

### EXPRESSGENE™ SPECIFICATIONS

|                                      |   |
|--------------------------------------|---|
| Temperature Range of Block, °C       | 4 to 99 with simulated tube and microplate control algorithms |
| Sample Accuracy, °C                  | ± 0.4 (20–99°C) ± 1 (4–20°C)                                  |
| Sample Homogeneity, °C               | ± 0.4 after 30 seconds (30–99°C)                              |
| Sample Volume Range, µl              | 5 to 100  |
| Ramping Rate, Cooling, °C per second | up to 6 (Ultra) / 3.5 (Standard)                              |
| Ramping Rate, Heating, °C per second | up to 3.5 (Ultra) / 2.5 (Standard)                            |
| Thermal Gradient                     | Up to 30°C between 30° and 80°C                               |
| Sample Overshoot, °C                 | < 1   |

### THERMAL BLOCKS

|                 |   |
|-----------------|---|
| Block Materials | <b>Standard:</b> Nickel coated aluminum blocks with four rapid response temperature sensors<br><b>Ultra:</b> Gold coated silver blocks with four rapid response temperature sensors |
| Traceability    | Calibration using NIST traceable standards  |

### USER INTERFACES

|                          |  |
|--------------------------|--|
| Touch Screen             | 6.4 inch color touch screen  |
| USB Connectivity         | Connect optional input devices Mouse, Keyboard or Bar code scanner & transfer data and perform software updates by USB Drive |
| Communication Interfaces | 1 x USB  |

### SOFTWARE

|                  |  |
|------------------|--|
| Software         | Program storage in individual user directories for > 10,000 programs |
| Power Management | Program resume or abandon function in the event of a power failure   |
| User Management  | Multiple levels of user security and access                          |

### PRESSURISED HEATED LID

|                 |                                      |
|-----------------|--------------------------------------|
| Lid Temperature | 112°C                                |
| Lid Pressure    | Adjustable for tubes and microplates |

### POWER AND DIMENSIONS

|                            |                 |
|----------------------------|-----------------|
| Electronic Power Supply    | 100V–240V       |
| Dimensions (w x d x h), mm | 342 x 425 x 260 |
| Weight, kg                 | 12              |

# Power and Performance at Your Fingertips



| Cat. No. | Description  | Price      |
|----------|--|------------|
| P5200    | ExpressGene™ Gradient Cycler with gradient thermal block for 96 x 0.2 ml tubes or 96-well PCR plates                             | \$4,999.00 |
| P5210    | ExpressGene™ Gradient Cycler with Flat Block for 4x slides/microarrays   | \$4,999.00 |
| P5220    | ExpressGene™ Gradient Cycler with Combi-Gradient thermal block for 48 x 0.2 ml and 48 x 0.5ml tubes                              | \$4,999.00 |
| P5300    | ExpressGene™ Ultra Gradient Cycler w/UltraGradient silver thermal block for 96 x 0.2 ml tubes or 96-well PCR plates              | \$5,999.00 |
| P5310    | ExpressGene™ Ultra Gradient Cycler with UltraGradient silver thermal block for 384-well PCR plates                               | \$5,999.00 |
| P5400    | ExpressGene™ Satellite Gradient Cycler with 96 gradient thermal block for 96 x 0.2 ml tubes or 96-well PCR plates                | \$4,500.00 |
| P5410    | ExpressGene™ Satellite Gradient Cycler with Flat Block for 4x slides/microarrays   | \$4,500.00 |
| P5420    | ExpressGene™ Satellite Gradient Cycler with Combi-Gradient thermal block for 48 x 0.2 ml and 48 x 0.5ml tubes                    | \$4,500.00 |
| P5500    | ExpressGene™ Satellite Ultra Gradient Cycler with UltraGradient silver thermal block for 96 x 0.2 ml tubes or 96-well PCR plates | \$5,500.00 |
| P5510    | ExpressGene™ Satellite Ultra Gradient Cycler with UltraGradient silver thermal block for 384-well PCR plates                     | \$5,500.00 |
| P5201    | Gradient thermal block for 96 x 0.2 ml tubes or 96-well PCR plates   | \$2,000.00 |
| P5202    | Combi-Gradient thermal block for 48 x 0.2 ml and 48 x 0.5ml tubes  | \$2,000.00 |
| P5301    | UltraGradient silver thermal block for 96 x 0.2 ml tubes or 96-well PCR plates   | \$2,500.00 |
| P5302    | UltraGradient silver thermal block for 384-well PCR plates   | \$2,500.00 |

Prices are subject to change without notice.

**ExpressGene™**  
Gradient Cycler

**DENVILLE**  
SCIENTIFIC INC.

Order **800.453.0385**

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**DENVILLE**  
SCIENTIFIC INC.

# ExpressGene™ Gradient Cycler



Driven by the latest peltier based thermal engine comprised of four independent thermal zones, the **ExpressGene™** delivers rapid ramp rates (up to 6°C per second), near-perfect uniformity, accuracy and superior performance. A unique real time temperature sensor feedback system ensures reliable and precise results for every run offering state-of-the-art performance.

The intuitive user interface utilizing a 6.4 inch color touch screen facilitates rapid program creation and execution of even complex protocols including gradient steps, touch-down, time and temperature increments and hot starts. A full thermal cycling protocol can be set up on a single screen in seconds. On board software includes an intelligent program creation wizard that will automatically generate an optimized protocol from primer sequence or T<sub>m</sub>, amplicon length and origin of the target sequence in a matter of seconds.

The **ExpressGene™** can utilize a USB mini network to connect and drive up to four independent thermal cycling units creating an expandable system of thermal cycler satellites.

## Unparalleled Performance

**Real time sensor readings** from all four temperature zones provide constant feedback of the quality of each and every run. Accuracy and performance can be seen and easily confirmed by user as all four temp sensor results are traced live for each

- Real time temperature sensor feedback
- Large graphical touch screen user interface
- Rapid intuitive “drag and drop” program creation
- Intelligent protocol creation wizard — With a few touches create brand new optimal protocol
- Gradient capable, Up to 30°C gradients

run. Even more performance is offered in the form of block type: Standard Gradient (nickel-plated aluminum block with ramp rates up to 3.5°C/s) and Ultra Gradient (gold-plated silver block with superior ramp rates of up to 6°C/s).

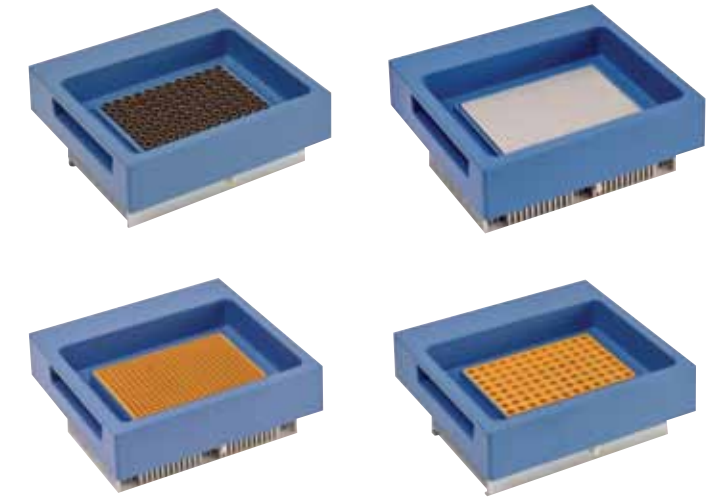
- Rapid ramp rates up to 6°C/s controllable to 0.1C/sec
- Uniformity better than ±0.4°C
- Accuracy better than ±0.5°C
- Thermal Overshoot less than 1°C
- 100 % NIST Traceable performance verification



## Multi-Block Capable!

The **ExpressGene™** can utilize a USB network to control up to four completely independent thermal cycler blocks for higher throughput or multi-user situations. This single block architecture has distinct advantages over the old fashioned quad block single chassis systems offered by other manufacturers:

- **Maximum versatility** — units can be positioned to maximize space effectively
- **Expandability** — individual satellites/blocks can be simply added or removed
- **Flexibility** — any ExpressGene™ satellite can be used
- **Serviceability** — satellites can be removed and replaced while retaining a fully operational system



Expand your system up to four cycling units as your laboratory's needs grow.

Two Year Warranty

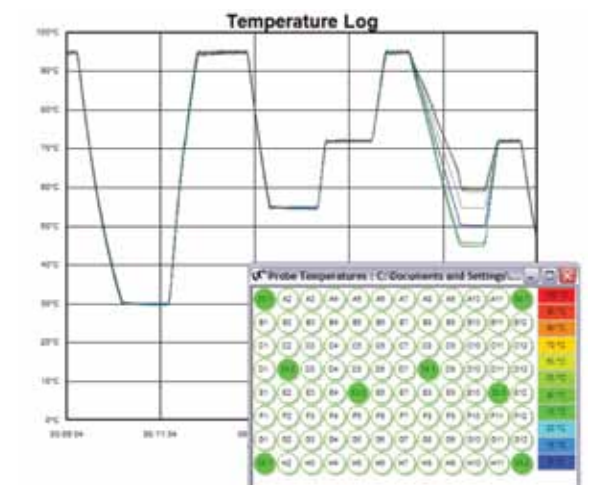
## Flexibility: Interchangeable Block Options

All interchangeable thermal blocks have four independently-controlled thermal zones (each powered by two cycling-specific peltiers monitored via an ultra-high precision temperature sensor) to deliver rapid ramp rates, excellent block uniformity, precise accuracy and clearly defined gradients of up to 30°C.

Multiple block options can be changed by the user in seconds **without the use of any tools.**

Interchangeable Block Options:

- 96 well 0.2ml / microplate block
- 48 x 0.5ml / 48 x 0.2ml combi block
- 384 well microplate block for high throughput
- Microarray/Slide blocks



Superior uniformity and precision. As part of the QC procedure, eight regions of the block are tested for temperature performance including the corners which are traditional trouble spots for other cyclers. The graph of these results show the precise uniformity and accuracy across the block as all eight probes superimposed perform as one.

## Dependability

- **Onboard QC test monitoring system** ensures that your ExpressGene™ is functioning in peak form run after run.
- **GLP Reports** — Data for each experiment is recorded in a unique GLP file system ensuring full laboratory traceability and validation. Optional bar code scanner use allows for absolute data accountability.
- **Rigorous QC Testing** — Every block undergoes comprehensive performance testing during its manufacture and is verified directly to NIST traceable international temperature standards.