

PHERAstAr® FSX

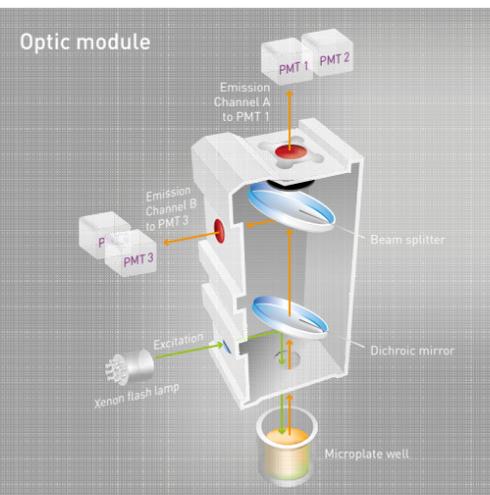
The gold standard for HTS



German engineering at its best

The PHERAstAr® FSX is the gold standard microplate reader for high-throughput screening, specifically designed for the highest sensitivity and speed. Its unique features make it superior to any other microplate reader currently on the market.

- Most sensitive reader in fluorescence intensity and polarization
- Fastest read times with Simultaneous Dual Emission detection
- Full absorbance spectra from 220-1000 nm in < 1 sec/well
- Top and bottom reading with focus adjustment (0.1 mm z-height)
- All microplate formats up to 3456-well
- New generation TRF laser for highest performance
- AlphaScreen®/ AlphaLISA® laser
- Up to two on-board reagent injectors
- Three integrated microplate barcode readers
- Advanced Assay Stability system



Never worry about which filter or dichroic mirror is installed!

Assay-specific Optic Modules are configured with all the necessary optical components including excitation and emission filters, dichroic mirrors, beam splitters, and polarization filters. The PHERAstAr FSX can accommodate up to six Optic Modules. All Optic Modules are easily exchangeable, barcoded, and are automatically selected by the reader for the appropriate assay.



CLARIOstar® Plus

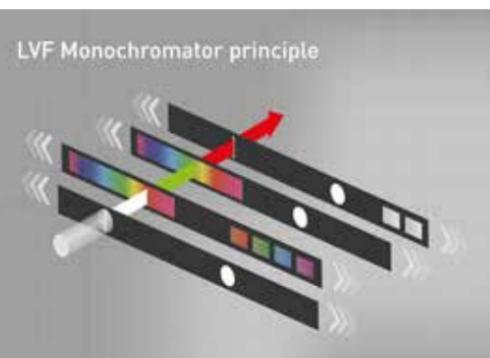
The assay development reader



The most sensitive monochromator-based reader

The CLARIOstar® Plus is a high-performance multi-mode plate reader that combines the flexibility of monochromators with the sensitivity of filters. Its sensitivity and flexibility make it a great choice for assay development and validation.

- Patented Linear Variable Filter (LVF) Monochromators™
- Continuously adjustable bandwidths (8-100 nm)
- Increased sensitivity over conventional monochromators
- Enhanced Dynamic Range technology and full-plate auto-focus
- Dedicated detectors for luminescence and far-red fluorescence
- Full absorbance spectra from 220-1000 nm in < 1 sec/well
- All microplate formats up to 1536-well
- Up to two on-board reagent injectors
- AlphaScreen®/AlphaLISA® laser
- Up to two integrated microplate barcode readers



The flexibility and sensitivity you need for assay development

The capability to adapt to different assays and the sensitivity to validate their effectivity are mandatory on a plate reader in assay development. The most sensitive monochromator combined with filter-based TRF/ TR-FRET detection, AlphaScreen laser excitation and superb fluorescence polarization sensitivity, make sure any non-radioactive assay can be detected effortlessly, even in 1536-well plates.



VANTAstAr®

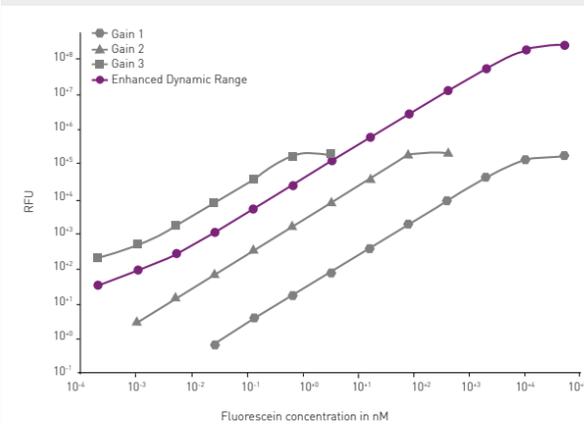
Microplate reading, made easy



Ease of use and flexibility for all of your assays

Conceived for ease-of-use and flexibility, the VANTAstAr® is a compact multi-mode plate reader with simplified detection workflows and a combination of three detection technologies: LVF Monochromators, filter-based detection and a UV/vis spectrometer.

- Patented Linear Variable Filter (LVF) Monochromators
- Continuously adjustable bandwidths (8-100 nm)
- Enhanced Dynamic Range technology and full-plate auto-focus
- Full absorbance spectra from 220-1000 nm in < 1 sec/well
- All microplate formats up to 384-well
- Full top/bottom reading capability with one click switch
- Integrated fluorophore library for easy wavelength selection
- Plate shaking and incubation up to 45°C or 60°C
- Reagent injector module with integrated heater and stirrer
- Reduced footprint



Automatic adjustments for an easy assay setup

The manual adjustment of detection parameters to obtain the best possible results has become superfluous on the VANTAstAr. Enhanced Dynamic Range and auto-focus ensure easy and reliable detection of samples with signal intensities spanning over 8 orders of magnitude with no manual intervention. Every plate is automatically read with the best possible settings.



Omega series

Filter-based reader platform



Upgradeable filter-based reader platform
The Omega series offers a combination of performance, flexibility, and value for money. It is the perfect platform for life science studies.

SPECTROstar®

- Spectrometer-based, single-mode absorbance reader with full UV/vis (220-1000 nm) spectral acquisition
- Reagent injectors, plate shaking and incubation up to 45°C or 65°C
- Upgradeable to FLUOstar Omega

LUMIstar®

- Single-mode luminescence plate reader for flash and glow assays
- Top/bottom reading and Simultaneous Dual Emission for BRET assays
- Reagent injectors, plate shaking and incubation up to 45°C or 65°C
- Upgradeable to FLUOstar Omega

FLUOstar®

- Absorbance, fluorescence intensity and luminescence detection
- Spectrometer-based absorbance with 220-1000 nm spectral scans in < 1 sec/well, or filter-based absorbance with range 240-740 nm
- Simultaneous Dual Emission for FRET and BRET assays
- Reagent injectors, plate shaking and incubation up to 45°C or 65°C



SPECTROstar® Nano

Ultra-fast UV/vis spectrometer



Ultra-fast DNA/RNA, protein, and ELISA measurements
Spectrometer-based dedicated absorbance reader for microplates and cuvettes with ultra-fast, full-spectrum detection.

- Full absorbance spectrum 220-1000 nm detection in < 1 sec/well
- All microplate formats up to 1536-well
- Integrated cuvette port, plate shaking and incubation up to 45°C



NEPHELOstar® Plus

Unique laser-based nephelometer



Light-scattering and turbidity measurements

- Uses light scattering for detection of insoluble particles
- All microplate formats up to 384-well
- Up to two onboard reagent injectors
- Shaking and incubation up to 45°C
- Stacker and robot compatible



Accessories

Atmospheric Control Unit (ACU)

Optimal environment for any live cell-based assay

- Active regulation of O₂ and CO₂ in the microplate reader
- Available for CLARIOstar Plus, VANTASTAR, Omega series, and NEPHELOstar Plus



LVIS Plate

Microplate for low-volume measurements

- Sixteen microdrop well sites for 2 µL samples
- Horizontal standard cuvette position
- NIST-traceable optical filters for precision and accuracy tests
- Compatible with all spectrometer-based readers

Stacker

Mid-throughput microplate handling

- Rapid loading, unloading, restacking for up to 50 microplates
- Continuous load feature and barcode reader
- Accommodates all microplate formats
- Compatible with CLARIOstar Plus, PHERASTAR FSX, Omega series, and NEPHELOstar Plus

Software

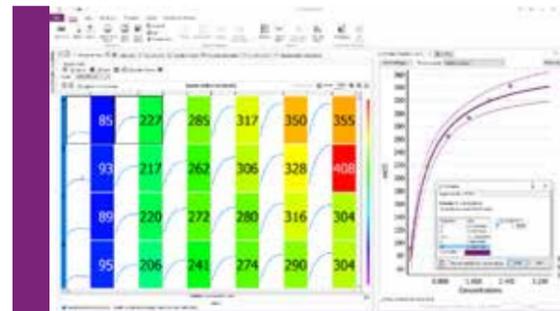
Powerful software package for data acquisition and analysis

Our comprehensive software package provides all the tools needed to both effectively acquire and analyse data. Compliant with FDA 21 CFR part 11 regulation, the software can be installed on as many computers as required, without the need to purchase additional licenses.

Reader Control

An intuitive interface for effortless data acquisition, Reader Control is a versatile platform for the straightforward execution of routine tasks and the optimisation of complex operations. Key features include:

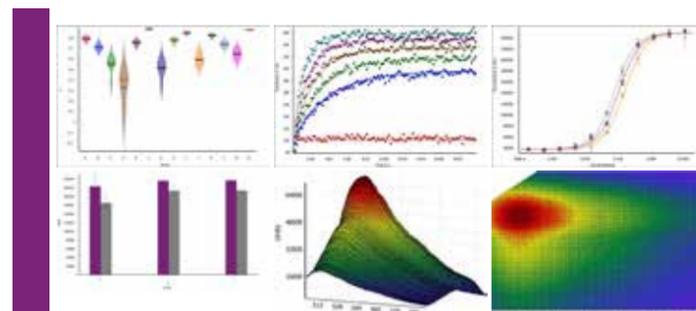
- More than 30 predefined assay protocols
- Quick-start button to get started quickly
- Real-time data display during measurement
- Wizard for simplified multiplexing
- Multiple well-scanning options for heterogeneous samples
- Data export to Excel, dBase, or ASCII format
- ActiveX, DDE and SiLA interfaces for easy integration



MARS

The MARS data analysis package offers multiple data reduction possibilities combined with simple and effective options to display, extract and export results. Key features include:

- Automated one-click assay analysis
- Data display as bar charts, box plots, violin plots, etc.
- Automatic DNA/RNA concentration determination
- Enzyme kinetic analysis using various models
- Signal interpolation using linear or cubic spline interpolation
- Linear, 4- / 5-parameter, polynomial and user-defined curve fits
- Assay performance: Z', %CV, Signal-to-Blank, Signal-to-Noise ... and many more



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Instrumentation Guide

