

# CR-Portal HR

Cargo Radiation Detection Solution



Security & Detection Systems

## Best-in-class performance in nuclear material detection and identification

L-3 delivers the largest detector volume and highest resolution on the market utilizing HPGe technology and NNSA tested threat detection algorithms enabling faster and more accurate identification of illegal radioactive materials while minimizing costly false alarms (< 1 in 1000). Excellent NORM discrimination and NORM masking capabilities combined with the proprietary L-3 ClearView™ Workstation real-time data fusion operator interface speed the free flow of legitimate commerce while effectively intercepting illicit trafficking of nuclear materials.

Engineered for 24/7 operations, L-3's CR-Portal HR scans and identifies cargo containing, or contaminated by, radioactive materials. The high-resolution system is specifically designed for inspections of vehicles carrying different sized cargo from large containers to small baggage carts without impacting the stream of commerce. Our safe portal uses passive radiation detectors and has been successfully tested in a set of controlled experiments to independently validate the nuclear detection and identification performance of radiation portals at the lowest minimum activity. L-3's proprietary Threat Assessment Algorithm (TAA) provides the highest proven isotope identification available. Optional software can be added to detect the presence of low-level surface contamination. Neutron detection is achieved with non-Helium-3 neutron detector modules.

Our CR-Portal HR unique design uses proven technology from the QATT-certified CR-Mobile. It is the only HPGe detector that has been tested in the challenging mobile environment of high density stacks. It has the largest detector surface area in the industry to facilitate response and identification performance. The high-resolution portal uses both gamma and neutron detectors in a single, integrated unit. The portals are built by stacking identical modules and are configurable, from a one-sided single panel to a single or stacked pair, on opposite sides of the conveyance. Our individual modules can be used as single detection units for lower speed and smaller objects such as baggage or other cargo moving on conveyor belts.

The L-3 CR-Portal HR integrates into secure facilities. It can be used along with other systems, such as our CR-Portal IGC (Isotope Group Classification). Scan results and State of Health (SOH) information are acquired and processed by the onboard communications system and sent to a Command and Control Station (CCS). Results can be displayed on our ClearView™ Workstation which consolidates data to create a unified and customized view of the critical information analysts need to assess cargo contents. The CR-Portal HR is part of a family of platforms that serve the full range of cargo environments and applications.



**US DOE NATIONAL LABORATORIES  
TESTED TO STANDARDS EQUIVALENT TO:**

- ANSI N42-38
- IEC 62484

## SPECIFICATIONS:

### Standard Features

- Gamma-neutron (HPGe/Li-6 or B-10) portals tested by US DOE National Laboratories to standards equivalent to ANSI N42-38 and IEC 62244 and 62484
- HPGe gamma monitors validation tested at Los Alamos National Laboratory
- Li-6 neutron detector validation testing at Pacific Northwest National Laboratory and Joint Research Centre- European Commission at ISPRA; B-10 and Li-6 validation testing at Nevada Test Site
- ICD 1 and 2 data output per ANSI N42.42 or equivalent international data format standards
- L-3 SDS proprietary collimated HPGe portal design
- HPGe and Li-6/B-10 detectors can be co-located next to X-ray systems
- Fielded L-3 SDS proprietary high-resolution TAA with NORM masking capability
- Negligible flow of commerce impact with very low False Alarm Rate (< 0.001 FAR)
- Real-time data acquisition and processing using the proven and fielded L-3 SDS proprietary StradSCAN™ data fusion engine
- Automatic data logging with wide range of user configurable interfaces and displays, including data replay capability
- Rugged design proven against severe maritime and harsh climate environments
- Environmentally friendly no-lead shielding

### Optional Features

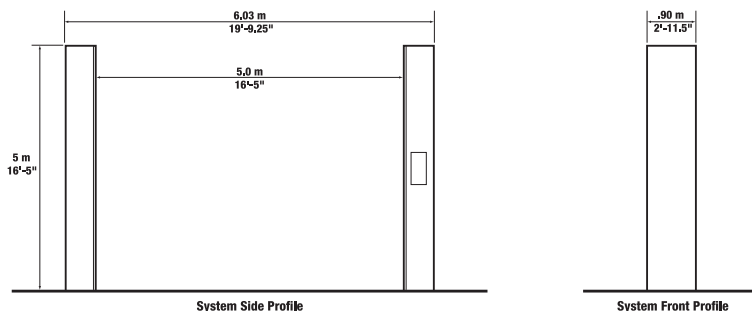
- Operates with NORM-discriminating primary scanner CR-Portal IGC (Isotope Group Classification)
- Can be built with additional HPGe detectors and used as a primary scanner
- Threat object localization via high-precision GPS
- Operates with co-located X-ray systems (such as L-3's CX- cargo solutions)
- Other neutron detector technologies available
- Data integration into ClearView™ Workstation (manifest data, live and stored data, and CX- cargo data)
- Cold and warm climate packages
- Design and installation of port-specific Command and Control Station
- Container number reader
- License plate reader

### Safety

- Meets applicable U.S. and European regulatory safety requirements for radiation scanning systems
- Visual and audible warning systems for operator
- Designed for compliance with UL requirements

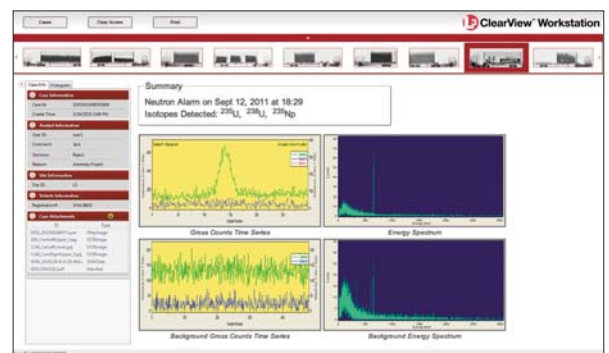
### Comprehensive Solutions

L-3's Cargo Solutions provide both configurable products and customized solutions that address unique, cutting edge requirements. The CR-Portal HR series is part of a family of radiation detection platforms that serve the full range of cargo environments and applications.



### Security & Detection Systems

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Typical time series and spectral analysis displays from ClearView Workstation