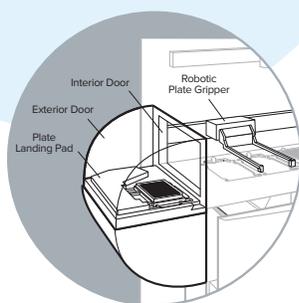


# FLIPR Tetra System

Real-time kinetic cellular assays

## KEY FEATURES

- **96, 384 & 1536 liquid transfer**
- **User-configurable fluidics and optics**
- **Multi-wavelength kinetic reading**
- **Calcium mobilization**
- **Membrane potential**



**TetraCycler microplate handler.** TetraCycler provides a light-tight chamber external to the reading chamber, enabling microplate and tip exchange during an experiment.

Molecular Devices delivers a robust screening platform to address real-time kinetic cell-based assays with the FLIPR Tetra® System. The system features 96, 384, and 1536 simultaneous liquid transfer, multi-wavelength kinetic reading, fluorescence and luminescence detection, agile internal plate handling, and elevated instrument intelligence to enable users to reduce costs and increase productivity, while addressing their preferred screening targets.

The FLIPR Tetra System's 1536 liquid transfer technology significantly reduces screening time and reagent consumption. Simultaneous liquid transfer to approximately 2,000 cells per well in a 1536-well plate is achieved using a proprietary, contact-based elastomeric technology. Contact-based liquid transfer occurs with the same height, speed and volume flexibility offered in traditional 96 and 384 pipettors.

The FLIPR Tetra System can accommodate changing laboratory screening requirements with its user-configurable fluidics and optics. The 96, 384, and 1536 pipettor heads, LED modules and emission filters can be exchanged by the user in approximately 10 minutes. In addition, TetraCycler, the system's internal plate handler, can be added to exchange plates and tips with an external robot. TetraCycler gives you the speed and agility to exchange up to 12 source plates and tips during one experiment while maintaining a light-tight environment.

By giving users the ability to choose instrument configuration, the system can address diversified target populations and larger compound libraries. From a base 96-well configuration, the user can purchase additional pipettor heads, wavelengths, read modes, and robotics to expand the system and increase capacity.

## Ordering information

FLIPR Tetra Systems are sold standard with an EMCCD camera, Calcium Optics Kit, tip washer and heated stage.

### FLIPR Tetra System

- 96 pipettor head kit with base system
- 384 pipettor head kit with base system
- 1536 pipettor head kit with base system and TetraCycler

### FLIPR Tetra System packages

- 96 & 384 pipettor head kits, TetraCycler with base system
- 384 & 1536 pipettor head kits, TetraCycler with base system

### Technical specifications

#### Excitation optics

|  |                             |
|--|-----------------------------|
| Source                                 | Light-emitting diodes (LED) |
| Wavelength range*<br>Calcium (default) | 470–495 nm                  |
| Membrane potential                     | 510–545 nm                  |
| Voltage sensor probes                  | 390–420 nm                  |

#### Emission optics

|  |                                    |
|--|------------------------------------|
| Standard EMCCD camera                          | Fluorescence                       |
| Aequorin ICCD camera                           | Fluorescence & Luminescence†       |
| 3-position filter slider                       | Filter wavelength ID               |
| Wavelength range**                             | 400–750 nm                         |
| Calcium (default)                              | 515–575 nm                         |
| Membrane potential                             | 565–625 nm                         |
| Voltage sensor probes                          | 440–480 nm<br>565–625 nm           |
| Data acquisition rate                          | 3 Hz                               |
| Ratiometrics                                   | Up to 4 EX/EM pairs per experiment |
| Data acquisition rate for ratiometric emission | 1 Hz (2 EX/EM pairs)               |
| Lower detection limit of fluorescein           | 5 nM with Z' = 0.5 (whole plate)   |

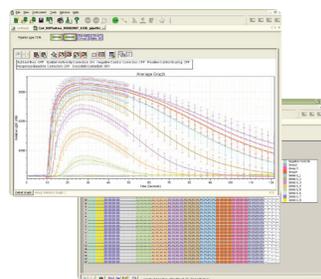
#### Fluidics

|                                      |                  |
|--------------------------------------|------------------|
| Simultaneous transfer                | 96, 384 and 1536 |
| Quadrant transfer: 96 pipettor head  | 384-well plate   |
| Quadrant transfer: 384 pipettor head | 1536-well plate  |

### Contact Us

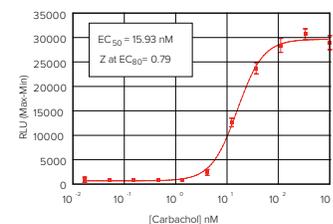
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Check our website for a current listing of worldwide distributors



### Real-time data handling.

ScreenWorks® Software enables users to monitor real-time 96-, 384- and 1536-well experiments in addition to exporting information-rich data.



### FLIPR Calcium 4 Assay Kit

**results.** Carbachol-induced calcium mobilization in CHO M1WT3 cells plated in 384-well microplates using the Molecular Devices FLIPR Calcium 4 Assay Kit.

### Technical specifications

#### Fluidics

|                      |           |
|----------------------|-----------|
| Pipettor range 96    | 5–200 µL  |
| Precision @ 75 µL    | 3% CV     |
| Pipetting increments | 1 µL      |
| Pipettor range 384   | 1–25 µL   |
| Precision @ 25 µL    | 4% CV     |
| Pipetting increments | 0.5 µL    |
| Pipettor range 1536  | 0.5–3 µL  |
| Precision @ 3 µL     | 6% CV     |
| Precision @ 1 µL     | 10% CV    |
| Pipetting increments | 0.1 µL    |
| Cell suspension      | Optional† |

#### Plate stage

|  |                                     |
|--|-------------------------------------|
| Throughput (1 read plate, 1 source plate and 1 tip rack) | 20 plates/hour (2-minute read time) |
| 96-well  | 1,920 data points/hour              |
| 384-well   | 7,680 data points/hour              |
| 1536-well  | 30,720 data points/hour             |
| Bar code manual mode                                     | Keyboard entry                      |
| Bar code remote mode                                     | Short or long side                  |
| Temperature control                                      | Ambient +5°C to 40°C                |

#### General specifications

|                   |                            |
|-------------------|----------------------------|
| Dimensions (in.)  | 45 (W) x 70 (H) x 27 (D)   |
| Dimensions (cm)   | 114 (W) x 178 (H) x 69 (D) |
| Weight (approx.)  | 860 lbs. (390 kg)          |
| Power consumption | 600 VA                     |
| Power source      | 90-240 Vac, 50–60 Hz       |
| Operating system  | Windows XP                 |

\*For additional excitation banks, contact our Customer Service department.

\*\*For additional emission filters, contact our Customer Service department.

†For details, see the FLIPR Tetra Aequorin Option data sheet or contact our Customer Service department.