

SaphyGate GN SNM Portal Monitor

- Sensitive and accurate: SaphyGate-GN combines very large PVT detector, sophisticated electronics and algorithm to exceed the challenging IAEA, IEC and ANSI standards
- Background noise shielding automatically taken into account
- Automatic scan: no intervention by control personnel
- 100 ms fast and real-time count rate analysis during measurement
- Rugged material designed for all weather conditions
- Easy to install and to operate
- Modular architecture allows easy upgrade
- CEA license



Illicit trafficking of nuclear and other radioactive material has become a growing concern since the first seizures in the early 1990s. SNM (Special Nuclear Material) can be used to create nuclear weapons whereas radioactive material can be used to produce dirty bomb (RDD).

Each state has the responsibility for combating illicit trafficking and the inadvertent movements of radioactive material. SNM portal Monitors are therefore installed in strategic locations such as borders, air terminals, ports, nuclear facilities and critical buildings.

For more than 30 years, Saphymo has been a pioneer in the design of SNM portal monitor: initially to prevent nuclear material to leave nuclear facilities such as nuclear research centers and fuel plants, then from the early 2000 adapting to the new challenge of illicit trafficking.

Until the recent years, most SNM portal monitor technologies were relying on He-3 tube for neutron detection, but due to the sharp price increase of such gas, this technology has become too expensive for most customers.

Saphymo is proud to introduce the new SaphyGate-GN SNM portal monitor, the first SNM portal Monitor based on plastic scintillation detector technology, able to meet the challenge of a highly effective gamma - neutron discrimination while providing high gamma and neutron sensitivity in line with international standards.

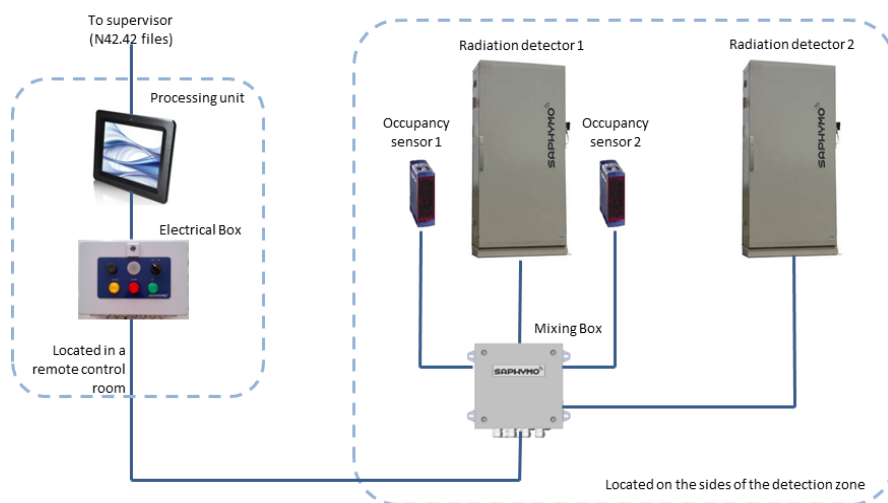
SaphyGate-GN includes 1 to 8 DSPGN4 detectors in order to stick to customer minimum detectable activity requirement

It performs static and dynamic measurements taking automatically into account the shielding effect of the vehicle which may vary a lot with the load density.

SaphyGate-GN benefits Saphymo wide experience in RPM technology with over 3000 installations in more than 40 countries.

SYSTEM ARCHITECTURE

Example with 2 DSPGN4 detectors configuration



RADIATION DETECTOR

- **detector DSPGN4 type:** 10 x 40 x 100 cm premium grade PVT plastic scintillators for gamma and neutron monitoring
- **very high speed electronic for gamma-neutron discrimination**
- **operating temperature:** -30° C to +55° C up to 93% HR (according to ANSI 42.35 standard)

PROCESSING UNIT

- **large touch screen interface** providing user friendly operation
- **radiation profile** for easier source location
- **multilingual interface**
- **N42 data files** storage on SQL server data base allowing easy remote access, configuration, maintenance and third party software integration
- **vehicle speed monitoring** through smart infrared sensors

ALARM MANAGEMENT

- **EB7 Electrical and alarm box:** alarm and acknowledgement system consisting of a buzzer, an acknowledgement button and four indicator lights (normal operation, technical failure – error, gamma alarm, neutron alarm)
- **BVS 300 local alarm unit:**
 - visual and audible alarm with xenon flash and a loud siren alarm
 - for indoor or outdoor operation

ACCESSORIES & RELATED PRODUCTS

- printer
- site and remote S7 supervision software
- camera(s)

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