



Annual Users' Conference

**ADVANCING RADIATION SAFETY.
EMPOWERING PROGRESS.**

M Resort, Henderson, NV | June 15 – June 18



MIRION
TECHNOLOGIES

*Advancing Radiation Safety.
Empowering Progress.*

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SiriusTM Core:

Setup, Calibration and Performance Deep Dive

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Mirion Connect | Annual Users' Conference 2026

Henderson, NV

**Scan QR code to log your
attendance for today's
(Thursday, June 18th)
breakout session**



Agenda

- *Vision*
- *Introduction*
- *Product Overview, Key Features and Technologies*
- *Live Demo!*



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To best meet the personnel Contamination & Clearance (C&C) hand and foot monitoring needs of customers in laboratories, radiopharmaceuticals and other medium-to-large nuclear facilities by providing a Two-Step Hand and Foot Contamination Monitor that offers minimal footprint, is easy to quickly deploy and shares radiological capabilities, software and common components with other Mirion C&C products resulting in minimal operating expenses and training efforts.



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Two (2)-Step Hand & Foot (H&F) Contamination Monitor

- *A new 2-Step H&F Monitor that complements the existing lineup of Mirion H&F Monitors was developed to serve customers in labs, radiopharmaceuticals, colleges/universities, nuclear medicine, etc. at a lower footprint as well as make it as easily mobile as possible.*
- **WHY?**
- *Let's look at what have had in the past and what we have now...*



Context

- **Legacy Mirion Hand-FootFibre™ (HFF):**
 - 1-Step Hand & Foot (H&F) Contamination Monitors based on RFD Fibre Detector technology.
 - RTM110 was rationalized a while ago...
- **Legacy Mirion RTM110:**
 - 1-Step Hand & Foot (H&F) Contamination Monitors based on gas-filled or plastic scintillator detector technologies.
 - Installed base >550 units. Rationalized a few years ago...
- **Legacy Canberra / Eurisys-Mesures Product Range:**
 - 1-Step Sirius™-4/-6 Hand and Foot Contamination Monitors
 - 2-Step Sirius-2 Hand and Foot Contamination Monitors
 - Installed base >800 units (Sirius-2/-4 only)
 - All three rationalized in 2011.
- **Current Mirion Avior-2 Product Range:**
 - 2-Step AVIOR-2H/F-S Hand/Foot System (but only palms) or 1-Step AVIOR-2H/H-S Hand/Hand System (only palms of hands)



RTM110

HFF



Sirius-6

Sirius-2

Sirius-4



AVIOR-2H/F-S

AVIOR-2H/H-S

Context

- *Current Mirion Sirius-5 Product Range:*
 - *Hand, Foot & Cuff Contamination Monitors*
 - *Installed base >1100 units (Sirius-5 / Sirius-5 Compact only)*
- *Sirius-5 (legacy) and now the Sirius-5 Compact are premium solutions for one-step hand & foot monitors where space is not an issue...*



Sirius™-5



Sirius™-5 Compact

4 detector configurations

Gas Flow	AB (LFP-579 detectors)	Sirius™-5AB	Sirius™-5AB Compact
This Plastic Scintillation (Gasless)	PAB (TPS-AB-579 detectors)	Sirius™-5PAB	Sirius™-5PAB Compact
	PB (TPS-B-579 detectors)	Sirius™-5PB	Sirius™-5PB Compact
	PBG (TPS-BG-579 detectors)	Sirius™-5PBG	Sirius™-5PBG Compact

Produce Evolution Based on Direct Customer Feedback in recent past:

- *“...make us a 2-Step monitor that has the following attributes shared with current Argos™/Sirius™...”:*
 - *Same S/W and user experience (so training time is next to nothing)...*
 - *Same radiological attributes (i.e., detectors) but in a two-step monitor to achieve lowest footprint possible...*
 - *If you are going to provide TPS detectors, make sure you have a gas-flow version to maximize alpha efficiencies...*
 - *Shared spare parts with current Argos/Sirius products...*

- *So, what was the solution?*

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Two-Step Hand and Foot Contamination Monitors

- *Two-Step efficient hand and foot monitoring in areas with size constraints.*
 - *The Sirius™ **Core** is a further evolution of the well-proven Sirius-5 legacy product and now Sirius-5 Compact and delivers the same exceptional performance in a low footprint form.*
 - *The Sirius **Core** provides thorough and reliable detection of external contamination on the hands and feet of personnel working in nuclear environments. It is rugged and reliable designed for high traffic areas; is compact for areas with size constraints and maneuverable with integrated casters and handles.*
 - *Depending on your monitoring needs, Sirius monitors are currently designed to use either plastic scintillator (TPS) gasless detectors or patented* gas flow proportional detectors (LFP-579).*



* Patent US 7,470,913 B1 High Efficiency and High Homogeneity Large-Area Gas-Filled Detectors



Position 1



Turn



Position 2



Frisker

Two-Step Hand and Foot Contamination Monitors

■ Features

- *Minimal Footprint: suitable for confined locations, and maximizing available space*
- *Rugged and reliable: for high traffic areas – minimal downtime and service required*
- *Foldable Foot Detector module and two (2) built-in heavy-duty recessed corner casters and three (3) flush foldable handles strategically placed for easy transportation. Can set up temporary stations, responding to situations quickly. Wall mount hooks included.*
- *Excellent radiological performance: various detector combinations possible*
- *Comprehensive and well-proven Monitor Program software platform, including WebRemote® software and Dashboard: Ergonomic and easy to use, touch screen software, intuitive – users with limited experience can easily locate parameter settings*

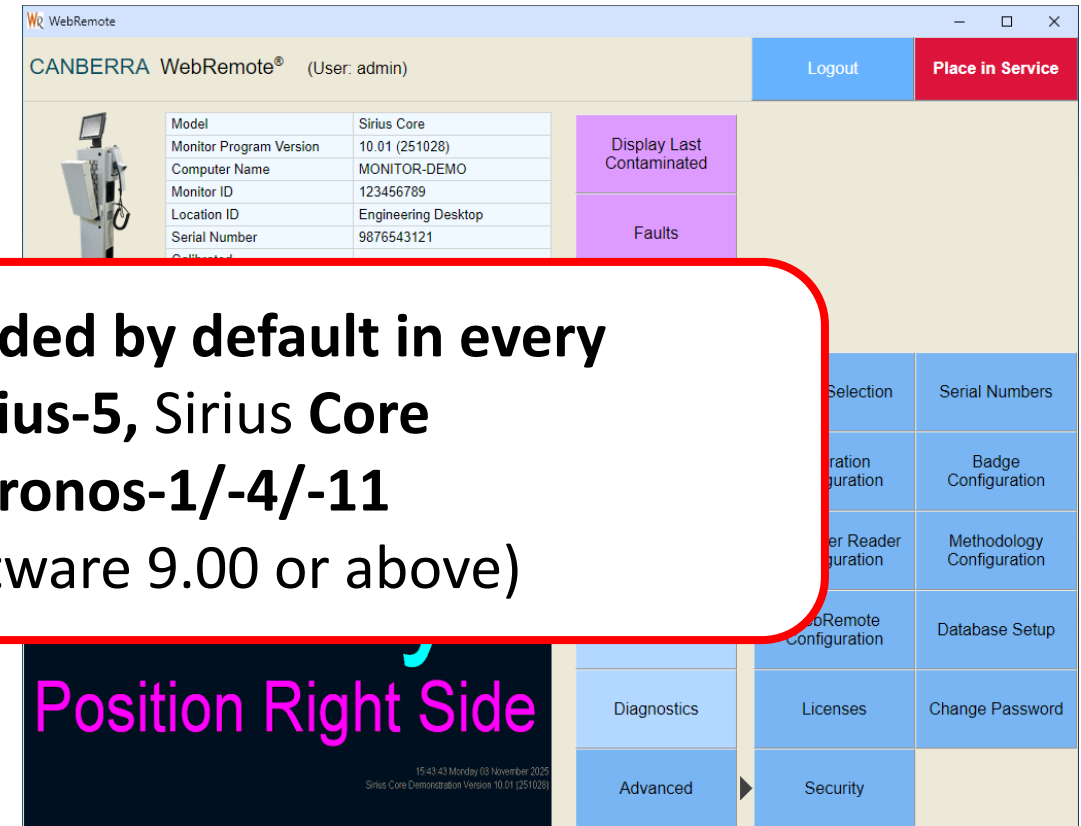


WebRemote®

Contamination Monitor Touch Screen Interface

- Available in a “Key” interface
- For local (at monitor) or network

**WebRemote® is included by default in every
Argos-3/-5, Sirius-5, Sirius Core
GEM-5 and Cronos-1/-4/-11
(with Monitor Software 9.00 or above)**

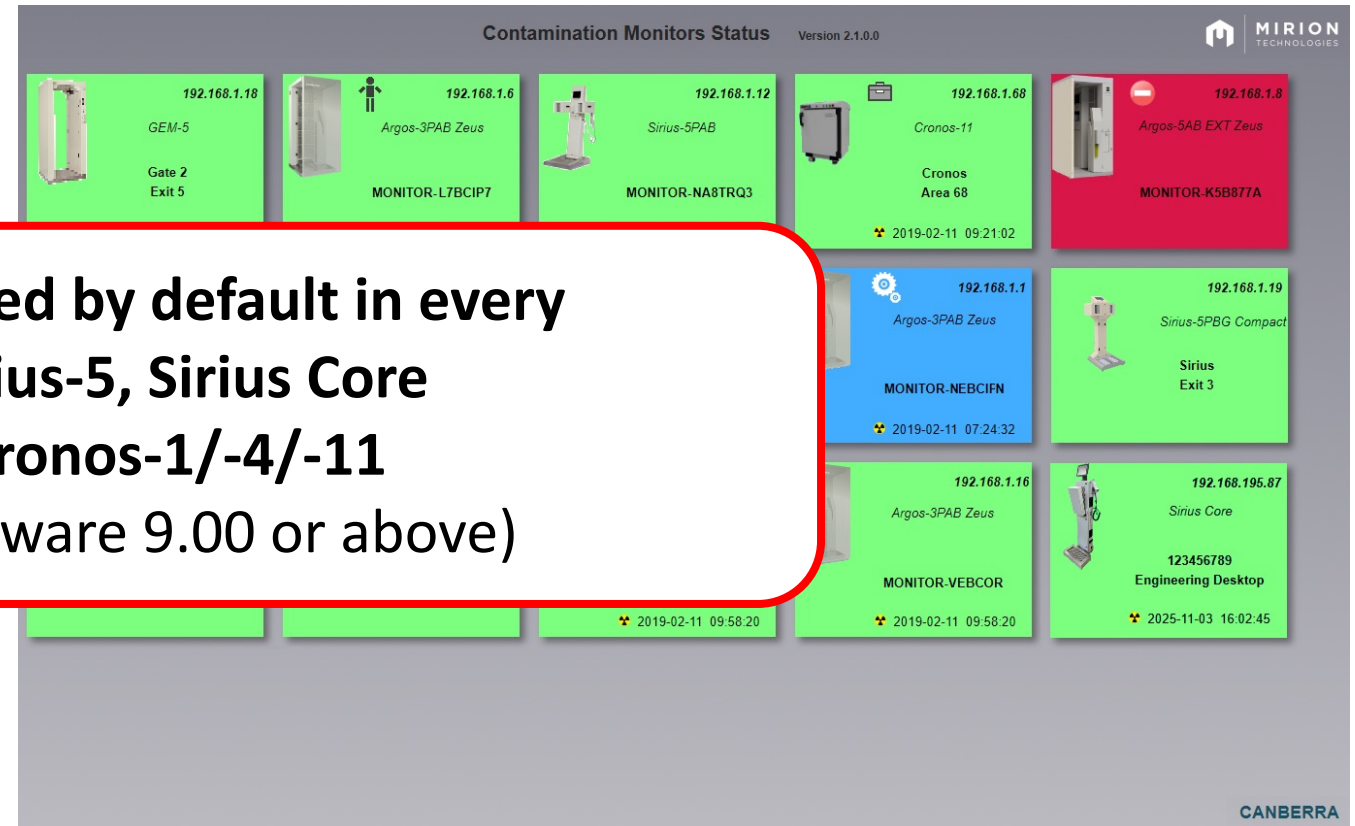


Dashboard

Contamination Monitor Status Overview

- Dashboard provides a simple overview of your contamination monitors
- Easy drill-down to monitor details
- Ability to interact with monitors via the interface
- No central server required (one contamination monitor is server)

**Dashboard is included by default in every
Argos-3/-5, Sirius-5, Sirius Core
GEM-5 and Cronos-1/-4/-11
(with Monitor Software 9.00 or above)**



Two-Step Hand and Foot Contamination Monitors

■ Features

- Four configurations are available (detector dependent) – just like Sirius™-5 legacy / Sirius-5 Compact
- Typical 4 π efficiencies same as Sirius-5 / Sirius-5 Compact
- Designed for 365/24/7 operation: high uptime and minimum maintenance
- Several components and spare parts are shared with Argos™-3/-5, Argos-3 Modular, Sirius-5 legacy, Sirius-5 Compact, GEM™-5 and Cronos® 1/-4/-11 contamination monitors
- Detachable 10" touch screen display
- Windows® 11 IoT operating system with LAN capability and USB ports
- Compliant with ISO 11929:2019 and IEC61098:2003



Two-Step Hand and Foot Contamination Monitors

■ Cabinet

- Steel with rugged powder coat finish for Foot, Hands and Main Modules, stainless steel foot pan cover provide for ease of decontamination and minimum maintenance
- Approximate dimensions in operational mode (including 10" LCD Touchscreen): 151.0 × 44.9 × 44.4 cm (59.5 × 17.7 × 17.5 in.) (H × W × D)
- Approximate dimensions when collapsed into transportation mode (with touchscreen removed): 126.1 × 44.9 × 30.4 cm (49.6 × 17.7 × 12.0 in.) (H × W × D)
- Approximate weight (depending on detector type) ~31 to ~33 kg (~68 to ~72 lb) without Options
- Open Frame Computer (same as Argos™-3 Modular):
- The computer of the Sirius **Core** operates on Windows® 11 IoT operating system with LAN capability and USB ports for transferring data. Data may be retrieved either via USB or a LAN.



Two-Step Hand and Foot Contamination Monitors

■ Options

- *Alpha/Beta Frisker Opt. for Sirius Core which includes:*
 - *Includes 100 cm² external alpha/beta LIGHTLink® AB-100 CSPevo® Detector Probe (see CSPevo materials for more info.!)*
 - *Mounting Hardware, electronics and cable to connect to Sirius Core (can be reinstalled to the opposite side in the field for opposite traffic flow requirements if needed!)*
 - *Two channels with discrimination between alpha and beta radiation*



Two-Step Hand and Foot Contamination Monitors

■ Options

- *Transportation Cases*
 - *Transportation Case with Tethered Lid for Sirius™ **Core***
 - *Needs two people to place a Sirius **Core** ergonomically and safely in / out of it.*
 - *Once the Sirius **Core** is placed inside, the case has two casters on one end and can be moved around by one person (but better with two).*
 - *Designed to hold the following:*
 - *Sirius **Core** with Foot Module Folded Up*
 - *Accessories Box (housing Detachable touch screen display removed from Sirius **Core**, Optional CSPevo® Frisker Detector Probe removed from Sirius **Core**)*
 - *Size: approx. 59.7 cm × 140.7 cm × 41.6 cm (23.5" × 55.4" × 16.4") (H × W × D)*
 - *Tare Weight: approx. 35 kg (77 lb)*



Two-Step Hand and Foot Contamination Monitors

■ Options

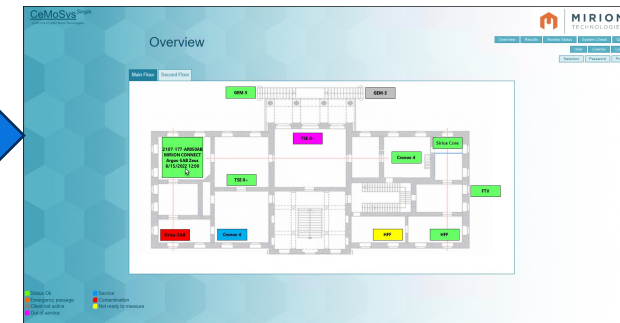
- *Transportation Cases*
 - *Transportation Case with Ramped Side for Sirius™ Core*
 - *Designed to only require one person to place a Sirius Core in / out of the case*
 - *Since the case is on five heavy duty casters (two are lockable!), it can be rolled around easily by one person (even with the Sirius Core within it).*
- *Designed to hold the following:*
 - *Sirius Core with Foot Module Folded Down in order to roll the monitor into the case*
 - *Accessories Box (housing Detachable touch screen display removed from Sirius Core, Optional CSPevo® Frisker Detector Probe removed from Sirius Core)*
 - *Size: approx. 155.6 cm × 59.7 cm × 68.3 cm (61.3" × 23.5" × 26.9") (H × W × D)*
 - *Tare Weight: approx. 91.4 kg (201 lb)*



Two-Step Hand and Foot Contamination Monitors

Other Options

- Foot Module Extension integrated with Foot Module for improved ergonomics
- Badge scanners
- Larger (12") LCD Touchscreen
- 7098537: Integrated LDM 320 dosimeter reader with direct data-exchange between contamination monitor and DosiServ™. Requires DosiServ™ Dose Management System
- 0009CVMS0002: CeMoSys™ Client License for interfacing with CeMoSys™ Central Monitoring System (Version 2.0 or above)



Advanced Dosimetry Integration



DMC 3000 Personal Electronic
Dosimeter and LDM 320W
Dosimeter Reader

Benefits

- **Proof** that individuals have been properly monitored for contamination
- **Save time** at exit of RCA (read-out & switch-off dosimeter in parallel to contamination monitoring)
- **Save space** (combination of dosimetry and contamination monitoring stations)
- **Identify potential sources/areas for contamination** (through analysis of job-code vs. contamination events)
→ **Understand & reduce contamination events**

Key Features

- **Direct integration** of LDM320 dosimeter reader for DMC 3000 dosimeter in Argos™ **Evo**, Argos-3/-5, Sirius™-5 (Compact), Sirius **Core** and GEM™-5 monitors
- **User ID** data stored with contamination measurement results
- **Supports management of sequences**, including configuration possibilities
- **LDMAccess software** for control of the dosimeter reader can be **run on the contamination monitor's local embedded computer**
- **Result of contamination monitoring (contaminated or clean) automatically available in DosiServ™ dose management software**

Two-Step Hand and Foot Contamination Monitors

■ Summary of Key Features

- *Smallest Footprint: Sirius™ Core's compact dimensions allow it to fit easily into tight spaces, making it ideal for labs, universities, and other facilities where floor space is at a premium.*
- *Benefit: Maximizes usable workspace and enables installation in locations where larger monitors simply won't fit.*



Two-Step Hand and Foot Contamination Monitors

■ Summary of Key Features

- *Effortless Deployment:*
 - *Designed for rapid relocation, Sirius™ **Core** can be moved by one person over short to medium distances (on smooth or lightly rough surfaces) using its built-in heavy-duty casters or transported longer distances in a choice of two types of optional protective transport case.*
 - *Wall-mounting hooks are included.*
- *Benefit: Enables quick setup for temporary, emergency, or permanent use—reducing downtime and supporting dynamic operational needs.*



Two-Step Hand and Foot Contamination Monitors

■ Summary of Key Features

- *User-Friendly Interface: Runs on Mirion's proven Monitor Program software (v10.01+), powered by Windows® 11 IoT, with WebRemote® and Dashboard for remote control and monitoring respectively.*
- *Benefit: Minimizes training time and costs for existing Argos/Sirius users which also use the Monitor Program Software.*



Two-Step Hand and Foot Contamination Monitors

■ Summary of Key Features

- *Advanced Detector Technology: Offers four detector options to suit a range of radiological environments:*

- *Gas Flow:*

- 1. Alpha/beta (with Mirion LFP-579 detectors)

- *Thin Plastic Scintillation*

- 2. Alpha/beta – TPS-AB-579
 - 3. Beta-only – TPS-B-579
 - 4. Beta/gamma – TPS-BG-579
- gamma measurement capability in elevated gamma background environments.*
- [Advantages of the TPS-BG-579 Anti-Coincidence Processing.pdf](#) for more details.



Two-Step Hand and Foot Contamination Monitors

■ Summary of Key Features

• Other Unique Features

- Open Frame Embedded Computer assembly housed in Main Post Module (same as Argos™-3 Modular for commonality of parts)
- Same proprietary electronic boards (housed in Main Post Module) as Argos-3 Modular (i.e., sensor board, etc. for commonality of parts)
- Flexible Options & Accessories
 - CSPevo® Frisker AB-100™ LIGHTLink detector
 - Card Readers and/or Dosimetry Reader integration.
 - A Foot Module Extension for those customers whose users might have difficulty balancing with one foot on the floor and one foot on the foot module.
 - CeMoSys™ connectivity.



Two-Step Hand and Foot Contamination Monitors

- Remember, the Sirius™ **Core** is designed for discerning customers who demand premium performance, full two-step coverage, and the flexibility to deploy in small or challenging spaces. It delivers advanced detection and mobility without compromising on quality—making it the ideal choice for organizations that value reliability, compliance, and operational efficiency.



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Thank you



Survey for:

Sirius™ Core: Setup, Calibration & Performance Deep Dive

<https://ahaslides.com/AR8X5>



*Please take a moment
to fill out a short survey
on this session.*

*Use the QR Code or link at
left...*