

Thales unveils its new long range ground surveillance radar Ground Observer 80

High-end follow-on to highly successful Thales BOR-A series

Thales, pioneer and world market leader in ground surveillance radars— presents its new long range Thales Ground Observer 80 (GO80) for the first time to international customers. The Ground Observer 80 is the world's highest performing ground surveillance radar made in Germany. It is the high-end follow-on to highly successful BOR-A series - suitable for army, border/coast guard and security applications - providing reliable service in large numbers to 20 customers around the globe.

The Ground Observer 80 with cutting edge radiofrequency and processing technology is specifically designed for border surveillance, target acquisition for indirect fire adjustment and the integration to surveillance/ recce vehicles. The GO 80 ensure high levels of operational efficiency and precision in any operational and climatic environment. Easily deployed, it provides excellent performance levels in a sandy hot desert, cold tundra, or any foggy coastal environment.

“Our engineers have outdone themselves with the GO 80 giving us the best long range ground surveillance radars on the market. Not only does the GO 80 reach further, but it is also more efficient and much lighter than any product of its category on the market today. It only uses half of the prime power and provides higher reliability along with significantly higher mean-time-between-failure (MTBF)”, says Hans Jochen Soelter, Director of Strategy and Business Director for Thales GSR in Germany, where the GO 80 has been developed and is produced.

“We believe that the GO 80 is a product that is perfectly suited for customers present attending IDEX, the regions largest defence trade show. This new generation of ground surveillance radars is highly competitive both in performance and on price”, says Olivier Badard, President Thales International Middle East & Western Asia.

Unparallel combination of range, coverage, accuracy, resolution and features.

The GO 80, instrumented for 80 km range, will detect persons (0.5 m² radar cross section) at ranges up to 24 km, other small targets (1 m²) up to 29 km. Vehicles (20 m²) are detected up to 60 km range and larger targets up to 80 km. These outstanding detection ranges are achieved independent of scan angle, which is a major advantage over electronic-scan GSRs, where range deteriorates with scanning.

The GO 80 can cover full 360°, also in unconstrained rotation. Large scan angles of about 180° (or even more) are necessary in many customers' applications, at borders, coast lines or in security surveillance and cannot be achieved by electronic scan radars, which are limited to 90°/120°.

Within GO 80, up to 5 flexible surveillance sectors of any size up to 360° can be pre-set with individual parameters and will be scanned automatically by the radar.

Given its small range gate sizes (10/20/40 m) tight target formations of any kind can be discriminated and clutter effects on detection are minimized. Facilitated by the outstanding

2000 range gate processing capacity, a 40 km arc for example can be fully covered with small 20 m range increments (a unique feature, not available in any other GSR). The small range gates and a 1.4° antenna beam also provide for highest target resolution and accuracy in both dimensions.

Ground Observer 80 comprises an internal Track While Scan (TWS) tracker which allows for tracking of up to 50 targets in parallel during normal surveillance operation. Target recognition is aided by an Automatic Target Classification function.

With 800 MHz frequency agile operation, low antenna side lobes, variable signal formats as well as output power and high order FFT processing followed by M out of N detection, the Ground Observer 80 features the most comprehensive EPM/ECCM suite in a GSR.

At a weight of only 68 kg (electronic scan radars often weigh more than double of this) the Ground Observer 80 is well suited for integration on vehicles from 3.5T to up and does not constrain mast design for elevated operation on vehicles.

Notes to editors:

GO 80 - World's highest performing GSR

- X-Band, Pulse-Doppler
- Instrumented Range up to 80 km
- N x 360° surveillance; 5 flexible sectors (8°s, 16°s, 32°s scan)
- Detection ranges
- Person 0.5 m²: 24 km
- Person/small target 1m²: 29 km
- Vehicle 20 m²: 60 km
- Azimuth resolution 1.5°
- No dependency of range, AZ accuracy and resolution on scan angle/sector
- 2000 range gates (10/20/40m)
- Full instrumentation of 40 km with 20 m range gates
- Multiple (TWS, ≈ 50) or Single Target Tracking
- Automatic Target Classification
- Comprehensive ECCM/EPM: frequency agility 800 MHz , low antenna sidelobes, variable TX power and signal formats
- Standard interface for easy integration/netting
- Integration on vehicles or towers or stand-alone man-portable (Sensor 34 + 34 kg)

About Thales

Thales is a global technology leader for the Defence & Security and the Aerospace & Transport markets. In 2009, the company generated revenues of EUR 12.9 billion with 68,000 employees in 50 countries. With its 22,500 engineers and researchers, Thales has a unique capability to design, develop and deploy equipment, systems and services that meet the most complex security requirements. Thales has an exceptional international footprint, with operations around the world working with customers as local partners. www.thalesgroup.com

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