

Features

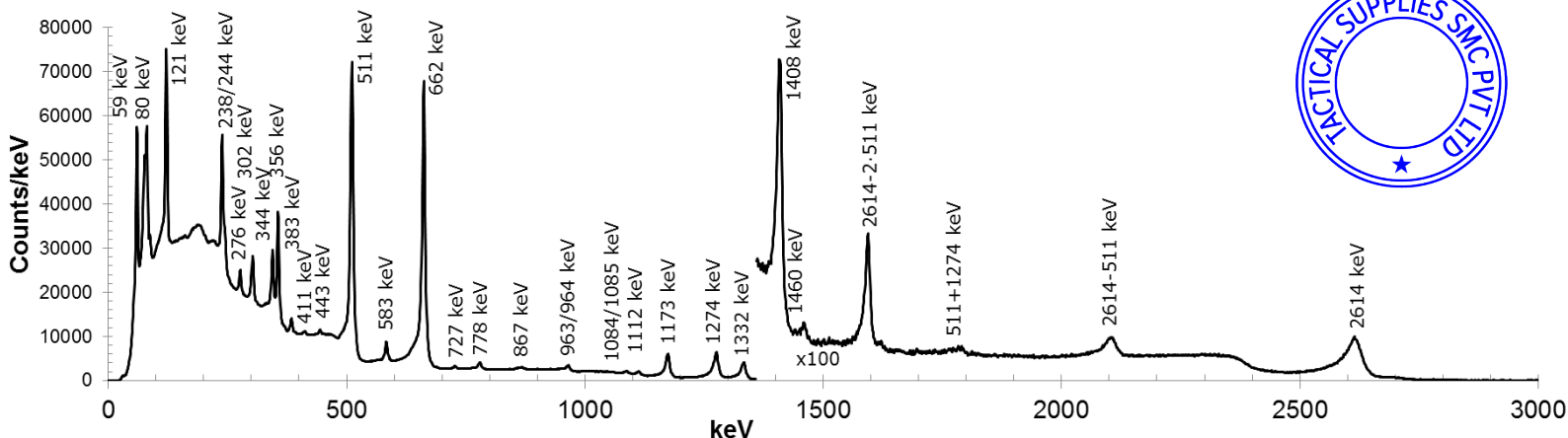
- ✓ Practical high-performance radioisotope identifier
- ✓ Compact and portable
- ✓ Tested to pass all ANSI N42.34 requirements
- ✓ Option for $\leq 0.8\%$ FWHM energy resolution at 662 keV and interaction-by-interaction resolution of $\leq 0.65\%$ FWHM
- ✓ Real-time 360° isotope-specific directionality
- ✓ Ready to use in less than 90 s
- ✓ Industry-leading efficiency with over 19 cm³ 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®'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-μCi ¹³⁷Cs at 1 m (~3 μR/hr) in < 22 s (in natural backgrd)
Localize 10-μCi ¹³⁷Cs point source at 1 m (~3 μR/hr) in <120 s to ±15°

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

Dose Accuracy: ±20%, 50 to 1500 keV, forward direction, ≤0.2 rem/hr (2 mSv/hr)
Option for calibration to improve accuracy to ±10%

Gamma-Ray Detector: >19 cm³ CZT (CdZnTe)
Count-Rate Limit: 1 rem/hr (10 mSv/hr) bare-¹³⁷Cs 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
3rd party DNDO 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
≤0.8% FWHM at 662 keV
(coincident interactions combined)
and ≤0.65% FWHM at 662 keV
(coincident interactions separated)

Neutron-Detector Option (A401)

Add 16 cm² 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 cm³ CZT

A100

Weight: 2.5 lbs (1.1 kg)
Sensitivity: Detection and
localization times increased by 4x
Crystal Volume: >4.5 cm³ CZT

