burke@harris.com)  
321-727-9131

**Source:** Epicos, Harris Corporation

### UK defence chief says Qatar warplane deal 'on the table'

Britain's defence minister said on Tuesday that a deal to sell Eurofighter Typhoon warplanes to Qatar was "definitely still on the table".

Michael Fallon, speaking on board a British destroyer anchored in Doha port, said he had held discussions on a possible sale with Qatari officials within the past week.

He added that the deal had not been killed off by a Qatari decision to buy 24 Rafale jets from France.

"It's definitely still on the table," said Fallon, who is in Qatar to attend the three-day Dimdex defence and security fair.

"It's something I have discussed with the new Qatari defence minister, (Khalid bin Mohammad) Al-Attiyah.

"Typhoon is proving itself a very capable aircraft in the skies above Syria and Iraq."

Asked if the French deal could scupper the prospective British sale, Fallon responded: "No".

"Qatar is one of our most important regional partners," added Fallon.

Britain's BAE Systems builds the Typhoon in cooperation with European aircraft maker Airbus and Italian defence firm Finmeccanica.

Britain has long sought to sell Typhoons to Qatar and is in the closing stages of wrapping up a deal to sell the jets to Kuwait.

Two other countries in the Gulf -- Saudi Arabia and Oman -- have also purchased Typhoon jets.

Energy-rich Qatar's spending is being squeezed by falling gas and oil prices but it appears committed to maintaining its defence budget and has previously pledged to increase the size of its air force.

Around 10 of its planes have been used in the ongoing Saudi-led military operations in Yemen.

**Source:** 2016 AFP, Agence France-Presse (AFP)

### Air New Zealand mulls Virgin Australia exit

Air New Zealand announced it was considering selling its stake in Virgin Australia Wednesday, saying it wanted to look at other uses for the capital it has tied up in the airline.

The Kiwi flag carrier is Virgin Australia's largest shareholder, with a 25.89 percent stake worth about Aus\$343 million (US\$262 million) built up as the airlines forged an alliance against trans-Tasman rival Qantas.

But Air NZ "does not want a large minority equity position in Virgin Australia as it focuses on its own growth opportunities", chairman Tony Carter said in a statement to the New Zealand stock exchange.

"Air New Zealand advises that it is exploring options with respect to its shareholding in Virgin Australia including a possible sale of all, or part of its shareholding," the airline said.

As a result, it said Air NZ chief executive Christopher Luxon has resigned from the Virgin Australia board with immediate effect.

"We look forward to continuing our partnership on the Tasman alliance," Luxon said.

Virgin Australia noted the announcement and pointed to its "strong" result for the six months to December 31, which included a Aus\$45.7 million interim net profit.

"Virgin Australia has undertaken a major transformation program that has seen it evolve from a low-cost carrier to a diversified airline group," it said.

When it released its half-year results this month Virgin Australia also announced it had secured Aus\$425 million in loans from its four major shareholders -- Air New Zealand, Etihad Airways, Singapore Airlines and Virgin Group.

Air New Zealand shares closed up 0.35 percent at NZ\$2.86 in Wellington, while Virgin Australia shares were in a trading halt on the Sydney exchange for the announcement.

**Source:** 2016 AFP, Agence France-Presse (AFP)

### India to acquire Raytheon Stinger missiles

The Indian Ministry of Defence has signed an agreement with the U.S. Department of Defense to acquire Stinger air-to-air missiles made by Raytheon Company. As part of the deal, India will receive 245 Stinger air-to-air missiles, as along with launchers and engineering support.

"India joins nations around the globe who recognize that air-to-air Stinger can be a key component of attack and light attack helicopter mission configurations," said Duane Gooden, Raytheon Land Warfare Systems vice president. "Stinger significantly improves the ability of the aircraft to successfully perform today's missions while countering existing threats."

Combat-proven in four major conflicts, Stinger has more than 270 fixed- and rotary-wing intercepts to its credit. It is deployed in 19 nations and with all four U.S. military services.

India's Stinger acquisition is part of a \$3.1 billion deal with the U.S. that includes combat helicopters, weapons, radars and electronic warfare suites.

#### About Stinger

The combination of supersonic speed, agility, highly accurate guidance and control system and lethal warhead gives Stinger the operational edge against all classes of helicopters, UAVs, cruise missiles, and fixed-wing aircraft. Stinger not only has a surface-to-air capability from land and sea, but also an air-to-air capability that can be integrated into most fixed- or rotary-wing platforms.

#### About Raytheon

Raytheon Company, with 2015 sales of \$23 billion and 61,000 employees, is a technology and innovation leader specializing in defense, civil government and cyber security solutions. With a history of innovation spanning 94 years, Raytheon provides state-of-the-art electronics, mission systems integration, C5I™ products and services, sensing, effects, and mission support for customers in more than 80 countries. Raytheon is headquartered in Waltham, Mass. Visit [www.raytheon.com](http://www.raytheon.com) and follow on Twitter @Raytheon.

#### Media Contact

John B. Patterson

+1.520.794.4559

[rmspr@raytheon.com](mailto:rmspr@raytheon.com)

**Source:** Epicos, Raytheon Company