# **DU 203.2** STRIDE Detection Units

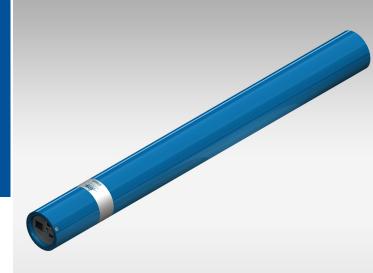
The covert movement of special nuclear material or weapons into populated areas represents possibly the greatest threat to the security of our world. Radionuclide identification systems are required to effectively detect and / or deter this threat. They must recognize the presence or movement of radioactive material across borders, into government buildings, at large public gatherings or events and much more plus identify the radionuclide(s) present. STRIDE Detection Units and Systems were designed for this very purpose.

## STRIDE Gamma Detectors with Nuclide Identification

The STRIDE DU 203.2 has been designed primarily for fixed wired installations. The cylinder shaped housing is made of aluminum and is both dust and moisture proof. The instrument can be equiped with an optional <sup>3</sup>He neutron detector and moderator. These units can be mounted on walls, above doorways, behind reception desks, behind passport control counters, above luggage or parcel conveyer belts, and much more. The standard 2" diameter by 3" long NaI scintillation detector provides an excellent sensitivity even to small, low activity radiation sources. A typical time-to-nuclide-identification can be from a few to 20 or 30 seconds, depending on the nuclide, the source activity and distance away, background conditions and the presence or absence of shielding material.

#### **STRIDE Detection Unit Network**

The STRIDE DU 203.2 can be easily set up and configured through a web interface. This interface can also be used to monitor the status and the output of the instrument. The STRIDE Server software (sold separtely) automatically detects any DU 203.2 connected to the network. Depending on the STRIDE Server configuration the DU 203.2 can be combined with other STRIDE detection units, resulting in a higher sensitivity and a source tracking ability.



#### FEATURES

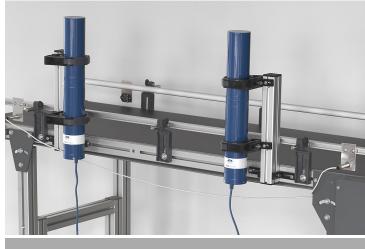
- Rapid detection of presence of radioactivity or radioactive material
- Performs rapid and accurate radionuclide identification
- Alarms on doserate changes above background
- Supports sources localization when using more than one instrument
- Continually stabilizes for temperature and background changes
- Dust and moisture proof
- RJ-45 Ethernet connection to LAN with PoE
- Server and Client software nackages available
- Open or covert installations
- GM detector for high doserate situations
- Optional <sup>3</sup>He neutron detector.



### **SPECIFICATIONS**

#### INPUT/OUTPUT

INPUT/UUTPUT	
Power	DC 12 V, 3 W or POE
Ethernet	RJ45, 10 Mbit/s, 100 Mbit/s
PHYSICAL	
Dimensions (L $\times$ dia.)	654 mm (25.764") × 65 mm (2.559")
Weight	2.3 kg (5.07 lb)
Housing Material	Aluminium
ENVIRONMENTAL	
Ambient/Operating	-15 °C – +50 °C (5 °F – 122 °F)
Temperature	
Storage Temperature	-30 °C – +70 °C (-22 °F – 158 °F)
Humidity	10 % – 80 %; Non Condensing
Protection Rating	IP 54
PERFORMANCE	
Energy Range (Gamma	20 keV – 3 MeV
Spectrum)	
Energy Resolution	Typically less or equal 8 % FWHM at 662 keV
	at 20.0 °C (68.0 °F) ambient temperature
Throughput	> 100 kcps
Input Count Rate	300 kcps
Auto Calibration	Yes
Corrections	Spectrum linearization
Spectrum Linearization	Online gamma spectrum linearization
Dose Rate Range	0.01 μSv/h – 1 Sv/h
Dose Rate Resolution	10 nSv/h
Dose Rate Accuracy	±30 % (50 keV – 1500 keV)
Energy Range (Dose Rate)	50 keV – 1500 keV
Neutron Sensitivity	11 cps/nv $\pm$ 20%, thermal neutrons
Stabilization	LED and <sup>40</sup> K
Measuring Modes	РНА; МРНА
DETECTORS	
Gamma	Nal; 2 " × 3 "
Gamma (High Dose Rate)	Energy Compensated GM Detector
Neutron	$^3$ He Tube; 0.75 " $ imes$ 3 "; 8 atm; surrounded by
	polyethelene moderator
STANDARDS	
IEC 60529	Degrees of Protection Provided by Enclosures
	(IP Code)
EMC - Directive	Regulations concerning electromagnetic
2004/108/EC	compatibility
SOFTWARE	
Embedded Software	Windows CE Operating System
Interface	STRIDE XML protocol
	Ethernet PHYSICAL Dimensions (L × dia.) Weight Housing Material ENVIRONMENTAL Ambient/Operating Temperature Storage Temperature Humidity Protection Rating PERFORMANCE Energy Range (Gamma Spectrum) Energy Resolution  Throughput Input Count Rate Auto Calibration Corrections Spectrum Linearization Dose Rate Range Dose Rate Resolution Dose Rate Accuracy Energy Range (Dose Rate) Neutron Sensitivity Stabilization Measuring Modes DETECTORS Gamma Gamma (High Dose Rate) Neutron  STANDARDS IEC 60529  EMC - Directive 2004/108/EC SOFTWARE Embedded Software



#### VARIANTS

Following variations of this device are available.

- \*1 DU 203.2-NG Standard STRIDE Detection Unit, Nal Detector, GM Tube
- \*2 **DU 203.2-NGH** Standard STRIDE Detection Unit, Nal Detector, GM Tube, <sup>3</sup>He Tube

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