New Generation Saab Surface Radar is on track and in production

The first of Saab’s new generation of Giraffe radars is in production and on track for delivery to its customer in 2016. Saab has also recently completed a further round of testing with the Giraffe 4A radar that again validated the system in a series of real-world operational scenarios.

Defence and security company Saab extended its surface radar portfolio earlier this year. With the introduction of five all-new complementary Giraffe radars for land and sea, there is now a Giraffe option for all kind of needs in air surveillance and air defence. Production of the first Giraffe 4A system for an undisclosed customer is ongoing at Saab in Gothenburg, Sweden. This incorporates the latest technology in radars; Gallium-Nitride (GaN) circuits.

In parallel with this production activity, during August this year Saab conducted a suite of operationally-focussed, deployed field tests with the new Giraffe 4A radar – demonstrating weapons location, air defence and air surveillance functions. These tests, performed at multiple locations, were witnessed by representatives from several countries. All tests met or exceeded the expected performance, with the radar demonstrating impressive functionality against small targets and jamming.

“Saab can now cater for all ground and naval defence radar needs; from VSHORAD to long-range air surveillance and weapons location, with multi-functional capability. Distinctive characteristics for our radars include the use of a stacked beam (digital beam forming), a high update rate, plus superb performance in clutter and jamming resistance,” says Anders Linder, Head of Saab’s business unit Surface Radar Solutions.
The multi-function capability means simultaneous functions for:
- Automatic air and surface surveillance and ‘track-on-jam’
- Classification of targets including hovering and moving helicopters
- High accuracy indication to weapon systems for anti-air and anti-surface engagements
- 360 degree incoming mortar/rocket fire alert and hostile weapons location
- Target designation for long-range surface-to-air missiles

Saab’s combat-proven and highly-regarded surface radar portfolio, including the renowned Giraffe AMB and Arthur radars, has been improved and expanded through the addition of new technologies and designs. Alongside its existing products, Saab is now producing new Active Electrically Scanned Array (AESA) radar variants for land and sea.

These radars use leap-ahead design techniques that put them in a class of their own in terms of performance and capability. For the first time Saab’s Giraffe radars also offer a solution for long-range air surveillance. There is now a Giraffe option for every air surveillance and air defence application, on land and at sea.

Saab has more than 30 years of AESA design experience. This depth of experience – and Saab’s understanding of radar cost, performance, reliability and packaging issues – results in a unique technology solution. Saab’s advanced surface-based radars are highly-effective against multiple ‘difficult’ air targets in the most dense and challenging operational environments.

Members of Saab’s surface-based radar family for land and sea now include:
- Giraffe 1X and Sea Giraffe 1X: short-range radars fitted with an X-band AESA, offering a comprehensive set of 3D functions with impressive performance and flexibility.
• Giraffe 4A and Sea Giraffe 4A: medium- to long-range radars, combining air surveillance, air defence, sense and warn and weapon locating capabilities in a single, low-footprint S-band AESA-based unit.

• Giraffe 8A: a long-range S-band AESA radar, including anti-ballistic missile capability, that pushes performance and functionality to a new level.

• Giraffe AMB and Sea Giraffe AMB: Saab’s existing short- to medium-range surveillance radar and command and control system for ground-based air defence. These combat proven C-band systems have now been enhanced with increased range and coverage.

• Arthur: Saab’s superior mobile combat proven C-band medium-range weapons-locating system which detects and locates enemy fire. With 80 units sold to date, the system’s performance and functionality has now been further enhanced.

Saab’s In-Service Solutions is another vital part of the overall radar family product offering and is currently contracted by more than 20 customers worldwide. Saab’s radar logistics support removes 100 percent of real-life risks related to cost of ownership and has proven to deliver 98.5 percent long-term mission availability.

Finally, Saab also offers a Common Radar Upgrade solution, providing upgrades to or extending the lifetime of customers’ existing (non-Saab) radar systems.

Saab is one of the world’s leading radar suppliers with 60 years of experience and more than 3,000 radar systems in operation in 30 countries.
For further information, please contact:
Saab Press Centre,
+46 734 180 018
presscentre@saabgroup.com
www.saabgroup.com
www.saabgroup.com/Twitter
www.saabgroup.com/YouTube

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