

# GENETIX-A300

Multi-mode UV-VIS, Fluorescence & Luminescence Plate Reader

Delivering Performance and  
Value to Every Laboratory



GENETIX BIOTECH ASIA PVT. LTD.

## Instrument Introduction

The Genetix-A300 microplate reader offers affordable high performance detection solutions, powered by monochromator and filter based technologies.

The Genetix-A300 microplate reader is a high performance multi-mode detection instrument to provide a simple means of detecting advanced chemistries. This instrument provides researchers UV-visible absorbance measurements, flexible use of filters for fluorescence intensity and filtered luminescence measurements.

The Genetix-A300 is also compatible with the customers modular upgraded functions. Users can upgrade to equip the low volume u-Nano Ultra-Micro plate and the automatic injector as your need.

The instrument is operated by an Android system, a 10-inch touch screen, APP software, which provides quick-to-use and easy navigation through the control options. Exporting your result and data are seamless with a variety of options, including export to your local data network.

The software will be able to provide the required technical element of a FDA 21 CFR Part 11-compliant system to be used with the appropriate laboratory workflow.

The instrument is equipped with a 10-inch touch screen, no need to connect a computer. The layout, operating parameters, and algorithm settings and the other informations can be completed by a single machine. The built-in software of the instrument includes multiple algorithm analysis functions of standard curve, qualitative and quantitative, basic calculation, kinetics, spectroscopy and etc, which makes more convenient for the processing and research of experimental data.

In addition, the Genetix-A300 has a code scanning function, which can not only identify the filters informations, but also create a QR code for the experimental program or standard curve. Researcher can quickly import the experimental program into the instrument through the QR code.

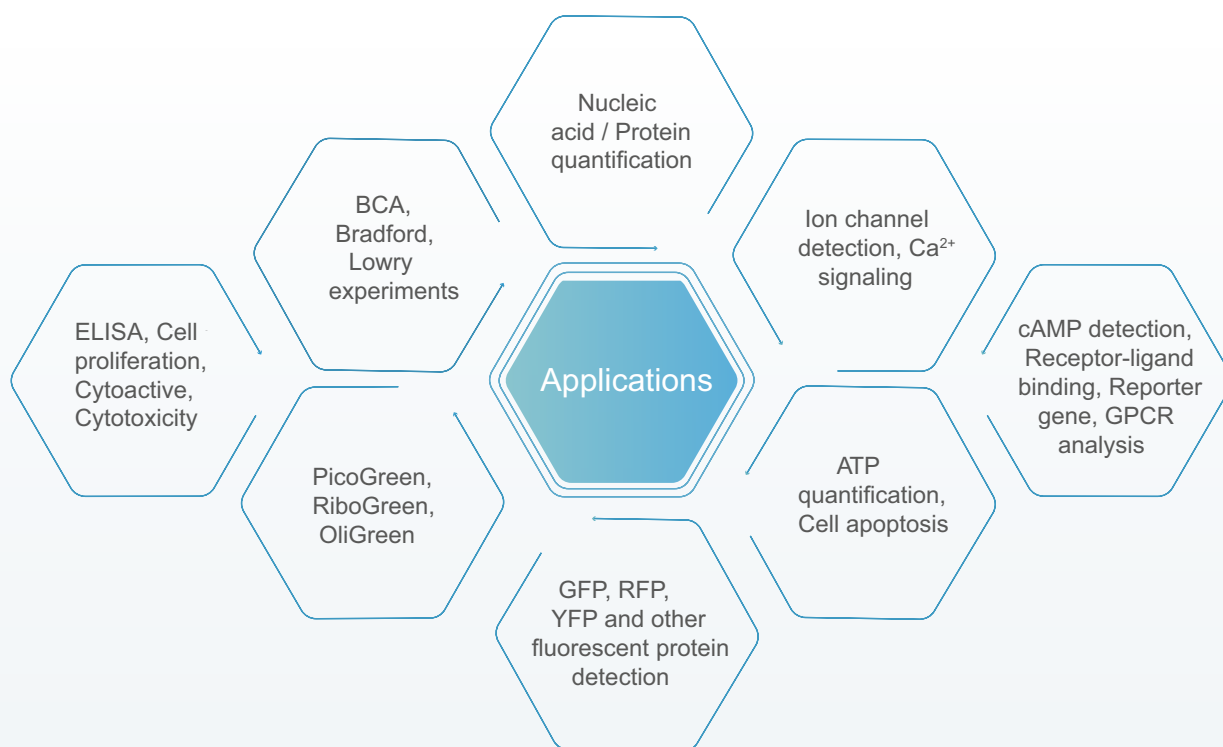
The Genetix-A300 represents a good combination of performance and flexibility for all of your basic research, life science study and assay development.

UV / Vis  
Absorbance  
Spectrum  
Scanning

Fluorescence  
Top Reading

Luminescence  
Glow / Flash





**u-Nano Plate  
Testing**

**Incubator  
Ambient  
+4°C~45°C**

**Injector  
Single / Dual**

# Genetix-A300

## Next Generation Multi-mode Plate Reader

### Multi-mode UV-VIS, Fluorescence & Luminescence Plate Reader

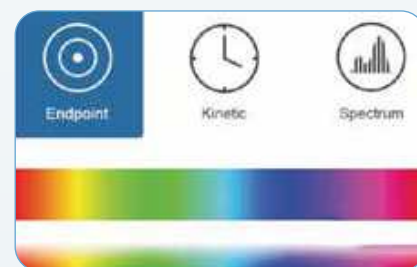
#### UV / Vis Absorbance

Wavelength selection in Genetix-A300 is done by using an advanced monochromator system. Any wavelength between 200 to 1000 nm can be selected. Using the spectral scanning feature, the whole spectrum of a sample can be scanned in 1 nm increments to allow identification of the optimal measurement wavelength for a new assay.

Long life xenon lamp  
which can be used for  
10<sup>9</sup> (10 years)

Fast reading mode only  
need time 15 s for 96  
well whole plate

Can be used for spectral  
scanning, endpoint and  
kinetic detection



#### Fluorescence

Genetix-A300 is equipped with filter-based fluorescence optics and dichroic mirrors for screening applications such as fluorescence polarization, and TR-FRET. Standard applications such as fluorescence-based DNA/RNA quantification assays are not only supported in microplates, but also in low volume u-Nano Ultra-Micro plate.

The independent removable filter modules make it more convenient for users to replace the filter. The filter-based fluorescence optics detection ensures high sensitivity, greater light transmission, precise control over transmitted peak shape, excellent blockage of undesired wavelengths. This is ideal for excitation and emission applications. The filters are also the technically preferred and most cost efficient technology for non-absorbance based assays.



#### Luminescence

Genetix-A300 has been designed with a dedicated luminescence detection system for both flash and glow based assays. It can offer excellent sensitivity and wide dynamic range in luminescence measurement.

The optimized precision dual-channel injectors ensure the detection performance of the 96-well and 384-well plate. The PMT enhances the maximum sensitivity of weak luminescence signals, prevents oversaturation of high signals, effectively improves the detection range of luminescence and minimizes signal crosstalk between wells.

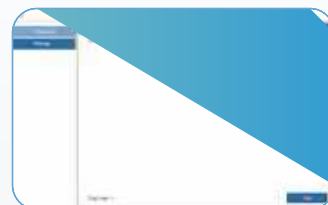


## Easy-to-Use and Flexible Software

The Genetix-A300 provides powerful independent instrument control software. Through the 10-inch high-resolution touch screen, you can perform board layout, parameter setting and data analysis operations. The intuitive interface, simple operation, and abundant functions will significantly improve the efficiency of your experiment.

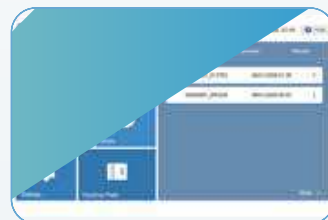
### User Authority Classification

- 1 User permissions are divided into four levels, with clear permissions to avoid the occurrence of misuse by researchers;
- 2 Administrator can manage the accounts of different sub-users;
- 3 The users have independent accounts and passwords to ensure the safety and confidentiality of experimental results.



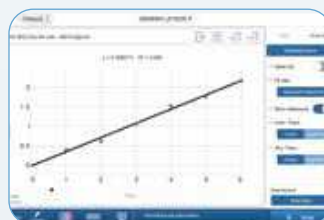
### Intuitive Interface Display

- 1 Intuitive selection of function modes, easy parameter setting;
- 2 The layout colors are distinguished clearly, convenient to be checked for the position of the sample;
- 3 Programs and results are stored independently, making it easy to be found the required applications.



### Powerful Data Analysis and Process

- 1 Provide multiple data process methods including blank subtraction, standard curve creation, qualitative analysis, quality control, kinetics and spectral analysis to help you obtain the analysis results you want;
- 2 Algorithm customization: according to your assays needs, you can customize the required algorithm, tailor-made for convenient assays.



### Liberalized User Communication

- 1 The software has with a shared library, which can store the program, results and standard curves for sharing them with others;
- 2 The program and standard curve can be created in real time to a QR code, and the required content can be imported only by scanning the code with the instrument.



### FTP (File Transfer Protocol)

Upload the data directly to a computer with a FTP server, and users can view the data results at any time in the authorized folder.





## Optional Accessories

### u-Nano Ultra-Micro Plate

- 1 Quickly complete high-throughput quantification of nucleic acid and proteins without samples dilution;
- 2 1~16 samples can be detected at the same time, only 2~4  $\mu\text{L}$  sample volume is needed;
- 3 No need to calibrate; reliable performance.



### Automatic Injector Module

- 1 Equipped with dual automatic injector modules of the Genetix-A300 are critically important for a myriad of assays, most notably flash luminescence and calcium flux assays etc.  
The Genetix-300A is equipped with a standard injector module, which can meet the precise sample addition operation of 384-well plates and realize the possibility of rapid detection of high-throughput plates.
- 2 The automatic injector module can be purchased at the same time with the device and can also be upgraded later.



### Modular Filter

The easy-to-disassemble modular filter will bring an economical and highly sensitive solution to your fluorescence detections. Only by scanning the QR codes on the module, the instrument can read the filter information to ensure accurate experimental parameters for convenient and quick operation.



### ReaderIt-II PC Analysis Software

The ReaderIt-II PC analysis software is with graphical operation interface design. Data export is convenient and fast. Detailed result reports can be created through built-in tools. ReaderIt-II software can also provide a more comprehensive and complex data analysis algorithm than the instrument APP software. The Reader-II PC software makes more convenient for customers to process assay results.



## Technical Parameter

<b>Basic Information</b>		Linear dynamic range	6 logs
Type	Genetix-A300	Crosstalk	≤0.005 %
Function	Absorbance, fluorescence, luminescence	<b>Shaking &amp; Incubation</b>	
Plate Formats	96 & 384 wells (6 / 12 / 24 / 48 optional)	Shaking mode	Linear, circular, double circular
<b>Absorbance</b>		Incubation temperature	RT +4 °C to 45 °C
Light source	High energy xenon flash lamp	Temperature uniformity	±0.5 °C @ 37 °C
Detector	PD	<b>Software</b>	
Wavelength accuracy	2 nm	Software interface	English (VER.)
Wavelength repeatability(SD)	0.2 nm	Screen size	10-inch LCD display
Half width (FWHM)	<2.5 nm	Operation method	Touch capacitive screen; use mouse
Wavelength range	200-1000 nm, 1 nm step	Data capacity	10 GB
Measuring range	0-4 OD	Compatibility	Support PC software, win7 to win10 64 bit
Resolution	0.0001 OD	Data transmission	Test data report can be uploaded to PC server via FTP
Accuracy	96-precision mode ±(1.0 % + 0.003Abs) @ (0.0-2.0Abs) ±2.0 % @ (2.0-3.0Abs)	<b>Others</b>	
Repeatability	CV < 1.0 % or Fast (0.0-3.0] CV < 0.5 % or Accurate (0.0-3.0]	Instrument port	2 USB A type ports / 1 USB B type port 1 Ethernet port CAN bus interface (injector connection)
Stray light	0.1 % @ 220 nm	Size (W x D x H)	420 mm x 550 mm x 386 mm
Linear	R <sup>2</sup> >0.999 @ [0.0-3.0]	Power supply	AC 100 to 240 V, 50 to 60 Hz
Reading time	96-well plate: fast < 15 s (A1 to A1)	Power	160 W 24 V 6.67 A (can be adjusted according to hardware requirements)
<b>Fluorescence</b>		Weight	33 kg
Reading mode	Top reading	<b>u-Nano Ultra-Micro Plate (Optional)</b>	
Excitation light source	High energy xenon lamp	Number of samples	1-16
Detector	PMT	Sample detection volume	2-4 µL
Wavelength range	EX: 200-1000 nm; EM: 270-850 nm	<b>Automatic Injector Module (Optional)</b>	
Filter EX / EM	3 groups	Quantity	1, 2
Detection limit	≤1 pM	Dispensing volume	5-1000 µL, 1 µL increment
Linear dynamic range	≥ 6 logs	Liquid injection speed	20-500 µL / s
<b>Luminescence</b>		Accuracy	±1 µL @ 5-50 µL ±2% @ 51-1000 µL
Detector	PMT	Waste liquid collection	50 mL
Detection limit	100 amol / hole	<b>*Upgradable to TRF &amp; Fluorescence Polarization</b>	

## Ordering Information

No.	Code	Product Description
1	GX-00-19050	Genetix A300 Multi-mode UV-VIS, Fluorescence & Luminescence Plate Reader
2	GX-01-19011	ReaderIt-II PC analysis software
3	GX-02-19011	u-Nano Ultra-micro plate
4	GX-03-19011	ABS optical performance validation plate
5	GX-01-19051	Automatic injector



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