

PAR-2000
GCA-2000
MPN-25
TASR
MPN-14K
MPN-26 (MACS)

Gilfillan
Air Traffic Control



Precision Approach Radars

ITT radars provide highly accurate area surveillance and precision approach landing services in the immediate area around airports. ITT Industries is the world's leading supplier of Precision Approach Radars with over 60 PAR and GCA-2000 units fielded since the late 1990s.

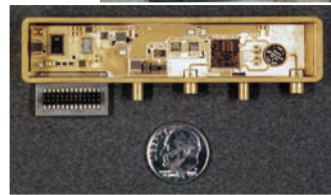
- Solid-state gallium arsenide transmit/receive modules
- Modular, open system architecture
- Accurate operation in severe environments including adverse weather conditions
- Unique 3-level weather display
- Change of runways in less than a minute
- Option to control system functions remotely
- High availability and superior reliability through use of COTS processors
- Available in fixed, transportable and mobile versions
- Fully ICAO compliant
- Built-in monitoring

PAR-2000

The PAR-2000 is a Precision Approach Radar designed with all the accuracies to guide aircraft to a safe landing in extreme environmental conditions.

PAR-2000 Specifications

Coverage	Azimuth 30° Elevation -1° to +7°
Range	20 nmi in Clear Mode 15 nmi in Rain Mode
Update Rate	<1 per second
Target Velocity	±40 to ±400 knots



GCA-2000

The GCA-2000 adds an airport surveillance and secondary surveillance radar capability to control the immediate area around an airport or airbase.

- Simultaneous ASR/SSR/PAR operations
- Accurate display of both types of radar data



Airport Surveillance Radars

ITT pioneered the development of the ASR in 1942 and continues to build the best performing compact terminal sensor in the world.

Key features for the ASR product line are:

- Excellent target detection and false alarm control
- Continuous operation through automatic switching
- Frequency agility
- High stability transmitter
- Digital Moving Target Detection (MTD) doppler processing
- Six-level weather per National Weather Service (NWS)
- High reliability and easy maintainability through a modular, redundant system design
- Built-in monitoring
- Available in fixed or mobile configurations



TASR

The Terminal Airport Surveillance Radar (TASR) is a light weight, high-performance airport surveillance and gap-filler radar, designed for demanding military terminal control requirements where size and weight are critical. Its performance compares to fixed-site civil airport sensors. The modular design allows the tailoring of the configurations based on operational requirements.

ASR & TASR Specifications	
TASR Range	0.5 nmi to >60 nmi
TASR-SR Range	0.5 nmi to >30 nmi
TASR Altitude	0° - 30°; 0 to 30,000 feet
TASR-SR Altitude	0° - 30°; 0 to 20,000 feet
SSR Range	60 - 200 nmi depending on interrogator
Update Rate	Each 4.8 seconds (12.5 rpm antenna rotation)



Integrated System Solutions



MPN-14K

The MPN-14K is a fully integrated digital Radar Approach Control Facility with exceptional reliability and performance. The TASR-based airport surveillance radar, with the same capabilities of civil sensors, controls arriving and departing aircraft in the terminal area. The precision approach radar performs guided landings in all weather conditions. The operations equipment includes the latest display and communication automation equipment available. The controller positions feature versatile, multimode digital color displays and full communications to meet all controller mission

requirements. To support variations in landing conditions, runway changes are handled by remote control. The mobile version houses the ASR and PAR antennas in a single trailer plus one full capability four-position shelter.



Integrated System Solutions (Cont'd)

MPN-26

The Mobile Approach Control System (MACS) is the U.S. Air Force's newest totally integrated tactical ATC system, featuring our solid-state S-band ASR, an operations subsystem, and a fully mobile PAR.

Additional features are:

- Full interface with the FAA NAS system*
- Digital communications suite consisting of UHF/VHF radios, landlines, voice recorder and intercom*
- Designed for mobility, transportability and operation in harsh environments*
- Rapid deployment in C-130 aircraft*

MACS ASR:

- Based on our solid-state S-band ASR and monopulse SSR*
- Two controller positions*
- Frequency selection in 1 MHz steps*

MACS PAR:

- Based on our PAR-2000*
- Compact robust design*
- PAR antennas and electronics located in the one-position PAR shelter*
- PAR shelter, mounted on a turntable, providing easily selectable six-runway coverage*
- Frequency selection in 1 MHz steps*

Operations Subsystem:

- Six multifunction controller positions*
- PAR and ASR functions accessible on a single display*
- Frequency selection in 1 MHz steps*
- Digital communications*





MPN-25

The MPN-25 is a GCA-2000, repackaged into a highly mobile integrated ASR/SSR/PAR system.

- Same performance as GCA-2000
- Achieves operational status in less than 90 minutes
- Deployable via C-130 aircraft

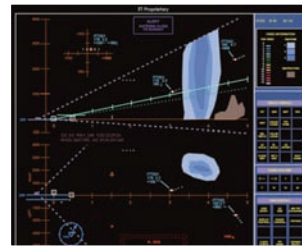


GCA-2000 & MPN-25 Specifications	
PAR Performance	Same as PAR-2000
ASR Coverage	Azimuth 360° Elevation 0° - 20° Altitude 0 - 8,000 feet
ASR Range	30 nmi in Clear Mode 25 nmi in Rain Mode
ASR Update Rate	<5 seconds (antenna rotation 60 rpm)
SSR Coverage	Azimuth 360°
SSR Range	60 - 250 nmi depending in interrogator selected
SSR Update Rate	Each 4.8 seconds (antenna rotation 12.5 rpm)

Display Automation

All of our solid-state radar systems feature:

- Versatile, multimode digital color displays
- PAR and ASR mode can be assigned individually based on traffic needs
- Off-the-shelf FAA certified ASR and USAF accepted PAR software, presented on high resolution, full color displays
- Seamless interface into the FAA National Air Space (NAS) system with the MACS-common Terminal Automation System (MTAS)
- PAR display provides three dimensional landing information in a state-of-the-art digital Az-El format.
- Flicker-free displays usable in normally lit work areas
- Patented display includes an innovative "bullseye"





ITT Industries, Gilfillan Division, a pioneer in the development of Air Traffic Control and Air Defense Radars, offers 60 years of demonstrated leadership in radar technologies and services.

Gilfillan specializes in total system solutions for Air Traffic Control (ATC), Air Defense, Advanced Technology, Communications and Command & Control missions for select government and commercial customers.

We are the world's number one producer of military ATC radar systems. Our spectrum of products include the Terminal Airport Surveillance Radar, to display air traffic within the terminal area of an airfield and the GCA-2000 family of Precision Approach Radars, for landing assistance in extreme environmental conditions.

With over 1200 radars and services in 40 countries, we, at Gilfillan, are committed to serve each customer's individual requirements. We always welcome the opportunity to tailor our products to fit your specific needs.

ITT Industries, Gilfillan Division
7821 Orion Ave.
Van Nuys, CA 91406

Tel: (800) 452-9136 or (818) 988-2600
Fax: (818) 901-2435
www.ittgil.com

ITT Industries, ITT blocks and Engineered for Life are registered trademarks of ITT Industries, Inc. ©2005.