

### Features

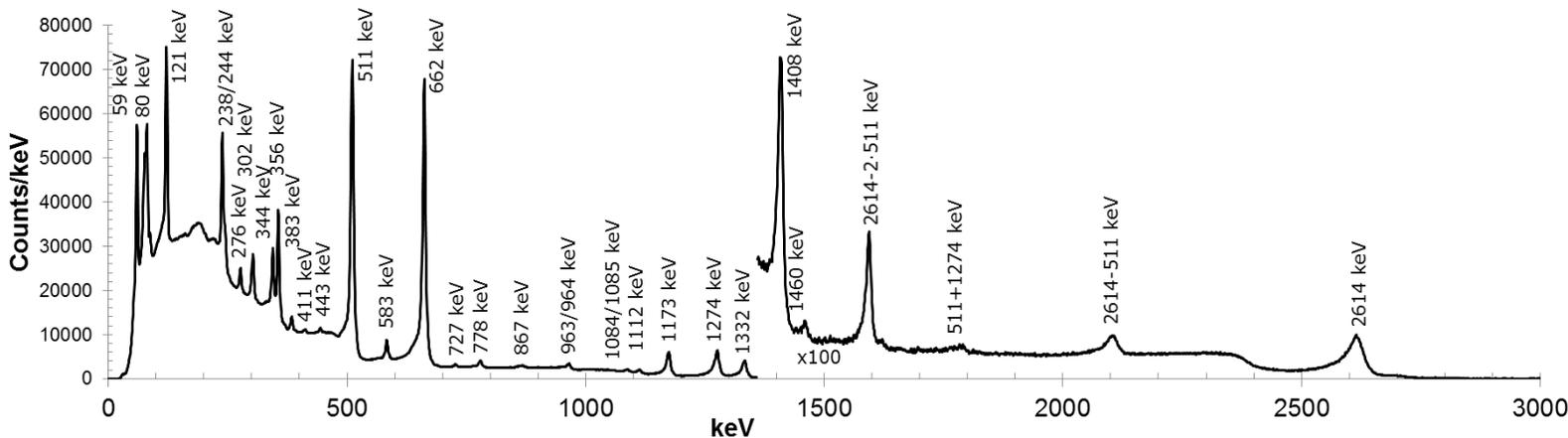
- ✓ Practical high-performance radioisotope identifier
- ✓ Compact and portable
- ✓ Tested to pass all ANSI N42.34 requirements
- ✓ Option for  $\leq 0.8\%$  FWHM energy resolution at 662 keV and interaction-by-interaction resolution of  $\leq 0.65\%$  FWHM
- ✓ Real-time 360° isotope-specific directionality
- ✓ Ready to use in less than 90 s
- ✓ Industry-leading efficiency with over 19 cm<sup>3</sup> pixelated CZT
- ✓ No cryogenic cooling required
- ✓ Energy range covers isotopes of interest up to 3 MeV
- ✓ Real-time isotope detection and identification
- ✓ Embedded user interface with one-handed operation
- ✓ MFK/ATAK CBRN plugin compatible
- ✓ Software updates included
- ✓ Wireless connectivity option
- ✓ Network webpage interface for mobile devices

**H3D<sup>®</sup>'s Next Generation A-Series is the new standard in radioisotope identification devices (RIIDs). Designed to meet your needs, experience:**

- High energy resolution
- High efficiency
- Directionality
- Compact and ergonomic design

**The most advanced semiconductor technology available to achieve spectroscopic performance competitive with cryogenically cooled detectors for:**

- Border security
- First responders
- Military and defense
- Environmental radiation measurements



# A400 Specifications

Dimensions: 12.0 in x 3.0 in x 3.75 in (30.5 cm x 7.6 cm x 9.5 cm)

Weight: 2.6 lbs (1.2 kg)

Battery Life: >8 hours

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

Operating Temperature: -20° C to 50° C (-4° F to 122° F)

Operating Humidity: Up to 93% at 35° C (95° F)

Ingress Protection: IP65

Energy Resolution

at 25° C (77° F): ≤1.1% FWHM at 662 keV (gamma; coincident interactions combined)

≤0.9% FWHM at 662 keV (gamma; coincident interactions separated)

Sensitivity: Detects 10- $\mu$ Ci  $^{137}$ Cs at 1 m (~3  $\mu$ R/hr) in < 22 s (in natural backgrd)

Localize 10- $\mu$ Ci  $^{137}$ Cs point source at 1 m (~3  $\mu$ R/hr) in <120 s to  $\pm$ 15°

Energy Range: 50 keV to 3 MeV (spectroscopy)

250 keV to 3 MeV (directionality)

Dose Accuracy:  $\pm$ 20%, 50 to 1500 keV, forward direction,  $\leq$ 0.2 rem/hr (2 mSv/hr)

Option for calibration to improve accuracy to  $\pm$ 10%

Gamma-Ray Detector: >19 cm<sup>3</sup> CZT (CdZnTe)

Count-Rate Limit: 1 rem/hr (10 mSv/hr) bare- $^{137}$ Cs equivalent for spectroscopy

Startup Time: <90 s

Isotope Library: Selectable from manufacturer-provisioned master library

User Interface: 3.5" embedded screen with button control

Also viewable on any internet browser

Views: Spectrum, identifications, dose, count-rate history, status information

Communication: WiFi, Bluetooth, USB-C, RJ45 Ethernet through adapter

Data Storage: 32 GB internal (>1 million measurements)

Data Stored: ANSI N42.42 xml file

Certifications: Tested to pass ANSI N42.34 requirements

3<sup>rd</sup> party DND0 TCS test report available by request

UL (predicted)

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

Includes: Power cables

Watertight Pelican™ Storage Case with custom foam

## About H3D, Inc.

H3D® is commercializing CZT-based 3D radiation-imaging technologies. Our team has over 100 years of combined experience in Compton Imaging, CZT readout, and system integration. We are employee-owned, market-driven, and committed to providing our customers with the highest performance and most user-friendly instruments possible.

**Any options can be combined, except as noted.**

### High-Resolution Option (A400+)

Improved energy resolution of  $\leq$ 0.8% FWHM at 662 keV (coincident interactions combined) and  $\leq$ 0.65% FWHM at 662 keV (coincident interactions separated)

### Neutron-Detector Option (A401)

Add 16 cm<sup>2</sup> Micro-Structured Neutron Detector (MSND)  
Neutron Sensitivity from ANSI-Moderated Cf-252:  
4.8 cps/nv (bare detector)

### Lower Efficiency Options

#### A200

Weight: 2.6 lbs (1.2 kg)  
Sensitivity: Detection and localization times increased by 2x  
Crystal Volume: >9 cm<sup>3</sup> CZT

#### A100

Weight: 2.5 lbs (1.1 kg)  
Sensitivity: Detection and localization times increased by 4x  
Crystal Volume: >4.5 cm<sup>3</sup> CZT



H3D®, Inc. • 812 Avis Drive • Ann Arbor, MI 48108 • USA

Tel +1 734-661-6416 • sales@h3dgamma.com • [www.h3dgamma.com](http://www.h3dgamma.com)

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