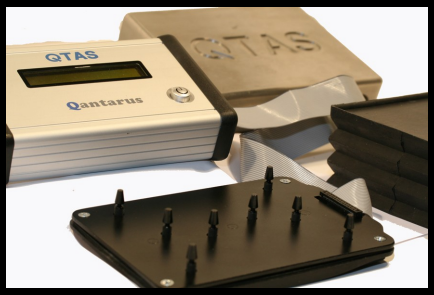
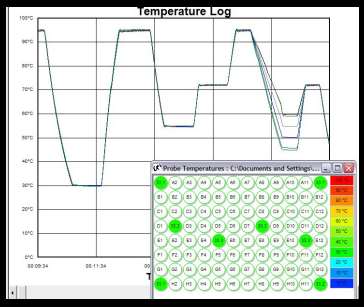
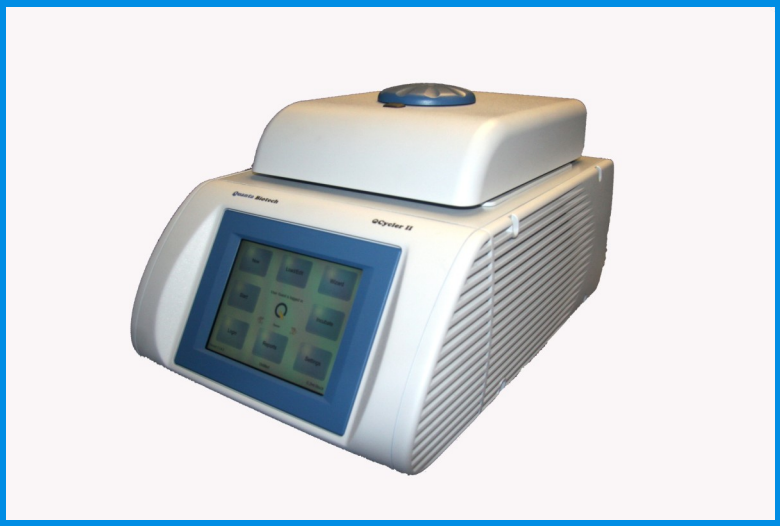
Quanta Biotech

Systems for Quantitative Biology





Product Catalogue 2010/11



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Quanta Biotech

Systems for Quantitative Biology

Contents

Who Are Quanta Biotech? Why Should I Consider them?

Established in 2001 Quanta Biotech has designed and manufactured Thermal Cyclers for some of the most highly respected brands in the business.

Quanta Biotech is a new brand but it has strong and mature foundations.

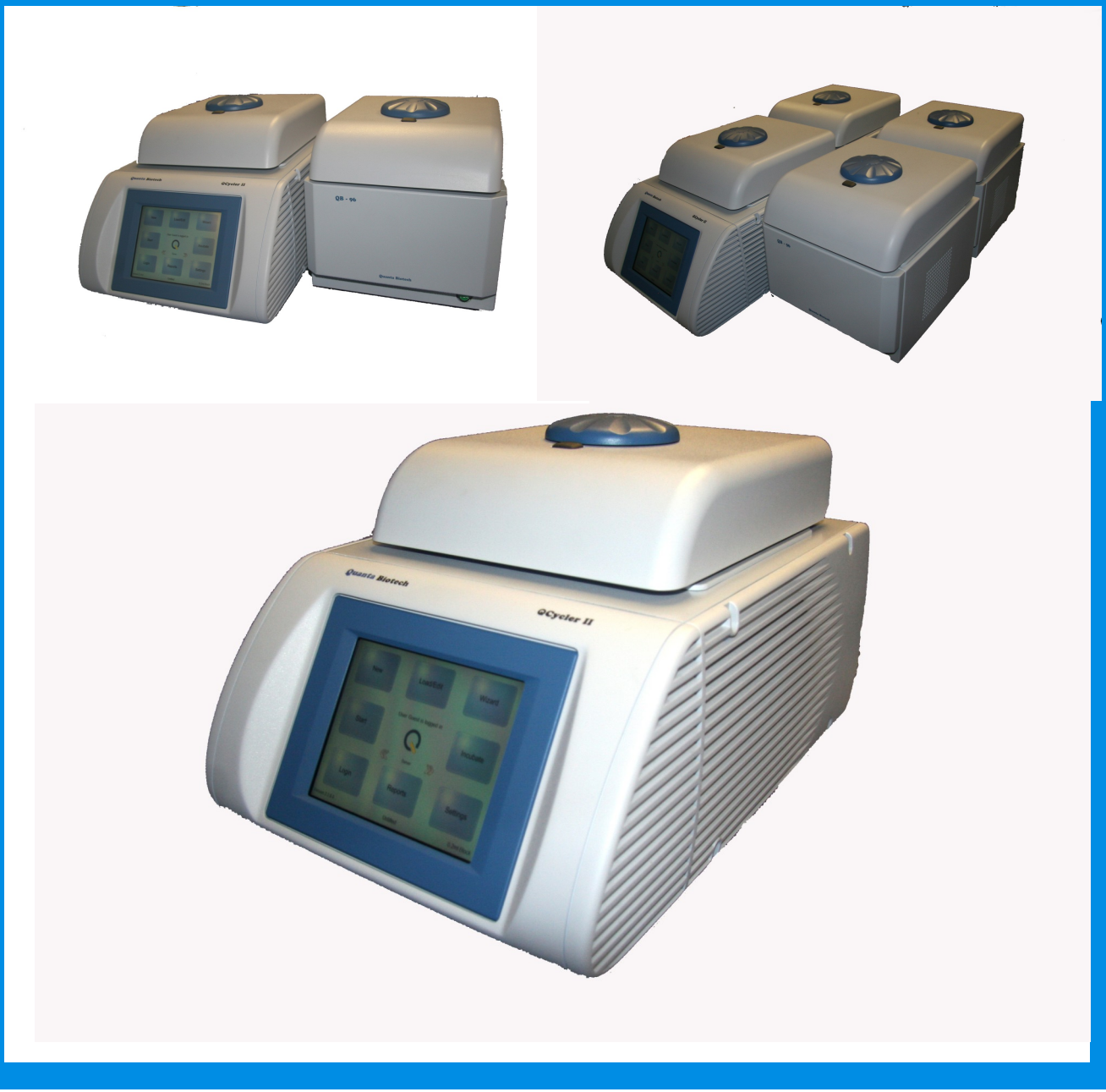
With a performance and reliability pedigree established over thousands of high performance Thermal Cycler Systems Quanta Biotech is a name you can trust in complete confidence

Experts in Thermal Cycler Systems

Fifth generation Thermal Cycler technology coupled with the most advanced Thermal Cycler Validation System on the market provide us with a very good knowledge of the key parameters which make your experiments work. Our team will strive to ensure to have both an enjoyable and a rewarding Quanta experience.

Advanced Modular Thermal Cycler Systems

The Q-Cycler II based systems utilise twenty years of experience and innovation to create what we believe is the most flexible and high performance thermal cycler range available. Whatever your laboratory needs from lone researcher to factory scale genotyping we can create a solution both perfectly matched to your current requirements and primed to evolve as your ongoing needs develop.

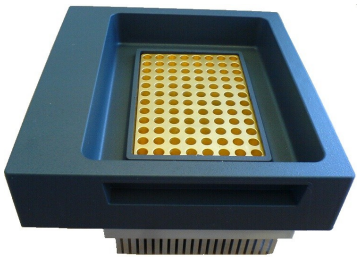


Ultimate Versatility to Create a Thermal Cycler System Perfect for *Your* Needs

Quanta Biotech's unique Server and Satellite System offers researchers from all areas almost endless possibilities to create

An Ideal System Personalised For Your Groups Needs

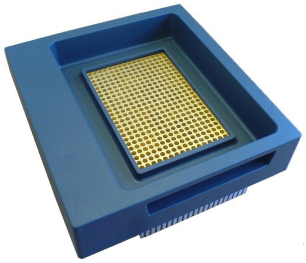
With 11 different models and 10 block types where will you begin?



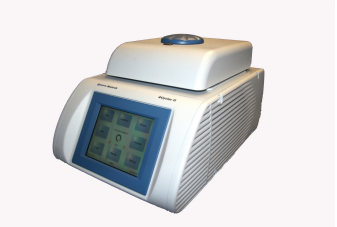
Don’t Compromise

Define Your Ideal System Today

Have it Delivered Tomorrow



In the Confidence it’s Ready to Evolve for the Future

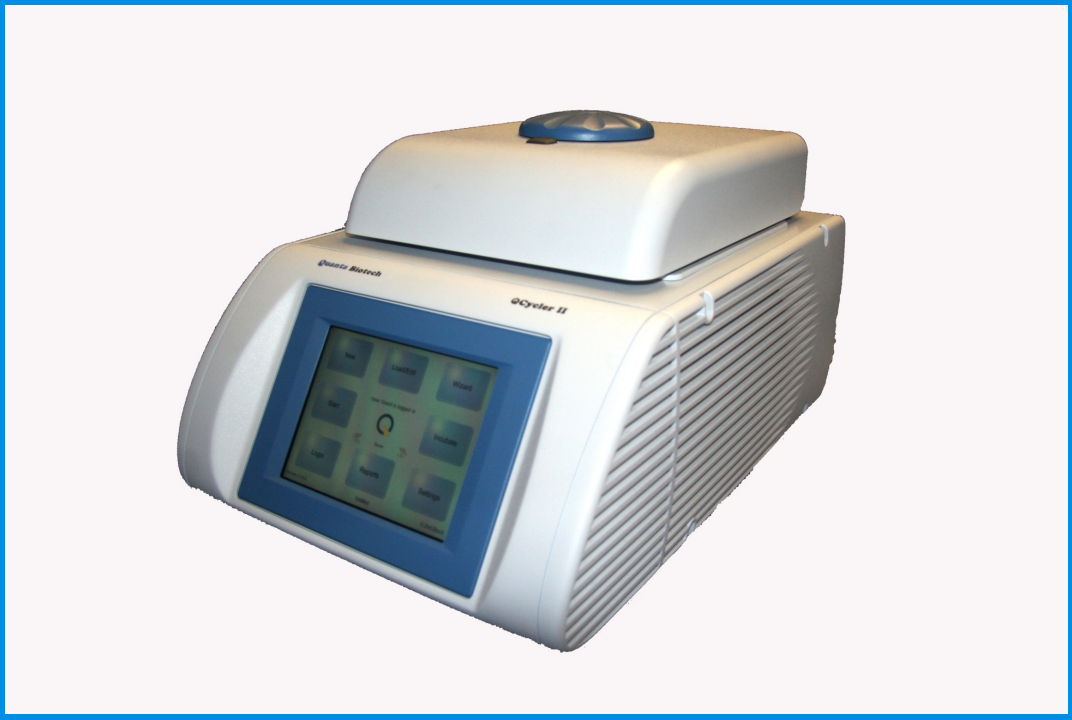


Ease of Use
Pure Power
&
Absolute Control

Welcome to *The* Thermal Cycler

Q-Cycler II Servers

Q-Cycler II Thermal Cycler Servers

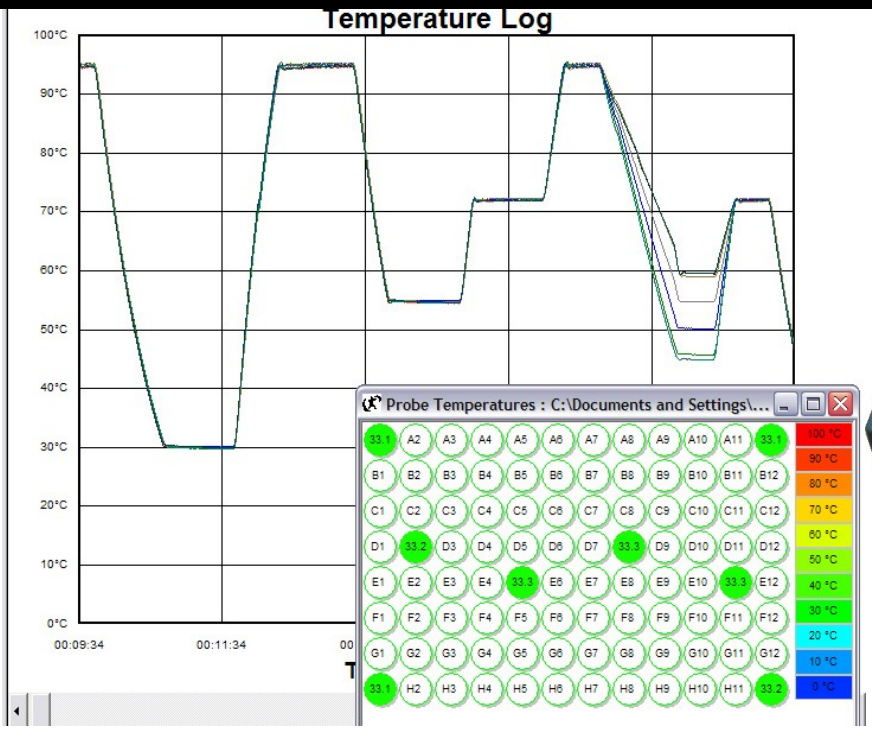


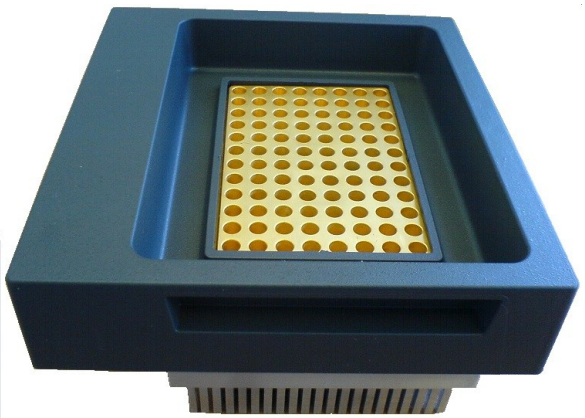
The Q-Cycler II thermal cycler server range consists of three thermal cycler models; Standard, Gradient and UltraGradient. As the centrepiece of any independent thermal cycler mini network there is a model matched to all performance and budget requirements.

The Q-Cycler II thermal cycler server models are equipped with integral 6.4 inch colour touch screen and two onboard computers which continually monitor and control every aspect of the machines performance. It utilises eight peltiers for precise sample control using Quanta's proprietary quad engine drive technology and active control algorithms which ensure temperatures are perfectly executed in every sample, regardless of sample run volume and the number of samples loaded. The temperature of each engine is monitored and adjusted twenty times a second eliminating overshoot and undershoot and delivering class leading uniformity both at temperatures and in temperature transitions.

Quanta Biotech Advanced Thermal Cycler System

Q-Cycler II Thermal Cycler Servers





Features:-

- Intuitive user interface for rapid programming and runs
- Ramp rate up to 5ºC/s, uniformity better than ±0.4ºC
- Up to 30ºC gradients
- Solid Silver Block with Quad engine drive delivers superior control
- Glp files and individual user directories for > 10,000 programs
- Intelligent protocol creation wizard
- Barcode reader compatible
- Inbuilt OQ Test

Up to three *S* line satellites can be controlled from a Q Cycler server in a simple *plug and play* USB network.
All units can run fully independent protocols

Uncompromised Performance

Q-Cycler II 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 3.5
Ramping rate, heating, °C per second	up to 5
Sample overshoot, °C	< 1
Thermal blocks	
Block materials	Nickel coated aluminium blocks with four rapid response temperature sensors Gold coated silver blocks with four rapid response temperature sensors
Traceability	Calibration using NIST traceable standards
Block supplied	96 x 0.2 ml; 48 x 0.2ml/48 x 0.5ml; 384 well or 4 x slide/microarray block. Gradient, non gradient and silver gradient blocks available.
User interfaces	
Touch Screen	6.4 inch colour touch screen
Communication interfaces	1 x USB
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	342x425x260
Weight , kg	12

Q-Cycler II Standard	**7019001**	Q-Cycler II Server standard thermal cycler (including block - please specify standard block required see page 12)
Q-Cycler II Gradient	**7019002**	Q-Cycler II Server gradient thermal cycler (including block - please specify gradient block required see page 12)
Q-Cycler II Ultra Gradient	**7019003**	Q-Cycler II Server ultra gradient thermal cycler (including block - please specify ultra gradient block required see page 12)

Thermal Cycler Blocks

Quanta Biotech's thermal blocks all contain ICP (Intelligent Calibration Parameters) which means whatever Quanta Biotech block is utilised it will inform the thermal cycler what temperature calibration is required to give the best possible protocol execution, totally independent of any user intervention.

Our simple interchangeable block system allows you to change the blocks within a thermal cycler in seconds, with no tools required and automatically calibrated.

Quanta Cyclers employ four independent thermal engines, each with its own control sensor; allowing for better uniformity and near linear gradients of up to 30ºC; performance is unaffected by different sample loading.

Each block is nickel coated aluminium or gold coated silver for easy decontamination, rapid consumable release and superior performance. All our thermal cycler blocks have an embedded intelligent heat sink temperature monitor to prevent system overheat.

Standard	7004001	Standard Block for 96x0.2ml/96well plate for Q-Cycler II & S-96 thermal cyclers
	7004002	Standard Block 96x0.2/48x0.5ml for Q-Cycler II & S-96 thermal cyclers
	7004003	Block for 4 Slides/Microarrays
Gradient	7004004	Gradient Block for 96x0.2ml/96well plate for Q-Cycler II & S-96 thermal cyclers
	7004005	Gradient Block 96x0.2/48x0.5ml for Q-Cycler II & S-96 thermal cyclers
	7004006	Gradient Block for 384 well plate for Q-Cycler II & S-96 thermal cyclers
Ultra Gradient	7004007	UltraGradient Block for 96x0.2ml/96well plate for Q-Cycler II & S-96 thermal cyclers
	7004008	UltraGradient Block for 384 well plate for Q-Cycler II & S-96 thermal cyclers

Q-System 2 Thermal Cycler Systems

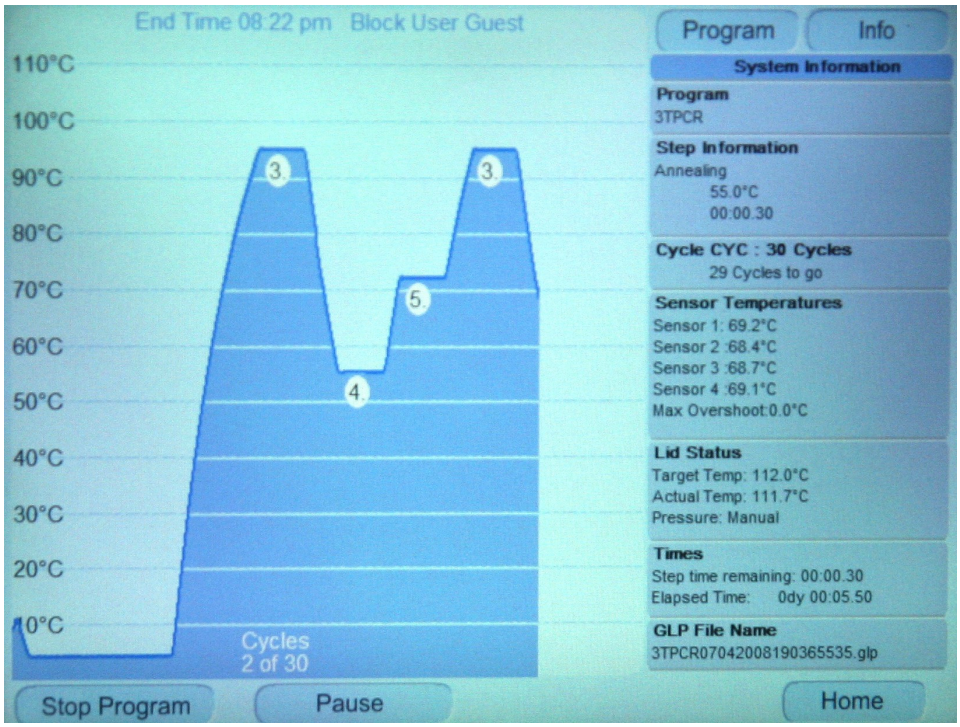
Q-System 2 thermal cycler systems fully integrate Q-Cycler II Servers and *S* line Satellites utilising a mini USB network.
With eight block types there are 32 options available.

An integral 6.4 inch colour touch screen controls the two independent thermal cycler blocks and utilises three computers to ensure perfect protocol execution for every run.

The inherent systems serviceability from using the Quanta Biotech single chassis, single block architecture rather than the old fashioned dual block single chassis systems result in minimal laboratory downtime and maximal versatility.

Quanta Biotech Advanced Thermal Cycler System

Q-System 2 Thermal Cycler Systems



Features:-

- Two Independent Thermal Blocks
- Tool less block interchange
- 8 Different Thermal Block Types
- Ability to expand to independent three or four block system
- Intuitive User Interface for Rapid Programming and Runs
- Ramp rate up to 5ºC/s, uniformity better than ±0.4ºC
- Up to 30ºC gradients
- Solid Silver Block with Quad engine drive delivers superior control
- Glp files and individual user directories for > 10,000 programs
- Intelligent protocol creation wizard
- Barcode reader compatible
- Inbuilt OQ Test
- Three different User levels
- Individual Program and GLP file folders
- Power fail resume

Uncompromised Performance

Q-System2 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 3.5
Ramping rate, heating, °C per second	up to 5
Sample overshoot, °C	< 1
Thermal blocks	
Block materials	Nickel coated aluminium blocks with four rapid response temperature sensors Gold coated silver blocks with four rapid response temperature sensors
Traceability	Calibration using NIST traceable standards
Block supplied	96 x 0.2 ml; 48 x 0.2ml/48 x 0.5ml; 384 well or 4 x slide/microarray block. Gradient, non gradient and ultragradient blocks available.
User interfaces	
Touch Screen	6.4 inch colour touch screen
Communication interfaces	1 x USB
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	684x425x260
Weight , kg	24kg

Q-System 2 Standard	**7019009**	Q-System 2 standard thermal cycler (including two blocks - please specify standard blocks required see page 12)
Q-System 2 Gradient	**7019010**	Q-System 2 gradient thermal cycler (including two blocks - please specify gradient blocks required see page 12)
Q-System 2 Ultra Gradient	**7019011**	Q-System 2 ultragradient thermal cycler (including two blocks - please specify ultragradient blocks required see page 12)

Quanta Biotech Advanced Thermal Cycler System

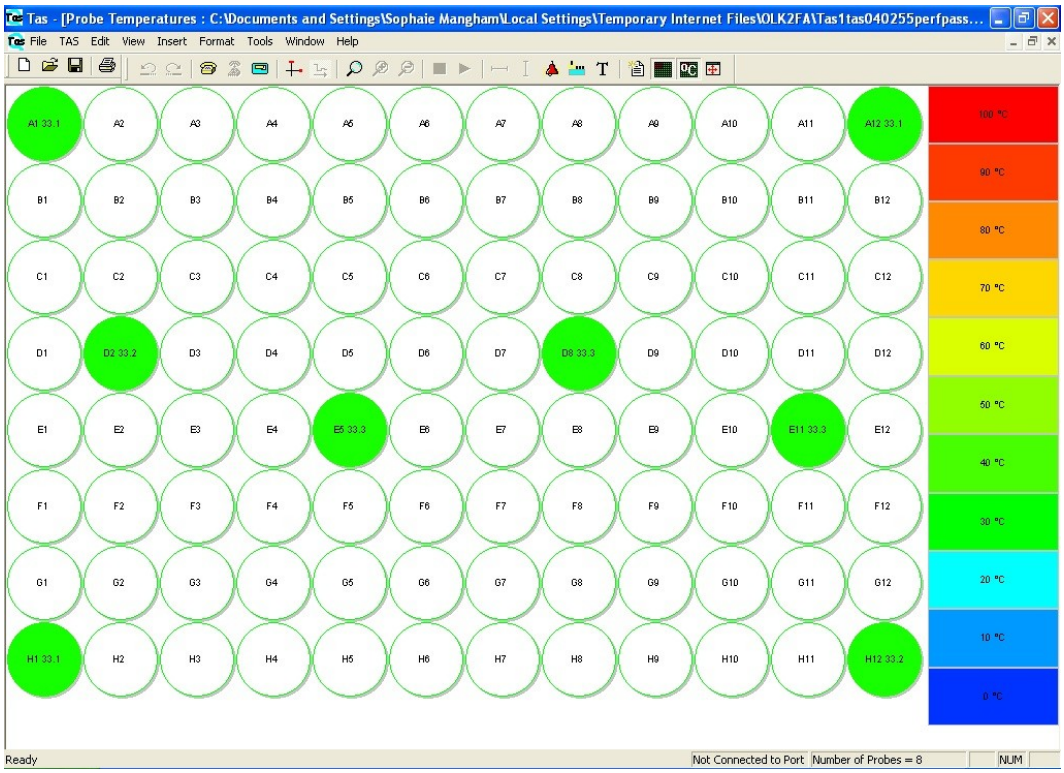
Q-System 4 Thermal Cycler Systems

Q-System 4 thermal cycler systems fully integrate Q-Cycler II Servers and *S* line Satellites in a four block system utilising a mini USB network. With eight block types there are 70 options available.

An integral 6.4 inch colour touch screen controls the four independent thermal cycler blocks and utilises three computers to ensure perfect protocol execution for every run.

The inherent systems serviceability from using the Quanta Biotech single chassis, single block architecture rather than the old fashioned quad block single chassis systems result in minimal laboratory downtime and maximal versatility.

Uncompromised Performance



Features:-

- Four Independent Thermal Blocks
- Tool less block interchange
- 8 Different Thermal Block Types
- Intuitive User Interface for Rapid Programming and Runs
- Ramp rate up to 5ºC/s, uniformity better than ±0.4ºC
- Up to 30ºC gradients
- Solid Silver Block with Quad engine drive delivers superior control
- Glp files and individual user directories for > 10,000 programs
- Intelligent protocol creation wizard
- Barcode reader compatible
- Inbuilt OQ Test
- Three different User levels
- Individual Program and GLP file folders
- Power fail resume

Q-System4 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 3.5
Ramping rate, heating, °C per second	up to 5
Sample overshoot, °C	< 1
Thermal blocks	
Block materials	Nickel coated aluminium blocks with four rapid response temperature sensors Gold coated silver blocks with four rapid response temperature sensors
Traceability	Calibration using NIST traceable standards
Block supplied	96 x 0.2 ml; 48 x 0.2ml/48 x 0.5ml; 384 well or 4 x slide/microarray block. Gradient, non gradient and ultragradient blocks available.
User interfaces	
Touch Screen	6.4 inch colour touch screen
Communication interfaces	1 x USB
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	684x740x260
Weight , kg	48kg

Q-System 4 Standard	**7019012**	Q-System 4 standard thermal cycler (including four blocks - please specify standard blocks required see page 12)
Q-System 4 Gradient	**7019013**	Q-System 4 gradient thermal cycler (including four blocks - please specify gradient blocks required see page 12)
Q-System 4 Ultra Gradient	**7019014**	Q-System 4 ultragradient thermal cycler (including four blocks - please specify ultragradient blocks required see page 12)

Total Flexibility & Control From Q-Cycler II Servers or PC

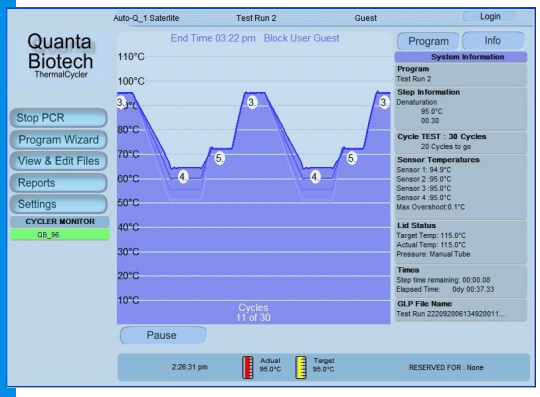
'S' line Satellites

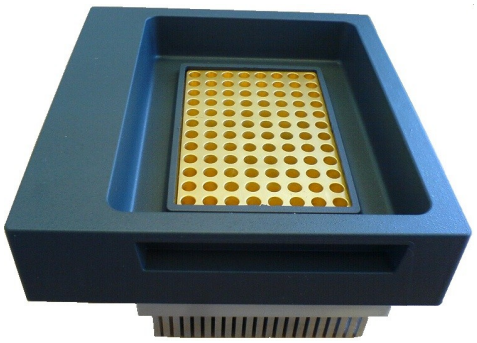
S-96 High Performance Satellite Thermal Cycler

The S-96 satellite range provides the best value in high performance Thermal Cyclers. They employ the latest quad engine drive technology and can be controlled by Q-Cycler II or PC

Features:-

- Small, quiet, modular 96 well or 384 well Gradient Thermal Cycler Satellite System
- PC Network of up to fifteen units all running
- independent protocols
- 8 types of interchangeable block including
  - UltraGradient 96 well 0.2ml/microplate
  - 48 well 0.5ml/96 well 0.2ml Combi
  - Gradient 96 well 0.2ml/ microplate
  - UltraGradient 384 well microplate
  - 4 x Microarray/slide
- Intuitive user interface for rapid programming and runs
- Ramp rate up to 5°C/s, uniformity better than ±0.4°C
- Up to 30°C gradients
- Four independent thermal engines for superior performance





S-96 High Perform-ance Satellite	**7019004**	Standard Satellite Cycler including block and PCQB Software (requires separate control from Q-Cycler II server or PC)
	7019005	Gradient Satellite Cycler including block and PCQB Software (requires separate control from Q-Cycler II server or PC)
	7019006	Ultra Gradient Satellite Cycler including block and PCQB Software (requires separate control from Q-Cycler II server or PC)

S-48 Gradient Thermal Cycler

The S-48 is a modular Gradient Thermal Cycler that is small and quiet.

The minimalist design and silent running hides a unit that is packed with power delivering maximum thermal performance.

Features

- Small, quiet, personal thermal cycler
- Satellite unit controlled by Q-Cycler II server, or PC
- Inclusive of PC control software
- Gradients up to 30ºC
- USB Network of up to 15 units all running independent protocols
- 48 x 0.2ml tubes in a 6x 8 format suitable for tubes or tube strips
- Intuitive user interface for rapid programming and runs
- Intelligent wizard protocol generation software
- Ramp rate of up to 3.5ºCs
- Uniformity better than +/- 0.4ºC
- Automatic heated lid

S-48 Personal Satellite	7019007	Satellite Personal Thermal Cycler including block for 24x0.2ml tubes and PCQB control Software (requires separate control from Q-Cycler II server or PC)
		Forthcoming product; for availability please email info@quantabiotech.com

S-24 Personal Satellite Thermal Cycler

The S-24 is a modular Personal Thermal Cycler that is small and quiet.

The minimalist design and silent running hides a unit that is packed with power delivering maximum thermal performance.

Features

- Small, quiet, personal thermal cycler
- Satellite unit controlled by Q-Cycler II server, or PC
- Inclusive of PC control software
- USB Network of up to 15 units all running independent protocols
- 24 x 0.2ml tubes in a 3 x 8 format suitable for tubes or tube strips
- Intuitive user interface for rapid programming and runs
- Intelligent wizard protocol generation software
- Ramp rate of up to 2.5ºCs
- Uniformity better than +/- 0.4ºC
- Automatic heated lid

S-24 Personal Satellite	7019008	Satellite Personal Thermal Cycler including block for 24x0.2ml tubes and PCQB control Software (requires separate control from Q-Cycler II server or PC)

Q-TAS

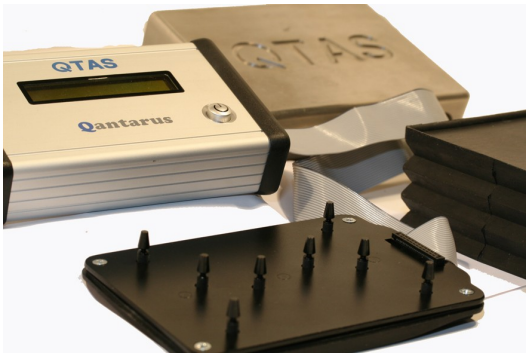
Thermal Cycler Validation Systems

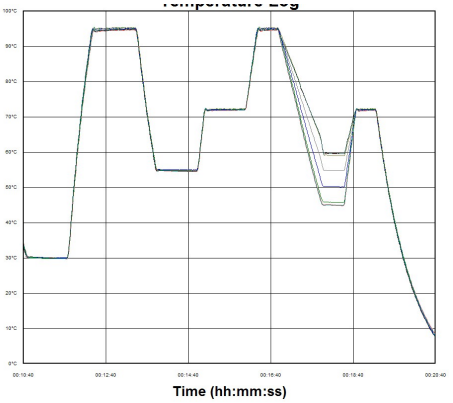
QTAS Fixed Systems Cycler Validation Systems

Our Thermal Cycler Validation Systems consist of all the components required for a complete thermal cycler validation package including control module, temperature probes, 3kg weight, bellows and PC software.

Our Thermal Cycler Validation Systems offer an accuracy of +/-0.1°C with a sensor response time of 200ms. The TAS has a sampling rate of 0.1s to 1 hr, with a temperature range of 4-99°C and is compatible with 0.2ml, 0.5ml and 384well blocks.

A real time graphical display shows readings with adjustable scale for temperature and time. Additionally the "Temperature Sensitive" micro plate view can be used for easy dynamic interpretation of hot and cold spots. Full GLP encrypted records with date and time stamp. Data export in CSV format.





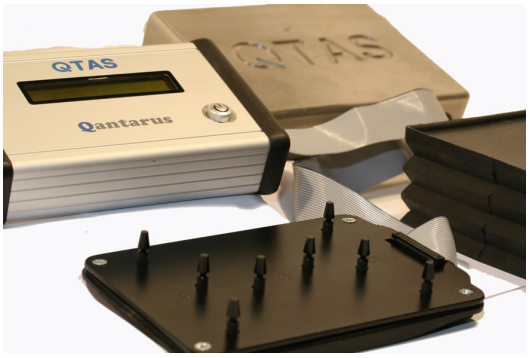
QTAS Fixed Probe systems	7016001	QTAS 8 thermal cycler validation system including 8 sensor fixed plate and PC software
	7016002	QTAS 16 thermal cycler validation system including 16
	7016003	QTAS 48 thermal cycler validation system including 48
	7016004	QTAS 96 thermal cycler validation system including 96

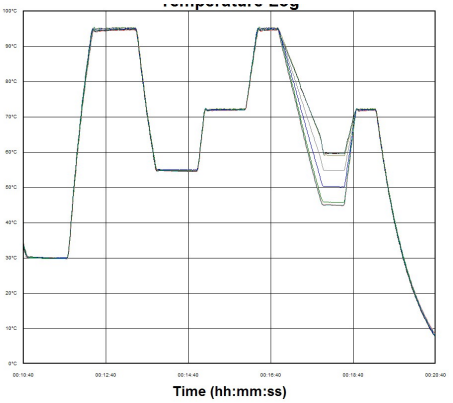
QTAS Variable Systems Cycler Validation

Our Thermal Cycler Validation Systems consist of all the components required for a complete thermal cycler validation package including control module, temperature probes, 3kg weight, bellows and PC software.

Our Thermal Cycler Validation Systems offer an accuracy of +/-0.1°C with a sensor response time of 200ms. The TAS has a sampling rate of 0.1s to 1 hr, with a temperature range of 4-99°C and is compatible with 0.2ml, 0.5ml and 384well blocks.

A real time graphical display shows readings with adjustable scale for temperature and time. Additionally the "Temperature Sensitive" micro plate view can be used for easy dynamic interpretation of hot and cold spots. Full GLP encrypted records with date and time stamp. Data export in CSV format.





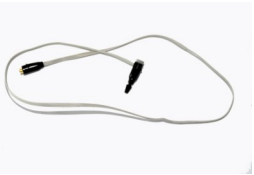
QTAS Variable Probe systems	7018001	QTAS 8 thermal cycler validation system including 8
	7018002	QTAS 16 thermal cycler validation system including 16
	7018003	QTAS 48 thermal cycler validation system including 48
	7018004	QTAS 96 thermal cycler validation system including 96

TAS Probes Validation Systems

Our sensors are compatible with 0.2ml, 0.5ml and 384 well thermal cycler blocks and are calibrated in our laboratory using a NIST traceable calibration standard traceable to ITS90: 12 month recalibration required. Up to 96 probes can be inserted into our most sophisticated control module (available separately). Our sensors are quick release precision and can be easily repositioned to inspect any combination of 96 or 384 block wells.

Sensors have a rapid response time of <200ms to ensure even the shortest temperature overshoot is recorded. Each sensor has is own unique identity eliminating any possibility of sensor mix up and the use of correct calibration parameters at every test.

Extra Long Temperature Probe
1 x 0.2ml/0.5ml Temperature probe on 0.75m lead for use with our TAS control modules, to accurately analyse the performance of thermal cyclers with blocks with non standard microplate well spacing.



Reference Probe
The reference probe will provide a temperature reading of 25 Celsius +/- 0.01°C in all well positions. It is used to check the correct operation of the TAS control module. It should be recalibrated annually.

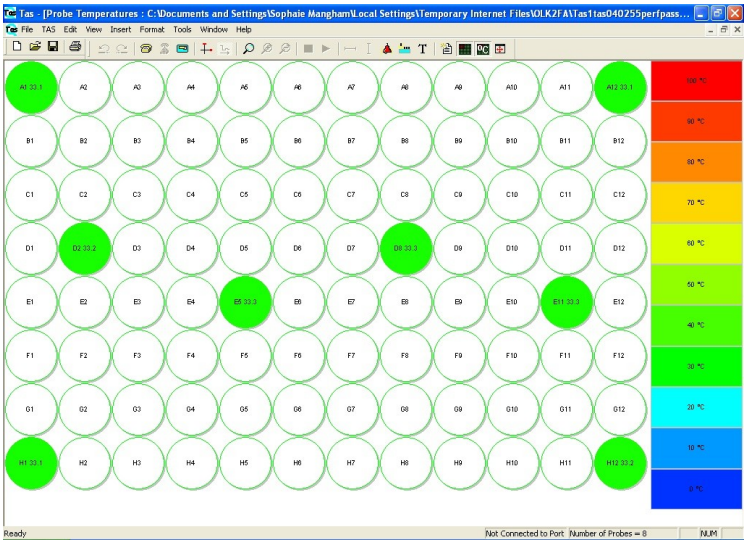
Bare Thermistor Probe
Bare thermistor temperature probe for use with our TAS thermal cycler validation systems, to analyse thermal cycler performance accurately. Used to monitor varying fluid volumes in the reaction consumables in which the experiments are actually conducted.

TAS Probes	7009001	1 Temperature Probe
	7009002	Set of 8 Temperature Probes
	7009003	Set of 16 Temperature Probes
	7009004	Set of 24 Temperature Probes
	7009005	Set of 48 Temperature Probes
	7009007	TAS extra long temperature probe on 0.75m lead
	7009008	TAS Bare thermistor probe
	7009009	Reference probe for QTAS 96 variable probe plate
	7014005	QTAS 96 variable probe plate (to interface interchangeable probes with QTAS systems)

Recalibration TAS probes

TAS temperature probes should be calibrated annually by returning them to Quanta Biotech's Calibration Laboratory. We use calibration standards traceable to NIST and the International Temperature Standard ITS90.

The reference probe will provide a temperature reading of 25 Celsius +/- 0.01C in all well positions. It is used to check the correct operation of the QTAS control module. It should be recalibrated annually.



TAS probe recalibration	7010001	1 Probe Recalibration
	7010002	Set of 8 Probes Recalibration
	7010003	Set of 16 Probes Recalibration
	7010004	Set of 24 Probes Recalibration
	7010005	Set of 48 Probes Recalibration
	7010006	Set of 96 Probes Recalibration
	7010007	Reference Probe Recalibration

Thermal Cycler Validation Service

Our Thermal Cycler validation services utilise sophisticated test equipment containing up to 96 rapid response precision temperature sensors (calibrated using temperature standards traceable to NIST and ITS90) to concurrently interrogate any combination of thermal cycler wells at acquisition rates of up to 100ms.

The result is that laboratories are no longer dependent on thermal cycler manufacturers for these procedures. Built in intelligence ensures that TAS always operates to meet, or exceed, the regulated standards for the most stringent thermal cycler validation requirements.

Custom tests and onsite validation can be arranged on request.
For further information and a quote for thermal cycler validation please contact us on calibrationlab@quantabiotech.com

Bronze Option	Silver Option	Gold Option	Platinum Option
Thermal Cycler Performance Check of 6 well positions at three temperatures using Quanta Biotech's standard TAS probes. Static uniformity and accuracy measured at 0, 15 and 30s after step timing initiation.	Thermal Cycler Performance Check of 16 well positions at three temperatures using Quanta Biotech's standard TAS probes. Static uniformity and accuracy measured at 0, 15 and 30s after step timing initiation. Dynamic uniformity measurement for heating and cooling phases (worst case)	Thermal Cycler Performance Check of 48 well positions at three temperatures using Quanta Biotech's standard TAS probes. Static uniformity and accuracy measured at 0, 15 and 30s after step timing initiation.	Thermal Cycler Performance Check of 16 well Positions at up to five temperatures at a user specified reaction volume using Quanta Biotech's bare thermistor TAS probes. Static uniformity and accuracy measured at three user specified periods (per set temperature) after step timing initiation.

Q-Hyb 10 Hybridization incubation oven

The Q-Hyb 10 is a high quality versatile hybridization incubator. With its integral rotisserie it has the capacity to conduct up to 20 independent probe hybridizations, each with up to seven separate membranes.

The rotisserie and shaking platform can be interchanged in less than a minute allowing researchers to quickly adapt the incubator to the needs of their individual protocols; employing strategies utilising both accessories.

This capacity and flexibility enables the incubator to service multiple users and act as a core hybridization oven facility in even the most demanding research laboratory.

Features:

- Optional accessories for falcon tube, standard, large bottle and custom rotisseries
- Wide temperature range ambient + 5°C– 95°C
- Timer with audible alarm
- Optional interchangeable shaking tray for batch washing
- Optional four removable shelves for static incubations
- Index loading system for controlled experimental set up
- Easy clean stainless interior and door
- Large window to view experiments
- High precision PID control
- Bottle to bottle uniformity better than 0.1°C
- Stackable to minimise wastage of laboratory space

Q-Hyb 10 Incubator	7011001	**Q-Hyb10** Base Incubator	220 Volt
	7011002	**Q-Hyb10** Base Incubator	110 Volt

Q-Hyb 10 Accessories

Rotisseries

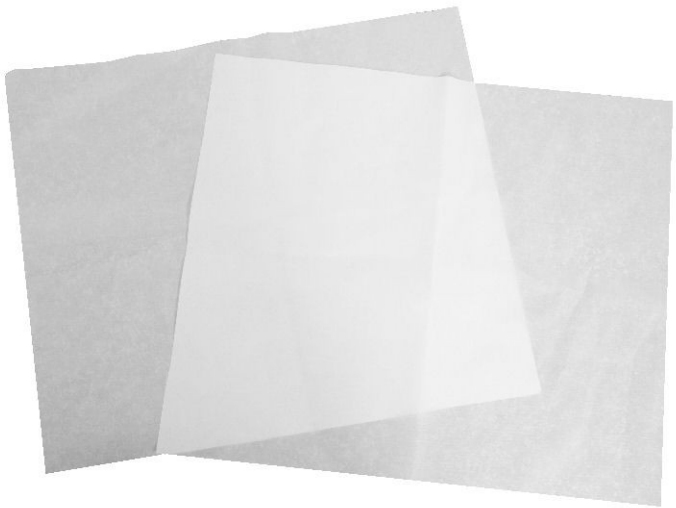
Standard Rotisserie Pack-10 bottle rotisserie, 2 large bottles & pack of large mesh
Extra Large Bottle Rotisserie- Rotisserie for extra large bottles
Falcon tube Rotisserie- Falcon tube rotisserie with capacity for up to 16 falcon tubes

Hybridisation Bottles

Extra Large Bottle- Extra large hybridization bottle. 300mm x 75mm
Large Bottle - Borosilicate glass bottle 300mm long x 35mm internal diameter
Small Bottle - Borosilicate glass bottle 150mm long x 35mm internal diameter

Hybridisation Mesh

Large Mesh - Pack of 10 nylon mesh 250 x 250mm
Small Mesh - Pack of 10 nylon mesh 130 x 130mm



Q-Hyb 10 Accessories continued

Shaking Tray

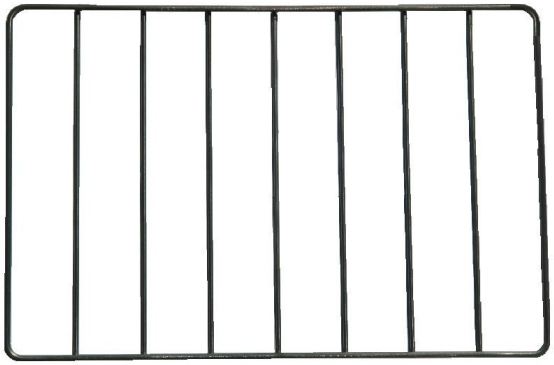
310 x 15 x 210mm

The Q-Hyb 10 shaking tray pack

Incubation shelf

Two stainless steel incubation shelves

The Q-Hyb 10 has 4 available shelving points



Bottle Handler - Safety sheath to insulate and protect

Rotisseries	7011003	Standard Bottle Rotisserie Pack
	7011004	Extra Large Bottle Rotisserie
	7011005	Falcon Tube Rotisserie
Shelving	7011006	Incubation Shelf Pack
	7011007	Shaking Tray
Hybridisation bottles	7011008	Extra Large Bottle
	7011009	Large Bottle
	7011010	Small Bottle
Mesh	7011011	Large Mesh
	7011012	Small Mesh
Accessories	7011013	Bottle Handler

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