

## Specifications

### General

#### Pipettor

Min / max. volumes	10 µl to 300 µl with 300 µl tip 301 µl to 1000 µl with 1100 µl tip
Precision (single dispense)	< 3% CV at 20 µl < 3% CV at 100 µl
Precision (multi dispense)	< 10% CV at 16 x 20 µl < 3% CV at 8 x 100 µl
Features	Pipetting pressure monitoring, capacitive liquid level detection, tip detection, mixing, multiple dilution steps, archiving

#### Dimensions

Width x Depth x Height	125 cm x 90 cm x 75 cm 49.2" x 35.4" x 29.5"
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### IFA

#### Capacity

Processing of up to 16 IFA slides per run

#### Features

IFA application without hardware modification  
Flexible and intuitive slide designer  
Quick and reliable: no risk of cross-contamination  
Flexible slide tray for different types and layout

### ELISA

#### Capacity

Sample and reagent capacity	Up to 192 samples Flexible: e. g. 144 samples + 8 reagents + 16 controls
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#### Reader

Photometric range	0 to 3.0 OD
Spectral range	400 nm to 700 nm (up to 8 filters)
Read time	< 15 sec single, < 30 sec dual
Precision	1% CV at 1.0 OD
Accuracy	± 0.005 OD or 2.5% (whichever is greater)
Linearity	0 to 2.000 OD ± 1%

#### Incubator

Temperature range	Up to 45°C
Temperature	± 1.5°C (with in-process temperature uniformity monitoring)

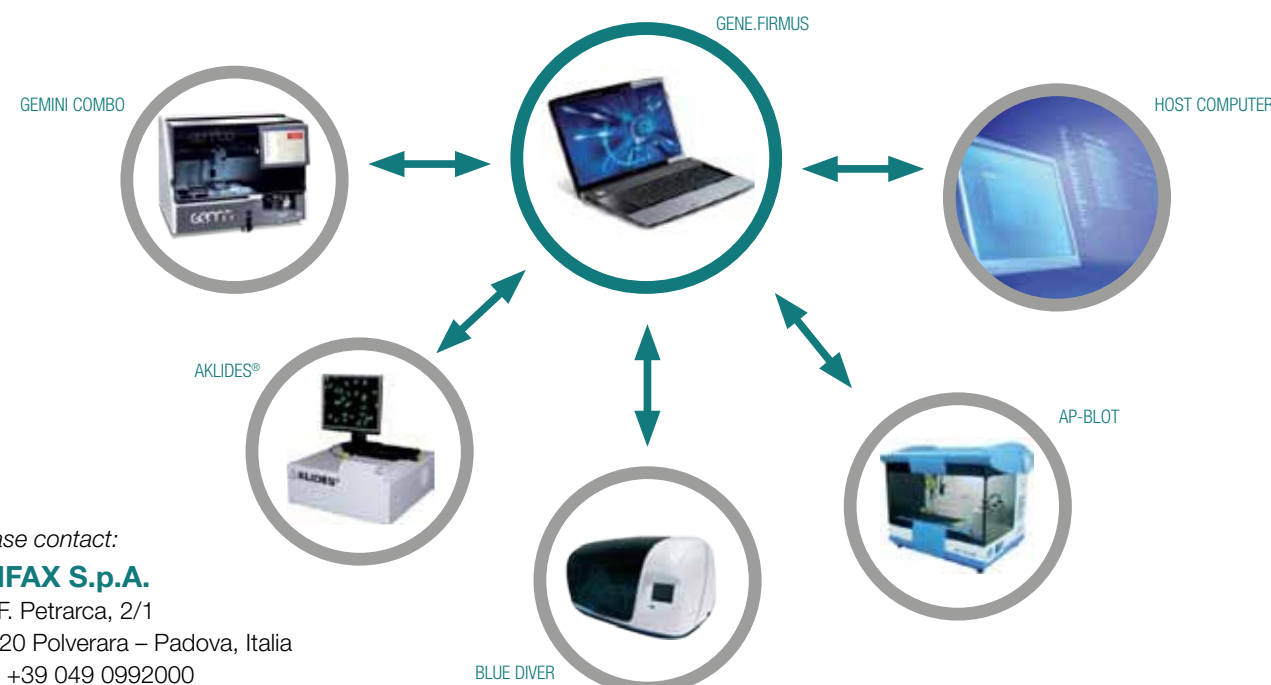
#### Shaking

20 Hz

#### Washer

Precision	10% CV at 300 µl
Residual volume	<2.5 µl in U-bottom (mean) <4 µl in flat bottom (mean)
Wash buffer capacity	3 wash buffers
Modes	Sweep mode, soak, top and bottom wash, variable pump speed

## GENE FIRMUS INTEGRATED MANAGEMENT AND WORKING FLOWCHART



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## Gemini Combo

ELISA and IFA slide Processor

## TUBE IN - RESULT OUT

Fully automated microplate and slide processor for low throughput applications

- Total walk away system
- Flexible time management with LIS connectivity
- Modularity – open system
- Ease of use, installation and maintenance
- Assay performance with disposable tips
- High process safety with triple pipetting control
- Convenient programming of assay protocols
- Proven reliability
- The system is in compliance with the In-vitro diagnostic directive 98/79/EC

### Reading

- Absorbance reader with up to 8 different filters
- Single or dual wavelength reading
- End point and kinetics
- Shaking



### Incubation

- Two independently controlled incubator chambers (up to 45°C) with shaking (20 Hz)
- Three room temperature incubation chambers

### Washing

- 2 x 8-channel washer (aspirate and dispense)
- Three wash buffers
- Sweep mode, soak, top and bottom wash, variable pump speed



### IFA TECHNOLOGY

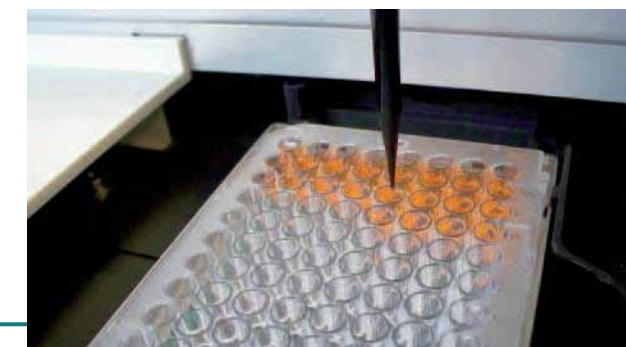
- Efficient dual technology – IFA and EIA – on a single instrument
- Processing of up to 16 IFA slides
- Quick and reliable: no risk of cross-contamination
- Flexible and intuitive slide designer

### Ease and flexibility

- Flexible scheduling of up to three plates
- Graphical assay protocol editor
- Combination of multiple assays on one plate
- Proven software reliability
- Bi-directional LIS connectivity, ideal with random access instruments
- Based on established EIA software platform with more than 4,500 placements worldwide

### Safety and in-process control

- Pipetting pressure monitoring
- Capacitive liquid level detection for optimal identification of fibrin clots and insufficient volume
- Colorimetric dispense verification
- Positive identification of barcoded samples and reagents



### Capacity and throughput

- Initial loading of up to 192 samples
- Continuous loading
- Three disposable tip rack positions
- Two deep-well plate positions for pre-dilution and / or archiving



### Pipetting

- Liquid pipettor for disposable tips (300 µl or 1100 µl)
- Flexibly programmable for single pipetting, multiple pipetting, multiple dilution steps, mixing and archiving

