# Luminex®

# xMAP INTELLIFLEX® Systems

Technology You Trust. Versatility You Want.

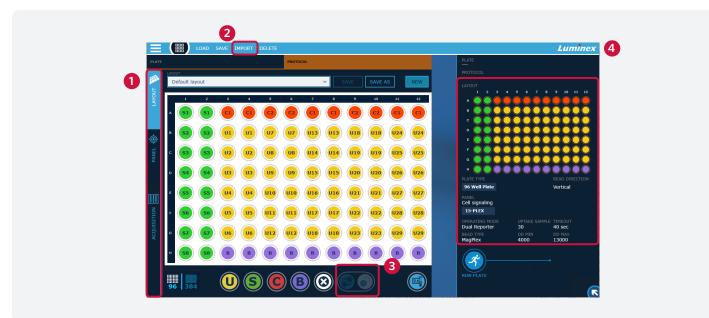# Proven Performance of xMAP® Technology with Innovative Features to Advance Research.

xMAP INTELLIFLEX® is the only compact, flow-based, multiplex platform that combines the proven performance of xMAP® Technology with modern features to enhance performance, empower assay development innovation, and simplify your user experience. No other multiplex platform combines low- and high-plex capabilities, quick time to reliable results, and the ability to simultaneously acquire data for two parameters per analyte simultaneously.

## xMAP INTELLIFLEX Systems offer:

- **A Broad Dynamic Range** – Avoid repeat testing due to out-of-range values with the widest dynamic range of any xMAP platform.

- **More Data from Each Target** – Acquire double the data for each analyte with the new second reporter channel, saving time and precious sample.

- **A Compact Footprint** – Reduce lab bench requirements with a compact footprint that features an embedded PC and a touchscreen user interface.

- **Intuitive and Flexible Software** – Quickly master the platform with easy-to-use software that empowers you to optimize workflows, gather performance insights, and export data into common analysis tools.

- **Commercially Available Kits and Custom Assays** – Experience the versatility of xMAP Technology with an open architecture design, enabling you to choose from the most extensive menu of commercially available kits and design your own assays.

- **Rich Compliance Features** – An optional Electronic Records Compliance module enables electronic signatures, enhanced audit trails, and other features to support 21 CFR Part 11 and Annex 11 compliant workflows.

- **Robust Integration Support** – Built to meet modern network and security expectations, xMAP INTELLIFLEX is easy to integrate into your IT environment. Additionally, an optional Automation module enables access to a modern REST API, for rapid integration into automated environments.

## Optimize Workflows

Quickly assemble plate configurations from saved components and start your run in as few as 20 seconds. Plate configurations can be set up with just a few clicks or can be imported from a CSV template.

**Figure 1.** xMAP INTELLIFLEX® plate layout screen.



**Figure 1. xMAP® INTELLIFLEX exemplary layout controls:**

1. Define plate layouts, panels, or acquisition parameters in any sequence, and save modular components for use in different acquisitions.
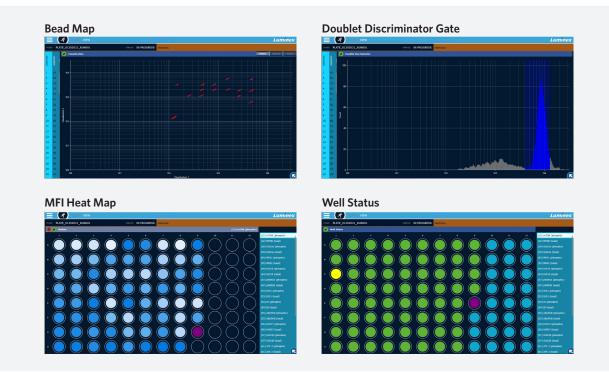2. Import plate layouts, sample lists, or panels from CSV.
3. Define replicates with intuitive copy-and-paste controls.
4. View run parameters at a glance.
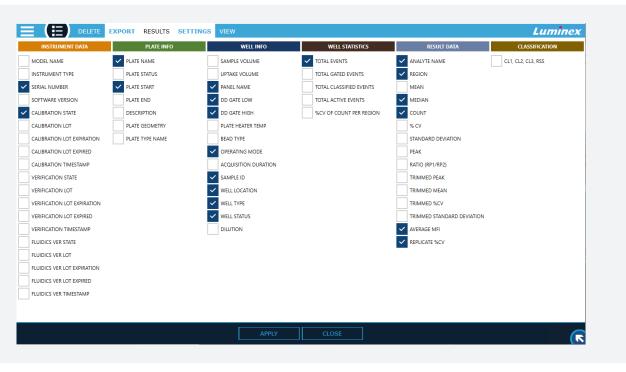
## Gather Performance Insights at a Glance

Quickly navigate between multiple data types for comprehensive, real-time run monitoring. **Figure 2** presents examples of viewable data types.

**Figure 2.** xMAP INTELLIFLEX® run monitoring data examples.



## Easily Export Data for Analysis

Export results in three file formats: An xPONENT(R)-style CSV format is compatible with existing xMAP(R) data analysis tools. A new xMAP INTELLIFLEX(R) CSV is simple and flexible, allowing you to customize the contents of the exported dataset (**Figure 3**). A new XLS format provides both the customized dataset and relevant audit log entries.
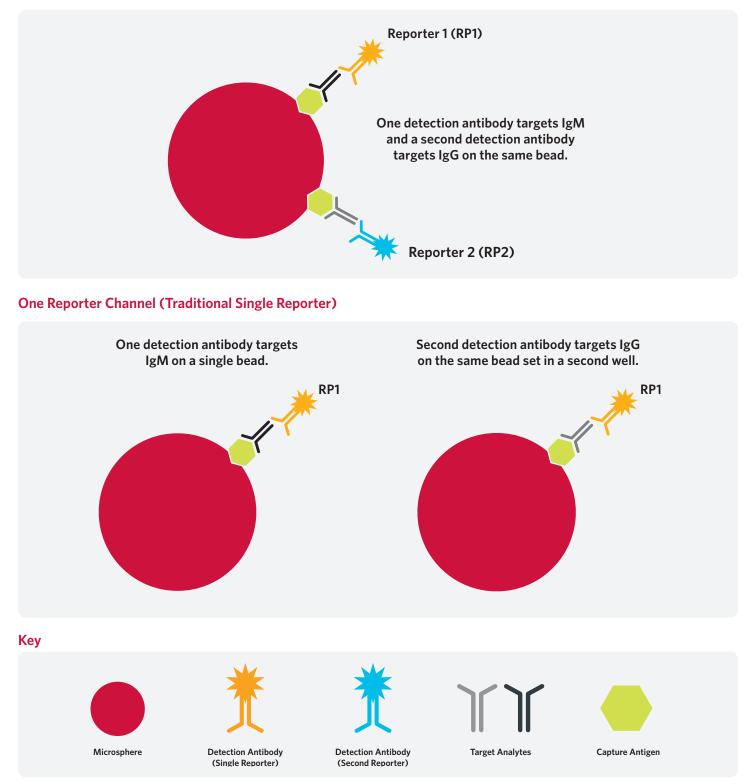
**Figure 3.** Export selection screen for xMAP INTELLIFLEX® data format.
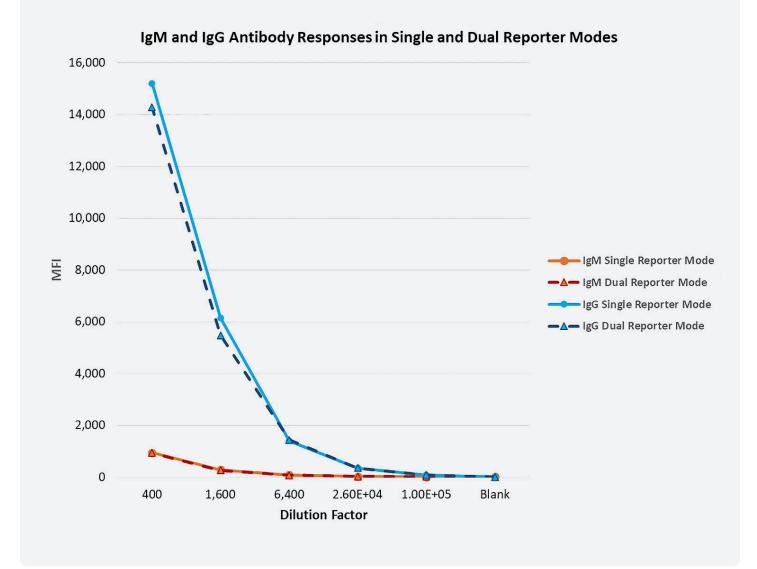
# More Data from Each Target

With the addition of a second reporter channel, you can acquire data about two parameters per target protein or nucleic acid, saving time and precious sample. This feature is ideally suited for measuring multiple isotypes or configurations targeting the same antigen.

## Serological Assay

**Two Reporter Channels (Dual Reporter)**

Reporter 1 (RP1)

One detection antibody targets IgM and a second detection antibody targets IgG on the same bead.

Reporter 2 (RP2)

**One Reporter Channel (Traditional Single Reporter)**

One detection antibody targets IgM on a single bead.

RP1

Second detection antibody targets IgG on the same bead set in a second well.

RP1

**Key**

| Microsphere | Detection Antibody (Single Reporter) | Detection Antibody (Second Reporter) | Target Analytes | Capture Antigen |

**Figure 4.** Equivalent signal in both single and dual reporter modes.



**Figure 4: Equivalent signal in both single and dual reporter modes.** Phycoerythrin-labeled IgM detection antibody and streptavidin-Super Bright 436 + biotinylated IgG detection antibody were used to measure SARS-CoV-2 N antigen-specific IgM and IgG in single and dual reporter modes. When run together, no interference was observed between the dyes and MFI values were equivalent.

# Specifications

xMAP INTELLIFLEX is available in two models with the following specifications:

| | xMAP INTELLIFLEX® RUO | xMAP INTELLIFLEX® DR-SE RUO* |
|---|---|---|
| **Performance** | | |
| **Multiplexing Capability** | Up to 500 individual analytes per well | Up to 500 individual analytes per well;<br>Up to 2 parameters per analyte |
| **Typical Dynamic Range** | ≥5.5 logs | ≥5.5 logs<br>≥4.5 logs (second reporter channel*) |
| **Plate Run Time** | 96-well plate in ~20 min<br>384-well plate in ~75 min | |
| **Sensitivity** | Commercially available kits deliver sensitivity as low as sub-picogram level | |
| **General** | | |
| **Physical Dimensions** | 58.4 cm (23 in.) W x 61 cm (24 in.) D x 76.2 cm (30 in.) H | |
| **Weight** | 54.4 kg (120 lbs) | |
| **System Warm-Up** | 30 min | |
| **Operating Temperature** | 15–30°C (59–86°F) | |
| **Operating System** | Microsoft Windows® 10 IoT Enterprise LTSC | |
| **Barcode Reader** | For importing target values from the xMAP INTELLIFLEX® Calibration and Performance Verification Kits | |
| **Fluidics** | | |
| **Sheath Pressure** | 8–13 psi | |
| **Sample Injection Rate** | 2 µL/sec | |
| **Sample Uptake Volume** | 10–200 µL | |
| **Optics** | | |
| **Lasers** | 1 Classification laser<br>1 Reporter laser | 1 Classification laser<br>2 Reporter lasers* |
| **Classification Laser Excitation** | 638 nm | |
| **Reporter Laser 1 (RP1) Excitation** | 532 nm | |
| **Reporter Laser 2 (RP2) Excitation*** | n/a | 405 nm |
| **RP1 Detector** | 565–585 nm | |
| **RP2 Detector*** | n/a | 421–441 nm |

*The second reporter channel is only available in the xMAP INTELLIFLEX® DR-SE RUO model.*

# Ordering Information

## Instruments

| Product | Part Number |
|---|---|
| **xMAP INTELLIFLEX® RUO & xMAP INTELLIFLEX® DR-SE RUO**<br>Includes:<br>• xMAP INTELLIFLEX® RUO Instrument<br>• xMAP INTELLIFLEX® Software (Installed)<br>• xMAP INTELLIFLEX® Quick Guide<br>• xMAP INTELLIFLEX® Performance Verification Kit<br>• xMAP INTELLIFLEX® Calibration Kit<br>• xMAP Sheath Fluid PLUS, 20 L<br>• (3) Sample Probe Needles<br>• Sample Probe Height Adjustment Kit<br>• Power Cable, Country-Specific<br>• Off-Plate Reagent Block<br>• Keyboard and Mouse Combo<br>• Heater Block for 96-Well Microtiter Plates<br>• Heater Block for 384-Well Microtiter Plates<br>• Empty Cubitainer for Waste | INTELLIFLEX-RUO,<br>INTELLIFLEX-DRSE-RUO |

## Optional Software Modules

| Product | Part Number |
|---|---|
| **xMAP INTELLIFLEX® Compliance Module for 21 CFR Part 11 and Annex 11, RUO** | IFX-CFR2.0-RUO |
| **xMAP INTELLIFLEX® Automation Module, RUO** | IFX-AUTO2.0-RUO |

## Reagents

| Product | Part Number |
|---|---|
| **xMAP INTELLIFLEX® Performance Verification Kit RUO, 20 Uses** | IFX-PVER-K20 |
| **xMAP INTELLIFLEX® Calibration Kit RUO, 20 Uses** | IFX-CAL-K20 |
| **xMAP® Sheath Fluid PLUS RUO, 20 L** | 40-50021 |
| **xMAP® Sheath Concentrate PLUS, 1 L** | 40-50023 |

Check out the xMAP® Kit Finder to find xMAP-based immunoassay kits from our Partners: **kitfinder.luminexcorp.com/**.

# Ordering Information

## Accessories and Spare Parts

| Product | Part Number |
|---|---|
| Syringe Cylinder with Seal, 500 μL | CN-0013-01 |
| Sheath Filter with Quick Disconnect | CN-0010-01 |
| Sample Probe Needles | CN-0221-01 |
| Sample Probe Height Adjustment Kit | CN-0263-01 |
| Power Cable, Country-Specific | CN-PXXX-01* |
| Preventive Maintenance (PM) Kit, 6 Months | CN-0458-01 |
| Off-Plate Reagent Block | CN-0514-01 |
| Heater Block for 96-Well Microtiter Plates | CN-0224-01 |
| Heater Block for 384-Well Microtiter Plates | CN-0223-01 |

*XXX is a country-specific part number. For more information, contact Luminex Technical Support.*

## Instrument Services

| | xMAP INTELLIFLEX® RUO | xMAP INTELLIFLEX® DR-SE RUO |
|---|---|---|
| Platinum Service | SLA-IFLEX-PLATINUM | SLA-IFLEXDRSE-PLATINUM |
| Gold Service | SLA-IFLEX-GOLD | SLA-IFLEXDRSE-GOLD |
| Bronze Service | SLA-IFLEX-BRONZE | SLA-IFLEXDRSE-BRONZE |

## Validation Services

| | xMAP INTELLIFLEX® RUO & xMAP INTELLIFLEX® DR-SE RUO |
|---|---|
| IQ/OQ with Installation | VP-INTELLIFLEX-IQOQ |
| Yearly OQ | VP-INTELLIFLEX-OQ |

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