ALPHA, BETA & GAMMA SPECTROMETRY

peo MEDICAL

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Partner Bertin Technologies

Bertin Technologies is a global provider of advanced radiation detection and environmental monitoring solutions, specializing in handheld monitors, personal electronic dosimeters, environmental monitoring systems, and waste & recycling management technologies. Their instruments are designed to meet the rigorous demands of nuclear facilities, emergency response teams, and environmental agencies.

Product offering

SpectroTRACER Environmental Radiation Monitor – Saphymo

SpectroTRACER Environmental Radiation Monitor – Saphymo

SpectroTRACER is a continuous environmental radiation monitor for spectroscopy to measure very low gamma contamination (water: SpectroTRACER AQUA).

The SpectroTRACER produces a spectroscopic analysis of the detected nuclides identification. The SpectroTRACER is used for the measurement of radioactivity when a standard gamma dose rate monitor is not efficient enough and when it is necessary to discover the nature of the gamma radiation.

SpectroTRACER Environmental Monitor features:

- working temperature: -20 ° C to + 50 ° C. / option: -30 ° C to + 60 ° C
- max. 100 meters under water (SpectroTRACER -AQUA)
- IP68 certified
- relative humidity: 100%
- integrated sensors for temperature and humidity

Partner Spectrum Techniques

Spectrum Techniques is a U.S.-based provider of radiation detection and measurement solutions, offering a comprehensive range of detectors, quality assurance (QA) sources, alpha, beta, and gamma spectrometry systems, as well as samplers and counters. Their products are designed to support educational institutions, research laboratories, and industrial applications requiring precise and reliable radiation measurements.

Product offering

UCS30 – Universal Computer Spectrometer

UCS30 – Universal Computer Spectrometer

As the successor to our renowned UCS20, the UCS30 Universal Computer Spectrometer is engineered to provide superior flexibility and enhanced capabilities. We offer three models, each equipped with 1024, 2048, or 4096 channels of conversion gain, allowing you to tailor your choice to your specific needs and preferences.

Partner Tracerco

Tracerco is a trusted global provider of radiation monitoring solutions, offering specialized instruments for contamination monitoring, dose rate measurement, and personal dosimetry. Their technologies are widely adopted in the medical field, supporting hospitals, radiology departments, and nuclear medicine facilities in maintaining safety and meeting regulatory standards.

Product offering

Potash Monitor (T206) Tracerco

Potash Monitor (T206) Tracerco

The Tracerco Potash Monitor™ (potassium-40) makes use of a robust detector technology and is very sensitive to the radioactivity of potassium-40.

The instrument is specifically calibrated to measure an accurate direct reading of the percentage of potassium-40 in the surrounding environment. The detector probe is particularly suitable for placement in boreholes.

Specifications Potash Monitor (T206)

Potash Potassium-40 Monitor

Partner Radiation Solutions Inc.

Radiation Solutions Inc. specializes in advanced radiation detection systems designed for high-performance spectrometry applications in medical and research environments. Their handheld and mobile solutions support alpha, beta, and gamma spectrometry, enabling precise identification and quantification of radioactive isotopes in real time.

Product offering

RS-725 Baghouse Dust Spectrometer System – Radiation Solutions

RS-230 BGO Handheld Spectrometer – Radiation Solutions

RS-125 Handheld Spectrometer – Radiation Solutions

RS-725 Baghouse Dust Spectrometer System – Radiation Solutions

The RS-725 Baghouse Dust Spectrometer System (Radiation Solutions) is developed for the monitoring of baghouse dust for radiation. The system provides very tight alarm thresholds which results in early detection of small amounts of radiation.

The RS-725 Baghouse Dust Spectrometer System consists of two components; detector and control box. The system can be used with two different detector models; RS-725/21 and RS-725/128

RS-725 Baghouse Dust Spectrometer System features:

- unique NASVD spectral analysis gives high sensitivity performance (no false alarms)
- control box supports up to 4 detector systems
- display screens and data analysis identical to entrance/gate monitor displays for easy RSO training
- sodium-iodide detectors for maximum performance
- 2 detector sizes permits optimization to the application
- 1024 channel high resolution spectrometer gives spectral analysis
- control box fully integrated into plants LAN top provides easy RSO alarm/performance overview of all units
- RS725/21; 3″x3″ (21 cu ins) sodium-iodide detector mounted in a square housing
- RS725/128; 4 x 2 x 16″ (128 cu in) sodium-iodide detector with internal 0.5′” lead shielding
- detector and controller are separately available

Read more about the RS-725 Baghouse Dust Spectrometer System on the Radiation Solutions website

RS-230 BGO Handheld Spectrometer – Radiation Solutions

The RS-230 BGO Handheld Spectrometer (Radiations Solutions) is a portable handheld radiation survey search device for use in the geophysical industry. Using a BGO give very significant increase in performance over the normally used NaI detector (3x).

RS-230 BGO Handheld Spectrometer features:

- single button operation
- high countrate: 65, 535
- protection: IP67
- rugged design
- digital LCD display
- analyses single channel and multichannel
- PC connectivity: USB or Bluetooth
- detector: BGO 2×2“, 103 ccm

Read more about the RS-230 BGO Handheld Spectrometer on the Radiation Solutions website

RS-125 Handheld Spectrometer – Radiation Solutions

The RS-125 Handheld Spectrometer (Radiation Solutions) is an advanced mobile instrument for radiation survey. The device is mainly used for spectral analyses in the geophysical industry. The RS-125 has the highest sensitivity in the market of spectrometers and is simple in use. There are no test sources required, the spectrometer stabilizes automatically on the different forms of radioactivity (K, U and Th).

RS-125 Handheld Spectrometer features:

- single button operation
- digital LCD display
- detector: NaI(Tl) 2×2“
- analyses single channel and multichannel
- PC connectivity: USB or Bluetooth
- high countrate: 65, 535
- protection: IP67
- rugged design

Read more about the RS-125 Handheld Spectrometer on the Radiation Solutions website

Partner Ludlum Medical Physics (LMP)

Ludlum Medical Physics (LMP), a division of Ludlum Measurements, Inc., specializes in radiation safety and medical imaging quality assurance (QA) solutions. Their comprehensive product line supports healthcare professionals in maintaining high standards of patient safety and diagnostic accuracy across various medical disciplines.

Product offering

Model 30-7 Series

Model 334AB Alpha-Beta Air Monitor

RayMon10 Quant

RayMon10

Model 70 Series – Ludlum

Model 30 Digital Survey Meter – Ludlum

Model 3000 Digital Survey Meter – Ludlum

Model 30-7 Series

- Digital Meter
- ^{3}He Proportional Detector
- Moderator: 19.5 cm (7.7 in.) dia.
- Sensitivity (^{241}AmBe): 4.5 cpm per µSv/h (45 cpm per mrem/hr) or 10 cpm per µSv/h (100 cpm per mrem/hr)
- Range: 0 to 99.9 mSv/h (0 to 9.99 rem/hr)

Model 334AB Alpha-Beta Air Monitor

Features

- Integrated LCD and Touch Screen Display
- Acute and Chronic Dose, Concentration, and Flow Logging Measurements
- Radon Compensation
- Built-In Gamma Guard Detector

The Model 334AB is a lightweight, battery-powered, alpha-beta air monitor that can be used as a portable workplace monitor or a portable CAM (continuous air monitor) for emergency-response assessments. It is designed to provide workers with an early warning of an airborne release of alpha and beta emitting particulates. The instrument can monitor up to two alpha isotopes of interest, simultaneously with beta monitoring. It also has radon compensation and a built-in gamma guard detector to compensate for changing ambient gamma background levels.

The Model 334AB has an integrated LCD and touchscreen that displays information on instrument status and readings during operation. The estimated dose of the isotope(s) of interest and the instrument status are displayed at all times. An ion-implanted silicon detector and 1024-channel multi-channel analyzer feed data to the embedded processor board. Operations include beta detection and alpha spectral analysis for radon compensation. Acquired data may be saved in the instrument’s internal memory, or alternately may be written to an SD card for later retrieval and review. It is stored in comma-separated-variable (*.csv) format that is recognized by most spreadsheet and database software.

RayMon10 Quant

Perfect for quantitative volumetric analysis

A RayMon10 handheld gamma detector with a radbeaker. This enables users to use it with distributed (soil, building material sample, liquid waste) and point (air sampling filters, calibration sources) source samples.

RayMon10

Rugged CZT-based isotope detector

Rugged handheld easy to grip RayMon10 tablet, with a GR1 gamma-ray detector spectrometer enabling users to detect, measure and accurately identify gamma-ray emitting radionuclides, providing high-resolution isotope identification.

Model 70 Series – Ludlum

Spectroscopic Personal Radiation Detector

The Ludlum Model 70 Series are high resolution CZT-type detectors that deliver unparalleled performance in express radionuclide identification and radiation dose assessment from low to moderate-high levels.

Each instrument is accompanied by GalaxRayWiz software, a powerful tool which communicates with the device, analyzes gamma-spectra and dose-rate time profiles accumulation of 14 hours. Collected data can be easily transferred via USB or Wi-Fi.

Continuous dose rate monitoring and recording enables the user to be instantly informed about radiation exposure and to carefully analyze radiation dose risks by exploring the dose rate recorded charts.

Features

- Handheld Gamma Spectrometer
- Mobile Phone Sized
- Three Button Operation
- Radiation Dose Assessment
- Dose Rate Time Profile Recording
- Express Nuclide Identification
- One Thousand Gamma-Spectra Storage
- Temperature Stabilized
- Complies with ANSI 42.48-2018

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SCAN TO VIEW VIDEO

Energy Range: 0.03 to 3.0 MeV, 1024 Ch

Energy Resolution: 1.8 to 2.5% at 662 keV

Gamma Dose Rate: within 30% accuracy per ANSI N42-48 from 0.5 µSv/h to 3 mSv/h (5 µR/hr to 300 mR/hr)

Gamma Efficiency: 70/1, 70/2: 0.06 cps per µR/hr 70/3, 70/4: 0.18 cps per µR/hr

Neutron Sensitivity: ≈ 2.4 cps/nv

Nuclide ID Over-Range Dose Rate: 0.5 mSv/hr

Preset Time: 86,400 s

Display: LCD 7.1 cm (2.8 in.), 240 x 320 pixels, backlight

Alarms: Audio (~85 dB), audio jack, vibrator, LED operations, 3-button keyboard

Data Storage: Up to 1000 spectra and up to 24 hours of dose rate time records

Data Transfer: via USB and Wi-Fi

Data Throughput: ≈ 70,000 cps

Power: Lithium-ion rechargeable battery, 3.7 V 5200 mAh

Battery Life: With Wi-Fi on and back-light on: Up to 14 hours with Wi-Fi off and back-light on: Up to 26 hours

Charge Time: 4 – 5 hours, with battery indicator on display

Temperature Range: -10 to 50 °C (-4 to 122 °F). Relative humidity ≤ 95%.

Environmental Rating: IP63 with rubber sleeve

Dimensions: (L x W x H) 100 x 75 x 48 mm (4 x 3 x 1.9 in.)

Weight: 220 g (0.5 lb) with battery

Model 30 Digital Survey Meter – Ludlum

The Ludlum Model 30 is a versatile, lightweight, instrument used with an external detector for alpha, beta, or gamma radiation survey. Three modes of operation – RATE, MAX, and COUNT – are available for the user. Measurements can be collected in two sets of units (primary and secondary) for RATE and MAX modes in cps, cpm, Bq, dpm, R/hr, rem, or Sv/h units.

The user can switch between two sets of chosen units by simply pressing the Units button. An internal switch is used to enable or disable the front-panel setup feature to protect desired settings from inadvertent modification. Setup is also available via software available from Ludlum Measurements.

This instrument features a large, easily-readable LCD (liquid crystal display), a piercing audio warning tone, and easy, intuitive, user-friendly design. Splash-resistant construction allows the Model 30 to be used outdoors. The unit body is made of lightweight, durable, high-impact plastic.
The Model 30 is shipped ready to use with batteries and calibration certificate.

Model 30 Digital Survey Meter features

- attaches to detector allowing one-handed operation
- large backlit auto-ranging LCD with adjustable viewing angle
- simple green, yellow, and red status indicators
- 3-button intuitive interface for easy operation
- USB port and all-digital calibration
- available in stretch scope configuration

View compatible probes here

Download the datasheets below or contact our product specialist.

Model 3000 Digital Survey Meter – Ludlum

The Model 3000 Digital Survey Meter (Ludlum) is a versatile and lightweight instrument with an ergonomic design. With this meter there are 3 modes of operation possible: MAX, RATE and COUNT.

Choose from a wide range of probes for any application: Ludlum probes

Model 3000 Digital Survey Meter features:

- all-digital calibration
- auto ranging
- splash-resistant construction
- easy operation: 4-button intuitive interface
- port: USB
- Geiger-Mueller (GM), scintillator or proportional detector available
- display range: 0.0 cps to 99.9 kcps; 0.00 cpm to 999 kcpm; 0.00 Bq to 99.9 kBq; 0.00 dpm to 999 kdpm; 0.00 µR/h to 999 R/h; µSv/h to 999 Sv/h
- alarms: count rate, exposure/dose and scaler alarm setpoints adjustable over the display range
- loss of count alarm protection
- response time: auto-response rate fast/slow or user-selectable from 1 to 60 seconds

Read more about Model 3000 Digital Survey Meter on the Ludlum website

Georadis is a Czech manufacturer specializing in advanced radiation detection instruments, offering solutions that support safety and compliance in medical environments. Their portable systems assist healthcare professionals in monitoring radiation levels, ensuring adherence to safety standards.

Product offering

RT-30 Mk II – Georadis

RT-22 Handheld Radiation Detector with GeoView Software – Georadis

RT-50 Laboratory Gamma-Ray Spectrometer – Georadis

RT-30 Gamma-Ray Spectrometer with Nuclide ID Capability – Georadis

RT-20 Compact handheld Radiation Detector – Georadis

RT-21 Handheld Radiation Detector – Georadis

RT-30 Mk II – Georadis

Handheld Isotope Identification Instrument RIID

The RT-30 Mk II is the second generation of popular handheld gamma ray spectrometer RT-30. Strengths of the first generation were copied in the new model. There has to be highlighted a strong alloy body sealed against dust and water, protective removable rubber boot, comfortable grip and low weight.

The Mk II learned of the limitations of the first generation and features a large colored transreflectible sun readable display, improved user's interface with five operation buttons, removable but well-sealed battery pack and clear and loud audio.

The instrument is built as an open platform with potential of fast and simple implementation of special features required by customers. Wide fleet of detectors is supported. The Mk II bridges traditional scintillation detection probes using common vacuum photomultiplier tube with up-to-date silicon photomultipliers technology. Saved significant volume of vacuum tubes is next occupied by larger size of detector.

A heart of gamma ray spectrometer is FPGA (programmable array) plus fast speed and low consumption ARM type processor. The combination of FPGA with ARM is taken of preceding larger instrument and has been tested for years. Beside gamma ray section the FPGA is capable to handle other sensors at the same time. A Geiger-Mueller counter and a Neutron detector make a standard offer.

Thanks to latest electronic the Mk II opens a platform for supporting most modern existing communication standards. Sharing new and traditional communication standards is guaranteed wide compatibility with older as well as new communication devices. The existing USB was upgraded to level C and beside communication it is used also for unit's battery charging. GPS system is built in the front part of the instrument and is used for localization of the unit and also for time synchronization.

Quickly determining the location of lost radioactive sources in the environment or scrap, monitoring of waste in hospitals or waste incinerators, scanning people or baggage to disclose illicit trafficking of nuclear materials; all are typical applications for the RT-30 Mk II series.

Features:

- Ergonomic, lightweight handheld well balanced, compact;
- Comfortable grip with five buttons operable in glows;
- Removable protective rubber boot;
- Detectors fully build in the housing, protected by rubber foam;
- Large, transreflectible colored display – sharp and high contrast in sunlight, backlighted in dark;
- Loudspeaker with plastic membrane watertight;
- Four status indication LEDs – indication of alarms and health status;
- USB standard C for data transfer and charging;
- Wide fleet of scintillation detectors NaI/Tl, CsI/Tl, CsI/Eu, LaHalide, BGO, GAGG, SrI, Plastic scintillation

detectors PVT;

- Maximum detector size: Diameter 2” and height 2” with standard vacuum PMT or max 5” with Silicon PMT (SiPM or MPPC).

See the full details in the RT-30 Mk II datasheet.

RT-22 Handheld Radiation Detector with GeoView Software – Georadis

The RT-22 model is based on the RT-21 series, the most sensitive from the range of manufactured hand-held radiation detectors. Compared to its predecessor, it comes with an internal memory for storing measurement data, and Bluetooth connectivity allowing the use of an external GPS module. Its robust design makes it suitable for hostile climatic conditions. Our bestseller at the time of the uranium panic. Popular with scrap yard owners.

GeoView provides specificated views on accumulated data such as survey in both doserate or cps. The RT-22 Handheld Radiation Detector can be connected with the software through USB or Bluetooth.

RT-22 Handheld Radiation Detector with GeoView Software features:

- graphical display
- with telescope available (RT-22T)
- sampling period: 20/sec
- detector: NaI(Tl) 2×2“ or BGO 2×2“, 103 ccm
- gamma ray energy range: 30 – 3000 keV
- highest sensitivity
- weather protected
- lightweight, rugged and compact design

Read more about the RT-22 Handheld Radiaotion Detector with GeoView Software on the Georadis website

RT-50 Laboratory Gamma-Ray Spectrometer – Georadis

The RT-50 (Georadis) is a state of the art gamma spectrum analyzer to monitor and detect the presence of radiation in metals, metals by-products, geological samples, construction materials, environmental commodities, food and many other materials. Floor standing and easy to operate, the RT-50 spectrum analyzer is an indispensable part of any analytical laboratory, it rapidly detects and accurately measures extremely low levels of radioactive contamination.

RT-50 Laboratory Gamma-Ray Spectrometer features:

- full sample analysis in less than 5 min
- sensitivity; 0.02 Bq/g
- energy range: 20 keV – 3,0 MeV
- 1024 channel pulse amplitude analyzer
- short calibration times
- NaI(Tl) volume 0.35 l, 76 x 76 mm (3”x3”) detector

Read more about the RT-50 Laboratory Gamma-Ray Spectrometer on the Georadis website

RT-30 Gamma-Ray Spectrometer with Nuclide ID Capability – Georadis

The RT-30 Gamma-Ray Spectrometer with Nuclide ID Capability (Georadis) integrates a radiation survey meter, dose meter and radionuclide identification device in a weather protected, lightweight and easy to use instrument.

RT-30 Gamma-Ray Spectrometer with Nuclide ID Capability features:

- multiple functions; nuclide ID (isotope name), scan and search
- auto-stabilization
- protection: IP66
- single button operation
- sensitivity: Co-60: 270 cps/MBq, Cs-137: 160 cps/MBq, Am-241: 75 cps/MBq
- data interchange; Bluetooth or USB
- readout search mode; 0 – 65535 cps
- energy response: 20 keV to 3000 keV
- energy compensated doserate: 0 – 10 mSv/h (with G/M detector)
- graphic LCD display; 128 x 64 pixels
- 2GB memory

Read more about the RT-30 Gamma-Ray Spectrometer with Nuclide ID Capability on the Georadis website

RT-20 Compact handheld Radiation Detector – Georadis

The RT-20 Compact handheld Radiation Detector is a robust and compact hand held radiation detector specifically designed to quickly scan for radioactive materials. The ruggedness, small size and light weight of the RT-20, combined with its sensitive Gamma Ray scintillation detector makes it a versatile instrument for quick measurements in a large variety of applications.

RT-20 Compact handheld Radiation Detector features:

- 1,3 kg; balanced and lightweight
- reads in counts per second, sampling rate 4 per second
- high sensitivity, NaI/Tl crysta
- adjustable audio threshold
- audio output and numeric LCD display maximum 19999 cps
- automated warning of high dose rate
- protection boot with carrying straps
- supplied in aluminium suitcase with moulded insert
- automatic charger integrated in unit
- dust and sprinkling water resistant (IP66)
- available with telescope (RS-111T)

Read more about the RT-20 Compact handheld Radiation Detector on the Georadis website

RT-21 Handheld Radiation Detector – Georadis

The RT-21 (Georadis) is the most sensitive of numerous manufactured handheld radiation detectors. Its robust design allows it to operate even in the most demanding climatic conditions. Our bestseller at the time of the uranium panic. Popular with scrap yard owners.

RT-21 Handheld Radiation Detector features:

- one button operation
- highest sensitivity
- weather protected
- lightweight, rugged and compact design
- graphical display
- with telescope available (RS-21T)
- sampling period: 20/sec
- detector: NaI(Tl) 2×2“ or BGO 2×2“, 103 ccm
- gamma ray energy range: 30 – 3000 keV

Read more about the RT-21 Handheld Radiation Detector on the Georadis website

Product offering

Scintillation Detector model 905

DETECTIVE-X Trans-SPEC editie- Ortec

Scintillation Detector model 905

A Scintillation Detector model 905 produces a pulse of light that is converted to an electric pulse by a photomultiplier tube (PMT). The PMT consists of a photocathode, a focusing electrode, and 10 or more dynodes that multiply the number of electrons striking at each dynode. A chain of resistors typically located in a plug-in tube base assembly biases the anode and dynodes. Complete assemblies including the scintillator and PMT are available.

The properties of a scintillation material required to produce a good detector are transparency, availability in large size, and large light output proportional to gamma-ray energy. Few materials have good properties for detectors. Thallium-activated sodium iodide and cesium iodide crystals are commonly used, as well as a wide variety of plastics. CsI(Tl) and plastics have much faster light decay times than NaI(Tl) and are primarily used for timing applications.

Do you want to know more about the Scintillation Detector model 905?

If you want to continue your search for additional information on this product try this link.

DETECTIVE-X Trans-SPEC editie- Ortec

The Detective-X Trans-SPEC is a complete spectroscopy range with an integrated auxiliary application spectroscopy computer using MAESTRO-Pro (including), GammaVision, Isotopic and other applications via WiFi, Ethernet and USB connections.

The instrument is an extension of the Detective-X plateform and uses a high-speed German detector with a small battery and a long battery life, a long period of time, rapid reprocessing and additional options for connectivity. n'importe lequel de ses prédécesseurs Trans-SPEC.

The new application Trans-SPEC is designed according to the standard methods of Detective-X, based on the applications of Detective-X, Sleuth and RAPiD, the type of instruments used to utilize the standard spectrometry system and the standard spectroscopy system. traditional spectrometry standard system. Dispositif d'identification de radioisotopes (RIID) « Gold Standard ».

The DETECTIVE-X-TS is a portable spectrum, complete and high resolution for the measurements in situ.

Advantages of the product:

- Grand détecteur de germanium de type P de haute pureté (65 x 50 mm) > 40 % d'efficacité relative
- Refroidisseur à cycle Stirling très fiable avec cryostat durci
- Signal number treatment and active suppression of bass frequency (LFR)
- Conception robuste pour les environnements difficiles (IP65 compliant)
- Compact and lightweight (6.98 kg)
- Longevity of battery life (8 hours) with the batteries replaced with fuel
- Grand écran tactile haute résolution (4.3 pouces), facile à lire en plein soleil
- Storage of internal and amovable files (> 100,000 specters)
- Controller control via USB, Ethernet and Wi-Fi compatible with ORTEC applications
- Mirroring applications for mobile phones, tablets and plate formats for iOS, Android and Windows

Radiation Detector/Cooler

Crystal	High purity P-type Germanium (HPGe). Coaxial construction. Nominal diameter 65 mm x length 50 mm.
Relative efficiency	≥40% typical (ANSI/IEEE 325-1996).
Resolution	≤1600 eV @ 122 keV and ≤2,3 keV @ 1332 keV (FWHM provides optimal settings).
Peak shape	1.9 typical (FWTM/FWHM).
Cryostat and cooler	"Hardened" cryostat, with very reliable and low consumption Stirling cooler. The design of the cryostat is such that the unit can be turned off and back on at any time, without having to wait for a complete thermal cycle (complete warm-up before cooling). This functionality considerably increases system availability during measurement campaigns.

Cooling time	The highly reliable cooler is designed for continuous use. Between measurements, the device is powered by a DC power supply, car battery, or other device. Initial cooling time depends on ambient temperature, but is typically 6 hours at 25°C.

Digital MCA and Data Processor

Digital Low Frequency Noise Cancellation	“LFR filter”.
Conversion gain	Up to 16,000 channels.
Display	4.3″ WQVGA display (480 x 272 pixels), sunlight readable, touch sensitive, can be used with finger or stylus.
Data processor	FREESCALE I.MX535 operates at 1 GHz.
Data storage media	Internal RAM and low profile removable USB drive. The device comes with a USB stick that can store more than 100,000 spectra.
File format	ORTEC CHN and SPC spectrum formats.
Computer and device interfaces	Connections USB, Ethernet TCP/IP v4 via standard RJ45 Ethernet connection (10/100 Mbps, auto-sensing), Wi-Fi (IEEE 802.11a/b/g/e/i/h/j and IEEE 802.11n standards with security access protocols, including WPA and WPA2). The mobile MCB server allows remote control via ORTEC CONNECTIONS based applications, such as MAESTRO, GammaVision, etc. Wisemo is used for device mirroring and app control.

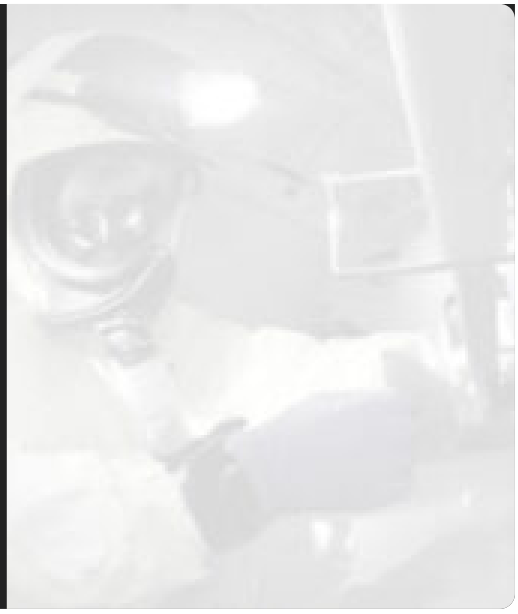
Physically

Maximum overall dimensions	(including handle and Ge detector cap) 39.5 cm L x 16 cm W x 21 cm H (15.5 in. L x 6.25 in. W x 8.25 in. H).
Weight	6.98 kg
Internal battery	2 rechargeable lithium ions. 98 Wh each, nominal. Approximately 8 hours of autonomy at 25°C when the HPGe detector is cold. <4 hours charging time. The internal battery is easy to replace.
External battery	Battery life can be extended indefinitely with the use of optional external battery packs. An external military battery (Model 2590) weighs less than 3.25 pounds and extends its life to >16 hours.
Input power	12 to 17 V DC from battery or DC power supply (universal power supply included).
Energy consumption	Highest during cooling and battery charging: <100 watts. Cold with fully charged battery <35 W.
Operating range	Temperature: –20°C to 50°C. Relative humidity: 95% non-condensing.
Instrument case	IP65 Sealed against dust and water ingress. All perforations are closed with rubber plugs (connectors, memory cards, etc.).

APP FEATURES

- Main view of the spectrum: Log/Lin, Zoom, Area of interest, Start, Stop, Clear acquisition and save the spectrum.
- Peak/ROI data: centroid, FWHM, start/end channel, gross and net area and count rate.
- Configurable spectral marking data: energy, channel, counts.
- Configurable status lines: any two of the following: Real Time, Real Time, Real Time Remaining, Real Time Remaining, Battery Time Remaining, Count Rate,
- Count rate in ROI.
- MCA Controls: ADC conversion gain with high and low level discriminators, coarse and fine amplifier gain, baseline recovery (auto, fast, slow), gain and zero stabilizers, high

voltage acquisition presets: real time, real time, return on investment. Peak and full return on investment.
- Health status: ±12V, +3.3V, detector temperature, cooler body temperature, cold peak temperature, high voltage.
- Security: Password protected user/administrator modes, lock/hide spectrum display during acquisition.
- Energy calibration: quadratic adjustment of energy relative to the channel.
- External applications: Compatible with all applications based on ORTEC CONNECTIONS such as MAESTRO, MAESTRO-Pro, GammaVision, Isotopic,
  Renaissance and the A11 programmer's toolbox for a wide range of applications.



The DETECTIVE-X-TS is a portable, complete and high resolution gamma spectrometer for in situ measurements. It can be used as a standalone instrument to collect spectra in the field or controlled by a computer connected via USB, Ethernet or Wi-Fi using applications such as MAESTRO-Pro (included), GammaVision, Isotopic and others.

The DETECTIVE-X-TS is physically identical to the popular DETECTIVE-X Radioisotope Identifier, which is considered the "Gold Standard" for critical detection and identification. Like ORTEC's older TRANS-SPEC-100T and MICRO-TRANS-SPEC instruments, the DETECTIVE-X-TS is specifically intended for use as a more cost-effective, high-resolution portable gamma spectrometer for field measurements rather than for identification automatic isotopic. DETECTIVE-X-TS model includes guaranteed resolution performance and MCA emulation software, but excludes isotope identification applications included with other DETECTIVE-X models (Detective DETECTIVE-X-TS can be upgraded to the DETECTIVE-X 3 MeV and 8 MeV models, as well as a current dose rate calibration.