The H3D® H100 is your complete solution for the identification, quantification, and localization of gamma-ray sources at nuclear power plants:

- Easy to use
- Highly portable
- Cost effective

25 years of development and 10+ years of application-specific engineering to the exacting standards of nuclear power plant operators to support:

- Routine monitoring and maintenance
- Decommissioning operations
- Emergencies, incidents, and outages

Spectroscopic performance competitive with cryogenically cooled detectors and omnidirectional isotope-specific imaging... at under 8 lbs.

“**All of our technology that we have—that I've worked with for 30 years—doesn't touch what this shows us.”**
- RPM, U.S. Nuclear Power Plant
H100 Specifications

Dimensions: 9.6 in x 3.5 in x 7.0 in (24 cm x 9 cm x 18 cm)
...with Add-On Exoskeleton: 14.8 in x 4.7 in x 8.3 in (37.5 cm x 12 cm x 21 cm)

Weight: 7.3 lbs (3.3 kg)
10.5 lbs (4.8 kg) with add-on exoskeleton

Battery Life: > 7 hours at 23°C (73°F)
> 3 hours at -20°C (~4°F) or 50°C (122°F)

Power Supply: 100-240 V, 47-63 Hz

Startup & Operating Temp.: -20°C to 50°C (-4°F to 122°F)
Storage Temperature: -20°C to 60°C (-4°F to 140°F)

Ingress Protection: IP65 (IP67 with fan replacement)

Tripod Mounts: 1/4”-20 with reinforced thread
3/8”-16 (with add-on exoskeleton only)

System Cooling: Proprietary external heat sink and removable fan

User Service: Removable fan cover; replaceable fan and fuse

Range Finder: Integrated Class 2 laser; 635 nm; <1 mW

Energy Resolution: ≤1.1% FWHM at 662 keV (coincident interactions combined)

Optical Field of View: >162° horizontal, >122° vertical; full color

Optical Registration: ±2° to radiation image in front 90° x 90°

Radiation Field of View: 4π (360°) omnidirectional

Angular Precision: ≥1° source localization for all 4π (real time)

Angular Resolution: ~30° FWHM for all 4π (real time)
~20° FWHM for all 4π (post processing)

Sensitivity: Detects 137Cs producing ~3 μR/hr in <1 min (spectroscopy)
Localize point source of 137Cs producing ~3 μR/hr in <5 min

Energy Range: 50 keV to 3 MeV (spectroscopy)
250 keV to 3 MeV (imaging)

Crystal Volume: 6 cm³ CZT (CdZnTe)

Count-Rate Limit: 0.5 rem/hr (5 mSv/hr) bare-137Cs equivalent

Alarms: Audio & visual alarms based on dose rate or accumulated dose
Silence independently & preemptively; adjustable threshold (Sv/h)

Isotope Library: Select from 3573 ENDF isotopes & user defined; unlimited

Startup Time: < 90 s at 23°C (73°F)

Display: 7” 1280x800 HD tablet (mountable to back cover)

Tablet Communication: Peer-to-peer Wifi or Bluetooth, or wired connection

Other Communication: Ethernet RJ45 port; TCP/IP

Views: Spectrum, gamma image, optical image, composite image

Data Storage: Removable USB (16 GB) included

Warranty: 2 years (includes annual recalibration and software updates)

Includes: Visualizer software for advanced post processing
Tablet-mounting bracket
Power/accessory cables, stylus, and tablet
Transport and storage case

Optional Add-Ons: Exoskeleton for drop protection
External battery
4π (360°) omnidirectional camera

90-s measurements; Shield Verification

Co-60 above
Co-60 unshielded
Before Shield in Place

Co-60 above
Co-60 shielded
After Shield in Place

H3D®, Inc. • 812 Avis Drive • Ann Arbor, MI 48108 • USA
Tel +1 734-661-6416 • sales@h3dgamma.com • www.h3dgamma.com
© 2014-2020 H3D, Inc. All Rights Reserved. H100 and related systems patent protected by:
U.S. Pat No. 7,411,197 & U.S. Pat No. 7,692,155 under license from the University of Michigan, and U.S. Pat
No. 10,032,264.

Specifications, descriptions and images contained in this document were in effect at time of publication. H3D,
Inc. reserves the right to change specifications or discontinue products without notice or obligation.
All names, logos, and products herein are trademarks of their respective companies.