
G-STORM™
GS2
PREPARE FOR THE G-STORM™


G-STORM™
GS2
G-STORM™ THE CUTTING-EDGE
THERMAL CYCLER SOLUTION
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G-STORM™ GS2

THE THERMAL CYCLER SOLUTION YOU'VE BEEN WAITING FOR

G-Storm GS2 from G-Storm Ltd is the perfect thermal cycler solution for when you require twice the throughput or twice the capacity – two heads really are better than one!

A good-looking, easy to use platform that combines medium to high throughput capacity together with added flexibility into your research lab, the GS2 is purpose built for the demands of the modern molecular biology laboratory. G-Storm is the new benchmark for thermal cycler excellence. Superb thermal performance characteristics are perfectly balanced with ease of operation ensuring that daily use is a pleasure.

Design and feel of GS2 is paramount, resulting in a cycler that will deliver the results you demand from a unit that will look great in your laboratory.

The colour touch-screen is the heart of GS2's control. The user interface is simplicity itself, making programming, file management and cycler control a breeze.

THE NEW BENCHMARK FOR PROGRAMMING AND CONTROL

Colour touch-screen display

The full colour VGA, 8.4 inch TFT touch-screen display presents users with an interface in which programming and control is point and click or drag and drop. Control of GS2 is via the touch-screen, using a stylus, ball pen, or even your finger! (An optional keyboard and mouse can be attached via the USB port if you prefer).

G-Storm software – simple yet powerful

If you are new to molecular biology, programming any thermal cycler for the first time can be a daunting prospect. This is not the case with GS2's interface! Novices through to experts find the software intuitive and easy to learn yet powerful enough to handle the most complex of protocols.

Users have the choice to enter known programs manually or utilise the fabulous Program Wizard. The program wizard function and in-built primer algorithms remove the requirement to manually calculate the ideal protocol for your experiment. Simply enter your primer sequences or melting temperatures (TM's) and let the wizard do the rest! Manual programmin utilises drag and drop principles, and the icon driven commands enable quick, clear and intuitive protocol inputs. Even utilising GS2's gradient function effectively is simple. Optimal conditions from any gradient protocol can be converted straight into a standard protocol with only a single click!

A site license for G-Storm programming software interface is also provided free of charge for use on PC's, enabling experimental design and programming from your desktop. Protocols can be transferred via memory stick to and from your PC straight onto the GS2.

G-Storm is changing the way molecular biologists think about using thermal cyclers. With so many features available from one machine combined with incredible ease of use, you will be blown away!

Multi-Sensor block technology

Both of the thermal blocks within the GS2 has 4 independent temperature control sensors and 8 peltier heating units, ensuring that temperature control and uniformity across the block surface is accurate and reproducible time after time, cycle after cycle. With features such as Active Sample Cooling (ASC) ensuring that samples are cooled until the heated lid reaches its target temperature, therefore reducing non-specific primer binding and extension, GS2 is protecting your samples even before your protocol has begun.

"The thermal cycler solution for cutting-edge molecular biologists."

A gradient feature for protocol optimisation is standard on all blocks (plate and tube block formats) (96 and 384 well) ensuring that you get the very best data from your starting biological material. The gradient range is user programmable from 4°C to 30°C across the thermal block (gradient can be run within a temperature range of 30°C to 80°C).

FAST Blocks

Choose between standard and new FAST Blocks:

- Ramp rate of up to 6°CS-^{1} with FAST Block option
- Increased productivity by faster protocols

G-Storm Ltd offer the choice of standard thermal blocks with a ramp rate of up to 3°CS-^{1} together with the new FAST Block (96 and 384) option with ramp rates of up to 6°CS-^{1}.

Utilising a new electroplating process to reduce material thermal mass, the FAST Blocks are made from solid silver with a gold finish. The FAST Blocks have incredible thermal conductivity properties that enable superb heating and cooling capability. These characteristics result in ramp rate of up to 6°CS-^{1}, twice the speed of our standard anodised aluminium blocks. By increasing the speed of the thermal block, protocols can be completed in less time, therefore enabling more samples to be run per day.

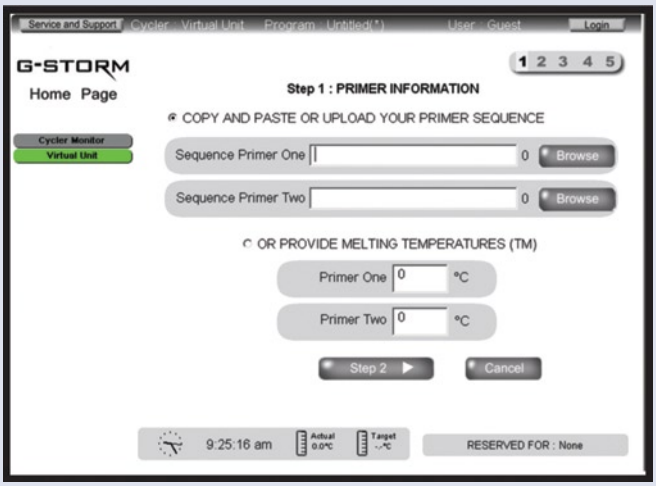
Fast Gradients

When optimising biological experiments, the same gradient functionality of the cyclers is available on the FAST Blocks, ensuring that whatever block option you choose, you can be sure to achieve the very best data from your biological material.

FAST Blocks are available in 96 well and 384 well options.

GS2's "Home Page" is central to the control of the cycler's various functions. Select the various options, including Program Wizard, New Program, Run Program, on the touch-screen and let the software take you through a logical process that enables you to do what you want to do in easy, simple to follow steps.

The icon driven, drag and drop programming is simplicity itself. Simply select the command that you require, drag it into the program window and enter your parameters when prompted. This method enables both complex and simple protocols to be visualised during programming by selecting the "profile" option.



The superb "Program Wizard" function uses primer sequences or primer melting temperatures to calculate your protocol for you. By entering this information, product length and any other "special" information, over just five steps, the wizard will present an ideal program based on this information within a few clicks, you are ready to go!

"The G-Storm GS2 is the perfect thermal cycler solution for your demands – a good looking, multi-function workhorse."

FINALLY, A CYCLER THAT MAKES THINGS EASY!

G-Storm 2 is probably the easiest thermal cycler to use whilst offering probably the most advanced protocol monitoring currently available. The status of each block on the cycler can be viewed individually with actual temperatures displayed graphically in real-time. Lab books and GLP reporting provide additional data vital for accreditation or validation for use in labs where quality control and monitoring is paramount.

Easy to operate and maintain

Internal performance protocols ensure that the GS2 is operating as it should and provide peace of mind that your experimental data is sound and accurate.
The thermal blocks within GS2 exchange in seconds without tools or the need for a specialist engineer, such a feature reduces any potential downtime to an absolute minimum. The USB port accepts memory sticks for program transfer/export and even operating software upgrades from the web or e-mailed directly to your from your local service team.

Quality assured

- NIST/UKAS traceable calibration procedures
- Password control – allows access to various reports
- Administrator, user and guest levels enable programs to be written, edited, protected and run according to status
- Power failure options – continue or halt
- Barcode reading option
- Encrypted GLP documentation produced with every program run

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G-STORM™ GS2 TECHNICAL SPECIFICATIONS

Thermal blocks

Block materials	STANDARD BLOCKS: Modular nickel plated anodised aluminium blocks with eight Peltier and four thermistor sensors FAST BLOCKS: Electroplated solid silver gold plated block with eight Peltier and four thermistor sensors
Traceability	NIST traceable temperature calibration
Blocks available	(Any combination of two) 96 well gradient block: for 96 well plates or 96 x 0.2ml tubes 384 well gradient block high throughput block: for 384 well plates 96 well FAST gradient block: for 96 well plates or 96 x 0.2ml tube 384 well FAST gradient block: for 384 well plates *In situ* block for four glass slides

Thermal block characteristics

Temperature range	4°C-99°C
Temperature control	Calculated mode with plate and tube control algorithms
Volume range	2-150µl
Block accuracy	+/- 0.4°C (20-99°C)
Block homogeneity	+/- 0.4°C
Ramp rate	Up to 3°CS-1 (standard block) Up to 6°CS-1 (fast block)
Gradient temp range	30°C - 80°C
Max/min gradient span	30°C / 4°C
Sample-overshoot	<1°C

Heated lids

Lid temperature range	112°C

User interface

Screen type	8.4 inch TFT colour VGA touch-screen (Stylus supplied. Suitable for ball-pen or finger use)
Data input	Touch-screen, external keyboard and mouse (USB) (Optional), barcode scanner (USB) (Optional)
Temperature display	Real-time graphical display of actual block temperatures
Communication	2 x USB

User and file management

User levels	3: administrator, user (with administrator selectable restricted rights) and guest
File protection	Via restricted access
File organisation	Windows Explorer, user-defined folders and subfolders
Program storage	Circa 10,000 internal memory

Reports and validation

Reports	Encrypted GLP report, LabBook report
Validation	Automatic internal validation prior to each program start

Power and dimensions

Electronic power supply	100V to 240V (frequency 48 to 62Hz)
Dimensions (LxWxH)	480mm x 605mm x 265m
Weight	28kg approx
Operating conditions	10°C - 30°C, 0 - 95% relative humidity
Regulatory	CE compliant
Warranty	2 years

Optional accessories

Barcode scanner	Barcode documentation via handheld barcode scanner
Data input	External keyboard and mouse (USB)
Memory	USB Memory Stick

CONTACT DETAILS

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Your local distributor