What is Millimeter Wave Radar?

- High frequency (77GHz) compared to conventional radar
- High resolution (<2 degrees beam width and <0.25m range resolution)
- Range, bearing and power are measured
- Compact size, due to high frequency operation
- Largely unaffected by environmental conditions such as rain/fog and dust
- Safe to be around (Approx 10mW transmitted power)
AdvanceGuard™
Forewarned is Forearmed

AdvanceGuard™directs the camera
The radar directs the PTZ Camera where to focus should someone or something move within its range.

AdvanceGuard™can be installed in any location
The radar can be mounted in an elevated position to cover areas such as large roof spaces.

AdvanceGuard™can be mounted at an elevated position to help provide optimum coverage.
Depending on the model, the radar is effective out to a maximum range of between 200-800 meters in radius.

Wildlife
Detection of small animals can be filtered out by the system so that they do not cause false alarms.

Guards can monitor and track potential intruders from a single location.
This can also be viewed from a remote location if required.

Security services are given live information
Images and activity levels inside and outside of the premises can be relayed to the security services.

Water craft detected by AdvanceGuard™
The radar is effective over land and water detecting vessels on water or vehicles or people on land.

AdvanceGuard™is effective in all weather and light conditions
The radar is unaffected by environmental conditions such as rain, snow, sunlight, smoke, and fog.

AdvanceGuard™directs the camera to focus in on an intruder
The radar directs the PTZ Camera to where the intruder is detected. This provides continuous monitoring of any incident without requiring operator input.
Why use Navtech Radar Technology?

*It delivers more capability for the money than alternative solutions*

- The system will automatically control CCTV cameras to display and follow intruders using full pan, tilt and zoom functionality.
- It is effective in all weather and all light conditions.
- It has longer range than alternative solutions.
- It continuously tracks intruders, displaying where they are, which direction they are moving in and at what speed.
- It avoids reliance upon physical barriers or electronic perimeters.
- It avoids reliance upon manned monitoring of CCTV images.
- It creates vital time to react effectively to an intrusion or an attack.
- It automatically controls cameras and DVR’s to record only incident footage.
- It is quick and easy to install.
Suitable Applications for this Technology

**VIP Houses, Estates and Heritage Properties**
It is a low environmental impact system that avoids erecting physical barriers or digging up the lawn to lay cables. It is unobtrusive to privacy, offering continuous scanning without constant monitoring of CCTV images.

**Power Stations & Reservoirs**
It does not interfere with other electronic equipment and it works over water where other technologies fail.

**Remote Telecommunications Infrastructure**
It is an automatic system that can relay alarms and images from remote sites.

**Airports & Landing Strips**
The ultimate detection range capability of 800m radius from the sensor in 360° makes it ideal for airfield surveillance. Multiple radar can be networked back to a single basestation and one display.
Suitable Applications for this Technology

Railway Marshalling Yards and Infrastructure
The excellent range resolution of the new sensor and the ability to set detection zones mean the system is effective to detect intruders in cluttered environments such as railway yards; networked back to a single basestation and one display.

Oil Refineries, Depots & Pipelines
The system can be powered by solar panel or wind turbine and configured with wireless coms. It is highly capable for deployment in flat featureless land as found in the Middle East around critical infrastructure.

Ports, Harbours and Jetties
The sensor will achieve detection in rain and fog and across water where other early warning detectors are ineffective.
What to consider when proposing radar

- Line of Site
- Mounting height
- Sensor level or matching ground topography / Slope
- Proximity to communication infrastructure
- Covers an area, not just a line/perimeter
Navtech Radar – Buckingham Palace
Navtech Radar Sensors
Navtech Radar Sensors
Navtech Radar Sensors
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Navtech Radar Sensors

- **W800-H**  Man 800m
- **W500**  Man 500m
- **W350X**  Man 350m
- **W200**  Man 200m
Navtech Radar Configuration

Diagram of Navtech Radar Configuration showing:
- W800 Radar
- W200 Radar
- Field Cabinet
- Equipment Room
- Control Room

Key components include:
- Power Supply
- SWITCH
- Media Converter
- Video Encoder
- PTZ camera
- Camera Control Box
- Com Ports
- Telem Pelco D
- Video Decoder
- TCP/IP
- Remote Processing Unit running NS3-CT software & BaseStation software
- Dry Contact Interface Box
- Monitor
- CCTV Keyboard
- Remote KVM
Features and Benefits of Radar

• All weather operation day or night.
• Very difficult to evade.
• Long range 360 degree coverage.
• Multi sensor network capable for large area coverage.
• Continuous tracking of targets allows intelligent assessment of intruder threat.
• Can be used where other sensors are not practical e.g. over water.
• Programmable alarm zones allow dynamic changing of detection area.