

PAR - Precision Approach Radar - Family

**One of the most demanding tasks of a pilot is to achieve a safe and smooth landing. The Galileo Avionica PAR Family consists of both ground based and shipborne Radar designed to provide guidance to aircraft Pilots approaching the runway or the deck regardless adverse weather conditions and environmental situations.**

The ground Controllers monitoring the aircraft's position on the PAR displays, instruct the pilot for keeping the aircraft on the correct descend path during the final approach. The pilot can safely and continuously maintain the aircraft position in day and night conditions and even in critical weather (dust, snow, heavy rain, hail, or strong wind). To optimise target detection, the PAR Controller can select the more appropriate mode of operation depending on weather conditions.

#### **A modern, but consolidated technology: Ground Based Precision Approach Radar**

The Galileo Avionica PAR family is a new generation of X-Band, state-of-the art radar designed to provide efficient and accurate tracking of up to **32 targets, controlling up to 8 runways** with a field of view of 10° in elevation and an azimuth coverage up to  $\pm 15^\circ$ .

It takes all the advantages of **25 years experience in this market**, where Galileo Avionica sets itself as one of the most important players. From first installation onwards, a continuous upgrade process has been implemented, aimed to have a modern product, with improved and up-to-date performances.

In this modernization process a primary role has been played by the well consolidated technology developed by the Company for the airborne radars. With a modular and open architecture and an extensive use of COTS components, the PAR offer growth capabilities to expand performances and to reduce maintenance costs.

#### **From the fixed to the mobile version**

Relying on the well consolidated experience, with more than 100 systems sold, more than 50 of which already installed and in service with several Air Forces worldwide, Galileo Avionica has developed a mobile version of its Ground Precision Approach Radar. Useful in any military tactical situation, or during international humanitarian missions, this radar is **easily transportable by a C-130**, one sortie only, and is rapidly deployable on the field: operative in less than 3 hours. Also the mobile version has been already acquired by an End User,

#### **High level of Serviceability**

**PAR is designed to work 24 hours a day, 7 days a week.** With a MTBF in excess of 2,000 hours and thanks to the implemented redundancies (double Radar channel and links), the system achieves a high reliability and availability: in case of failure, the second Radar channel is switched on in less than 0,5 seconds.

#### **In military Airports**

PAR 2090 CF (Fixed Configuration) is most frequently used at military airports.

The system consists of two sub-systems: the "Radar Head" (shelter-housed) with two reflector antennas scanning the coverage volume, and the "Presentation subsystem", in the standard configuration with two consoles, presenting to the Controller an accurate target position. A dual redundant fibre optic links (or radio link) supports commands, video and data link between the subsystems.

**In any tactical situation**

PAR 2090 CM (Mobile Configuration) is the solution proposed by Galileo Avionica for any emergency situation, for rescue operations in natural disaster (floods, earthquakes) or in any case of peacekeeping mission when aircraft have to land in opportunity airports..

In this configuration both the subsystems are shelter-housed and equipped with wheels.

**The two PAR 2090 versions (fixed and mobile) share to the maximum extent the same HW, and therefore the same performances. The only difference is the antenna type, specifically designed to allow an easy transportation of the system into which it is folded down.**

**The simpler supply configuration**

PAR 2080 C

It is intended for installations sites where fixed infrastructures exists. In this case the Antenna Group is mounted on a pedestal which is anchored to a concrete platform, while the Radar Head can be hosted in a building at the PAR site.

**In any aircraft carrier**

**SPN-720**, developed by Galileo Avionica, is a compact and very easy to install system. It implements a highly performing stabilization for keeping the required tracking accuracy of the landing aircraft. It's operated remotely by means of two consoles, allowing the controllers on the ship to conduct the aircraft, according to a predefined pathway, to the ship's deck even in heavy weather conditions.

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