OVERVIEW

Nuclafe has been working with military and first response professionals from around the world in the development of the Guardian Patriot® Portable Radiation Search Tool (PRST).

Guardian Patriot® is built to detect the presence of NORM, legal, and illicit radioactive materials. The system incorporates state of the art passive scanning technology to detect changes in radiation levels emitted by gamma, high energy beta, and neutrons contained on persons and in objects, vehicles, or containers.

The Guardian Patriot® exceeds the strict requirements that military professionals, law enforcement, and emergency responders demand on today's complex missions. Guardian Patriot provides a detection system that is highly accurate, has maximum sensitivity, is rugged, and can be human or vehicle portable for multiple mission requirements.

The Guardian Patriot® is capable of detecting and identifying a wide range of radioactive material. Additionally, the Guardian Patriot® identifies a wide variety of more common radionuclide and materials, including 40K, 60Co, 57Co, 137Cs, 192Ir, 226Ra, 241Am, 232Th and 201Tl.

Depending on user requirements and configuration, the system is designed to distinguish between special nuclear mate-rial, naturally occurring radioactive materials (NORM), medical isotopes, and industrial isotopes in a way that minimizes operator interaction with the system controls and indicators.

The Guardian Patriot® can be remotely connected to a phone, tablet, or Notebook PC. Mission critical data can be sent to and monitored from a command and control center and a central reach-back facility.

System configuration is done with an intuitive Windows inter-face featuring content-specific help. All system parameters can be adjusted utilizing this interface. Simply connect a PC to the device, either wired or wirelessly, and connect with a PC or Tablet running Windows. Configuration changes and firm-ware updates can be performed utilizing the interface, allowing quick and easy upgrades to the latest code when it becomes available.

There are several advanced features in the Android and IOS Applications. The Patriot® backpack also includes: GPS coordinates logging with each data point, onboard data logging, Data logging directly on the Android or IOS device, radionuclide dictionary, Units and display settings as well as Mapping on certain models.
Guardian Patriot
SPECIFICATIONS

**Form Factors**
Backpack, or custom packaging

**Detectors**
2 each 2"x4" NaI(Tl) spectroscopic gamma detectors

**Probes (optional)**
Neutron (solid-state)

**Integration Time**
200 ms (0.2s)

**Battery**
Rechargeable, > 9 hours operation
- Hot swappable
- Extended life battery optional

**GPS**
Integrated 12-channel receiver

**Wrist Display (optional)**
Direct sunlight readable, single push button operation

**Operator Display**
Android device (Phone, tablet) includes:
- Directionality
- Mapping
- Bread crumbing
- Reach back
- Spectral analysis
- Live 1024 channel spectrum

**Data Recording**
>8 hours continuous data logging (standard)

**Wireless**
802.11b/g, Blue tooth

**Operating Temperature Range**
-4°F to +122°F (-20°C to +50°C)

**Total Weight**
~17lbs. (~7.1 kg) - less if Gamma only.

**Size**
20" x 13" x 6" (50 cm x 33 cm x 21 cm)

**System Options**
- Solid-state neutron detector
- Geiger-Mueller probe
- Alpha (ZnS) probe
- Wrist display
- Spectroscopy
- Cell phone application
- Extended-life battery