

Applied Biosystems™ QuantStudio 7 Pro Real-time PCR System

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 The world leader in serving science



QuantStudio 6/7 Pro Real-time PCR Systems

Innovative technology to enable smart qPCR workflow for greater productivity

- **Smart qPCR workflow**— traceability to help reduce manual errors and hands-on time
- **Hands-free features**—greater ease and convenience
- **Smart Help**— assist uptime and convenience
- **Format flexibility**—interchangeable blocks (96-well; 384-well and TaqMan Array card*)
- **Automation compatibility**—Ability to run plates 24/7*

* Quantstudio 7 Pro only



QuantStudio 6/7 Pro Real-time PCR Systems

Efficient use of lab space with small footprint and standalone operation

- **Standalone capability**—perform all essential operations from a large, capacitive ergonomic touchscreen
- **10GB** of onboard memory
- **Security, audit and e-signature module (SAE)*** —21CFR part 11 enablement, with single or multiple instruments
- **Low maintenance**—2-year interval between calibrations
- **Veriflex™ zones**—faster optimization of assays

* Quantstudio 7 Pro only



Loaded with New Technology to Enable Smart qPCR



Voice Commands for Easy and Convenient Hands-free Operation



Voice commands, to perform basic operations in a hands-free mode without having to remove gloves or touch the screen

OPEN
DOOR

SHUT
DOOR

START
RUN

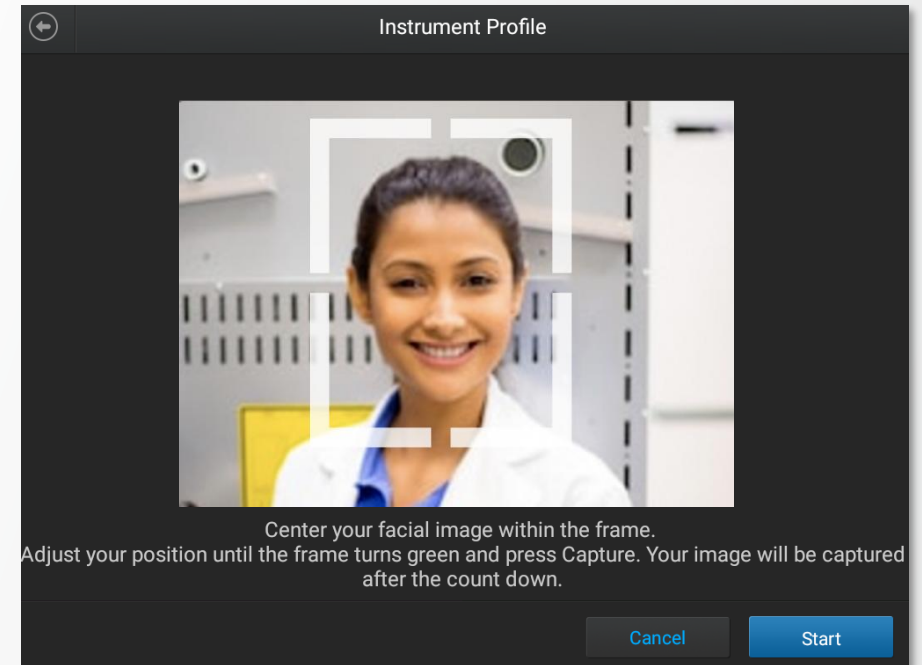
HELP

CHANGE
BLOCK

No need to remove gloves or touch the screen to perform essential tasks

Facial Authentication for Convenient Hands-free Log-in

- With quick setup, facial authentication supports hands-free login to personalized settings
- Fast and convenient, without the need to remove gloves or memorize yet another password



[Use hands-free features - YouTube](#)

Easy and convenient hands-free log-in with automatic loading of user preferences

RFID-tagged qPCR Plates Enable Reduced Human Error and Time Saving

Standard workflow

Go to TaqMan Files download page

Enter sales order information

Download AIF to USB drive

Transfer files to your computer

Upload plate layout/ assay information to template file



Start run

VS

Smart qPCR workflow

Load RFID tagged-plate



Start run

RFID tag contains:

- **Plate layout – Assay IDs in each well**
- Plate type
- Expiration date
- Catalog number
- Lot number
- Reaction volume per well
- Passive reference dye
- Thermal protocol

[Use RFID-tagged Plates - YouTube](#)

Ultimate traceability,
quality and ease of use

Enhanced Design for Interchangeable Block Types

Benefits

- Motorized block change design for greater ease
- Smaller, lighter block/heated cover with grip and storage box for convenience
- Veriflex zones for faster optimization of assays
 - 3 zones for the QuantStudio 6 Pro
 - 6 zones for the QuantStudio 7 Pro

Upgrade Kits available

[QuantStudio™ Pro Block Upgrade Kit, 96-well, 0.1 mL \(thermofisher.com\)](https://thermofisher.com)

[QuantStudio™ Pro Block Upgrade Kit, 96-well, 0.2 mL \(thermofisher.com\)](https://thermofisher.com)

[QuantStudio™ Pro Block Upgrade Kit, 384-well \(thermofisher.com\)](https://thermofisher.com)

[QuantStudio™ Pro Block Upgrade Kit, TaqMan™ Array Card \(thermofisher.com\)](https://thermofisher.com)



Interchangeable blocks

Flexibility of format supports changing lab needs

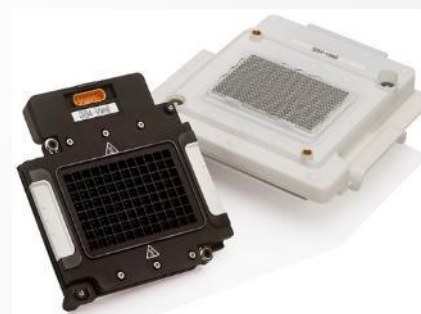
- Motorized block change design accessed by the push of a button or via voice command*
- Smaller, lighter block and heated cover with grips and storage box
- Applied Biosystems™ VeriFlex™ Blocks with independent zones for faster optimization of assays
 - 3 zones for the 6 Pro system
 - 6 zones for the 7 Pro system



96-well 0.1 mL



96-well 0.2 mL



384-well



TaqMan® Array Card

Enhanced Design for Interchangeable Block Types

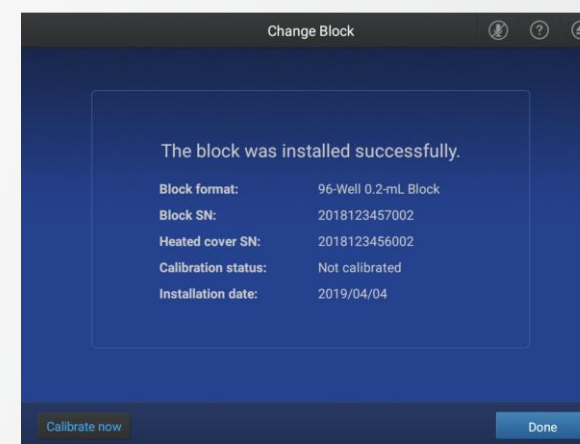
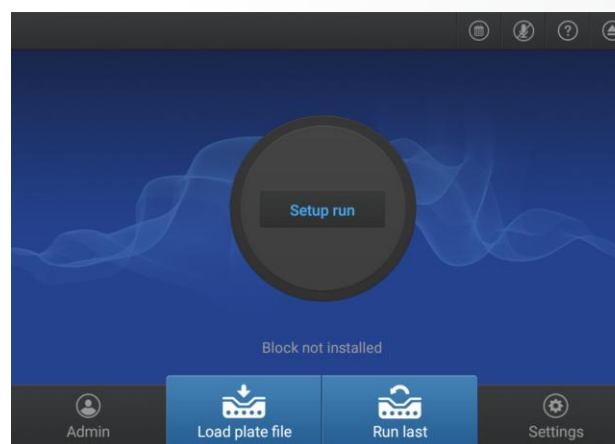
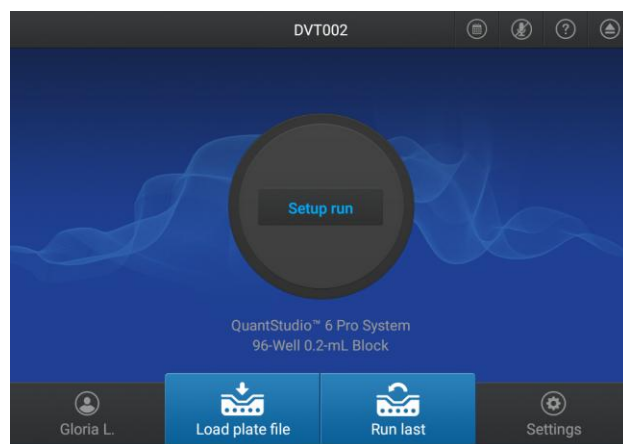


	QuantStudio 6 Pro Real-Time PCR System	QuantStudio 7 Pro Real-Time PCR System
Sample capacity (wells)	96 or 384	
Reaction volume*	96-well 0.1 mL block: 10–30 µL 96-well 0.2 mL block: 10–100 µL 384-well block: 5–20 µL	96-well 0.1 mL block: 10–30 µL 96-well 0.2 mL block: 10–100 µL 384-well block: 5–20 µL TaqMan Array Card: ~1.5 µL
Excitation source	Bright white LED	
Filter or color combinations	5	21
Excitation/emission range	450–680 nm/500–730 nm	
Multiplexing	5 or 6 targets	
Maximum block ramp rate	96-well 0.1 mL block: 9.0°C/sec 96-well 0.2 mL block: 6.5°C/sec 384-well block: 6.0°C/sec	96-well 0.1 mL block: 9.0°C/sec 96-well 0.2 mL block: 6.5°C/sec 384-well block: 6.0°C/sec TaqMan Array Card: 3.0°C/sec
Average sample ramp rate	3.66°C/sec	
Temperature uniformity	0.4°C	
Temperature range	4–99.9°C	
Compatible dyes	FAM™, SYBR™ Green, VIC™, JOE™, TET™, ABY™, NED™, TAMRA™, Cy®3, JUN™, ROX™, Texas Red™, Mustang Purple™, Cy®5, LIZ™, Cy®5.5	
Security, auditing, and e-signature (SAE) features	No	Yes, with no additional fees
Compatible with automation	No	Yes



Block Change Explained

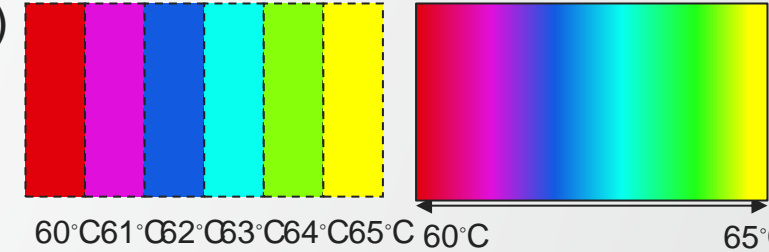
- System will show the current block status on home screen.
- System will track the block calibration status independently by its serial number.
- Any user can change the block of the system.
- Upon request to change block, system will first verify and inform user of the current block installed.
- Once confirmed, system will walk through the block change in a step-by-step wizard. The whole process takes only a few minutes.
- System doesn't need to be powered down for block change.



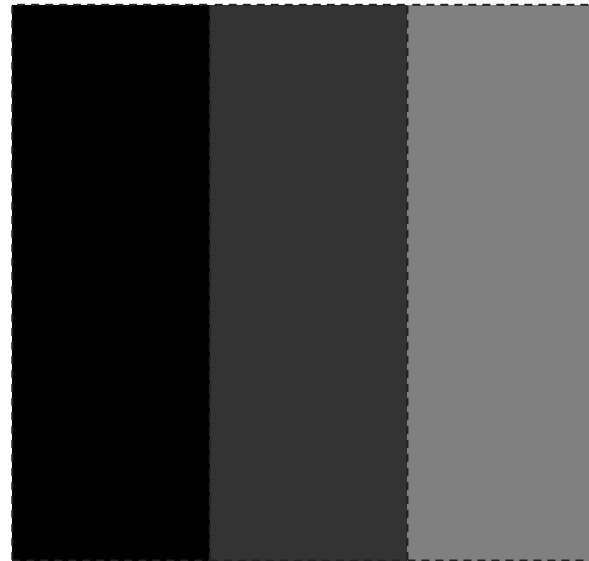
[QS 6/7 Pro block change - YouTube](#)

VeriFlex™ Zones for Faster Optimization of Assays

- Available on 96-well block. 3 veriflex zones for the Quantstudio 6 Pro and 6 veriflex zones for the Quantstudio 7 Pro
- Independent temperature control in each zone (more precise than gradient)
- Can program at will, including multiple zones with same temperature (Temperature difference between adjacent zones $<5^{\circ}\text{C}$)

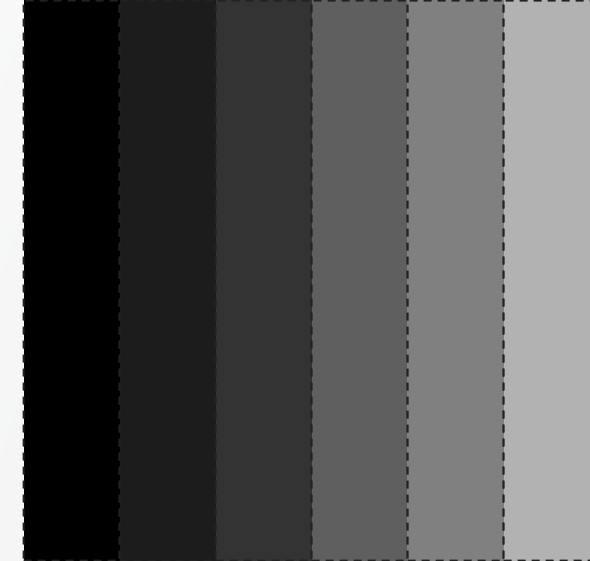


QuantStudio™ 6 Pro



60°C 61°C 62°C

QuantStudio™ 7 Pro



60°C 61°C 62°C 63°C 64°C 65°C

Enable 24/7 Operation with Our Robot and qPCR Master Mixes on Quantstudio 7 PRO

Thermo Scientific Orbitor® RS Microplate Mover

Integrate with 2x QuantStudio 7 Pro systems for scalability

Random or sequential access for plates: Flexibility in setup and operation

Collision detection/recovery and plate sensing: Safe operation and eliminates plate dropping

Applied Biosystems™ high performing qPCR reagents

TaqMan™ Fast Advanced Master Mix

PowerUp™ SYBR™ Green Master Mix

Allows up to 72 hours benchtop stability

Includes heat-labile UNG and a blend of dTTP/dUTP for carryover contamination control



[Limit Lab Time with Real Time PCR \(qPCR\) Automation: QuantStudio & Orbitor - YouTube](#)

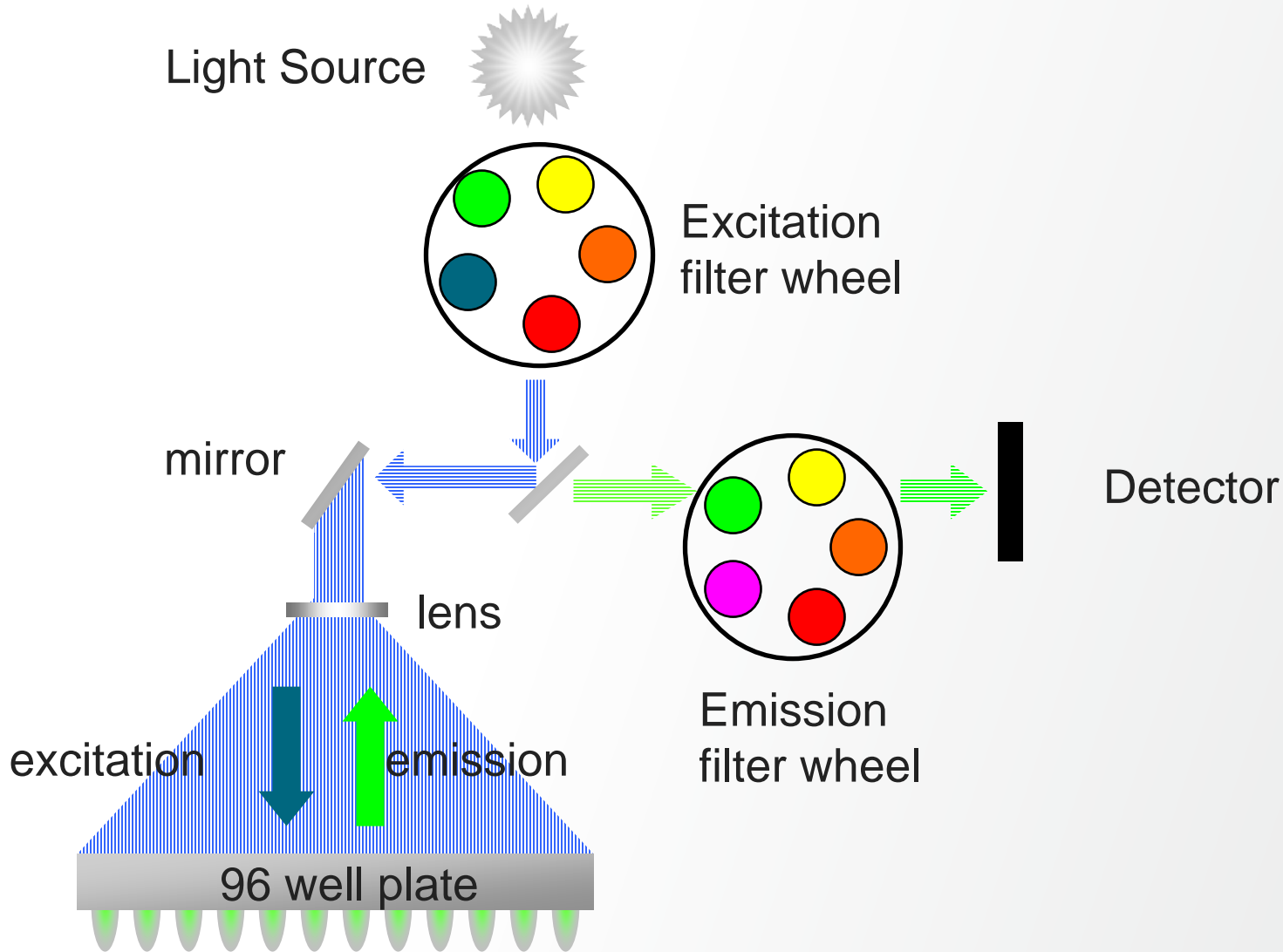
Ability to process large numbers of samples, 24/7 with minimal hands-on time

Real-Time PCR Specification Summary



Description	Specification
Dye compatibility	FAM™/SYBR™ Green, VIC™/JOE™/HEX™/TET™, ABY™/NED™/TAMRA™/Cy®3, JUN™/ROX™/Texas Red™, Mustang Purple™/Cy®5/LIZ™, Cy®5.5
Multiplexing	5 or 6 targets
Dynamic range	10 logs
Sensitivity	Detect down to 1 copy
Resolution	1.5-fold resolution
Light source	Bright white LED
Data acquisition	Whole-plate imaging
Detection method	CMOS technology
Reaction volume	96-well 0.1 ml block: 10–30 µl; 96-well 0.2 ml block: 10–100 µl; 384-well block: 5–20 µl; TaqMan Array Cards: ~1.5 µL
Maximum ramp rate	6.5°C/sec
Average sample ramp rate	3.66°C/sec
Temperature uniformity/range	0.4°C/4-100°C
Veriflex block (96-well)	3 or 6 independent temperature zones

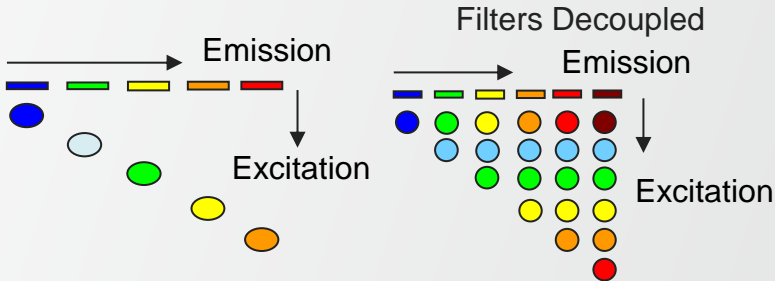
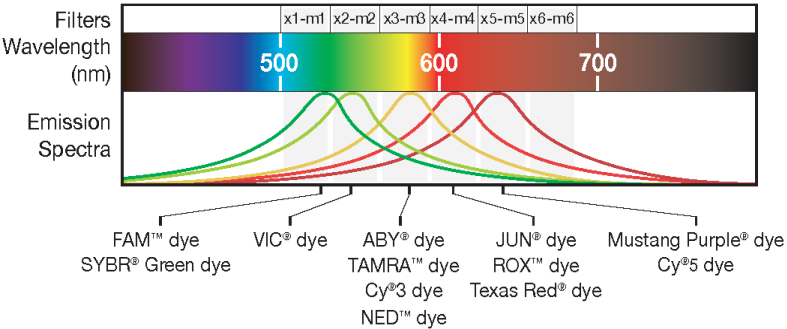
OptiFlex™ System with Bright White LED



Multiplexing Capabilities

Channel	Dye Examples*	Excitation Filter	Emission Filter	QuantStudio™6 PRO	QuantStudio™7 PRO
x1-m1	FAM™, SYBR Green	470 ± 15nm	520 ± 15nm	✓	✓
x2-m2	VIC™, JOE™, TET™, HEX™	520 ± 10nm	558 ± 12nm	✓	✓
x3-m3	TAMRA™, NED™, ABY™	550 ± 10nm	586 ± 10nm	✓	✓
x4-m4	ROX™, JUN™, Texas Red™	580 ± 10nm	623 ± 14nm	✓	✓
x5-m5	Mustang Purple™, LIZ™, Cy®5	640 ± 10nm	682 ± 14nm	✓	✓
x6-m6	Cy®5.5, Alexa Fluor™	662 ± 10nm	711 ± 12nm		✓

* Dyes in red are calibrated at installation



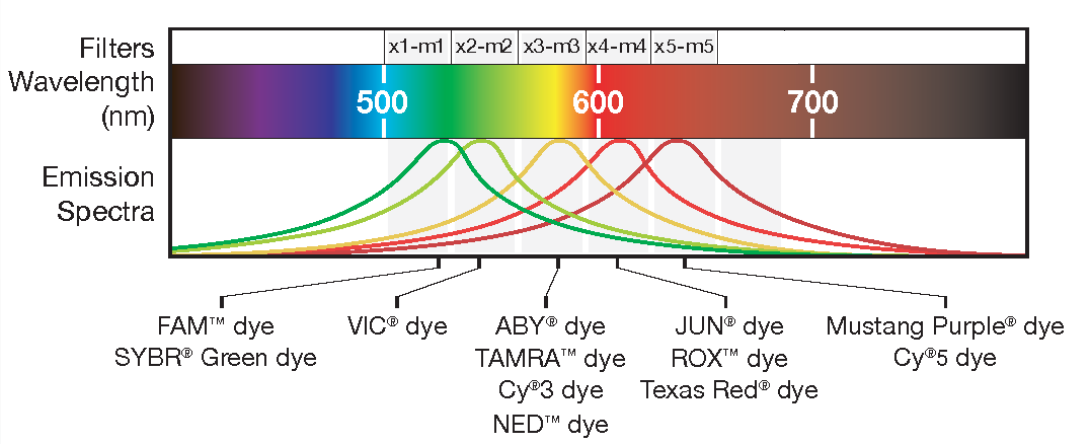
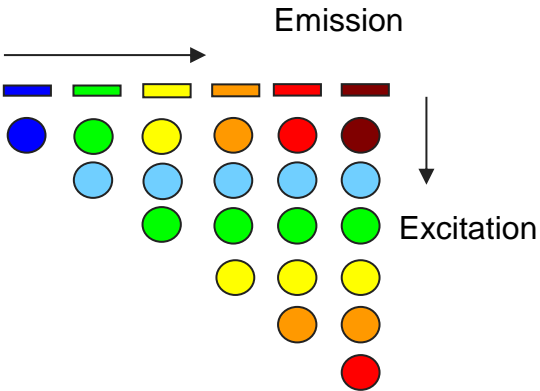
Multiplexing Capabilities - QuantStudio™ 7 PRO



- OptiFlex™ System with Bright White LED
- Six color unlocked filter system
- Calibration at installation

Peak filter	Color	Filter wavelength (nm)		System dyes	Example custom dyes
		Excitation	Emission		
x1-m1	Blue	470 ± 15	520 ± 15	FAM™ dye, SYBR GREEN™ dye	SYT09
x2-m2	Green	520 ± 10	558 ± 11	VIC™ dye	JOE™ dye, HEX™ dye, TET™ dye
x3-m3	Yellow	550 ± 11	586 ± 10	NED™ dye, TAMRA™ dye, ABY™ dye	Cy®3 dye
x4-m4	Orange	580 ± 10	623 ± 14	ROX™ dye, JUN™ dye	Texas Red™ dye
x5-m5	Red	640 ± 10	682 ± 14	MUSTANG PURPLE™ dye, Cy®5	LIZ™ dye
x6-m6	Deep-Red	662 ± 10	711 ± 12	*	Cy®5.5 dye

*This filter set currently does not support any dyes supplied by Thermo Fisher Scientific



Cutting Edge Internet Of Things (IoT) Technology— Flexible Accessibility

Link instrument to the
Connect cloud-enabled
platform via wifi or ethernet



Wifi or
Ethernet



Monitor



Analyze



Share

- Works with both MAC and PC
- Access & analyze data any time anywhere
- **IoT*** enabled features
- Real time run monitoring on smart phones
- Thermo Scientific PC not required



Instrument
Connect app



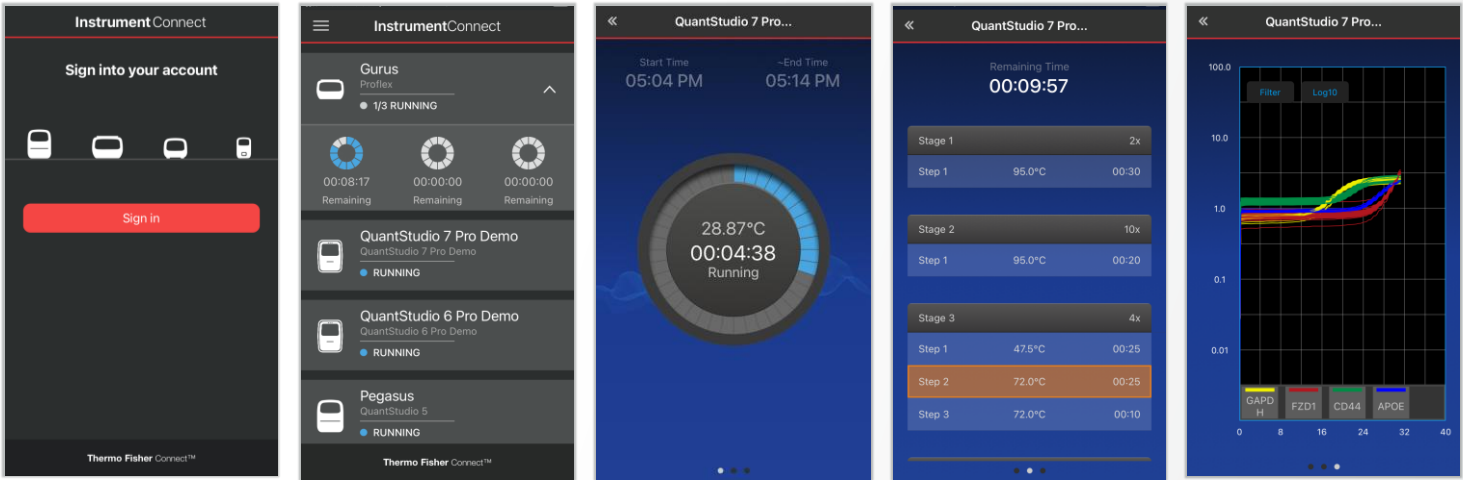
Flexibility to access, analyze and share data anytime, anywhere, and with computer of choice

*Need Online Connectivity

Instrument Connect Mobile App



Monitor your runs on multiple devices



Local Area Network Setup

Connect instrument to LAN via wifi or ethernet



Wifi or
Ethernet

Local Area Network (LAN)

- Works with both MAC and PC
- Data sharing within network
- Thermo Scientific PC not required



Collocated Mode Setup

instrument connected to
dedicated PC offline

- Thermo Scientific PC required
- No networking requirement
- PC required

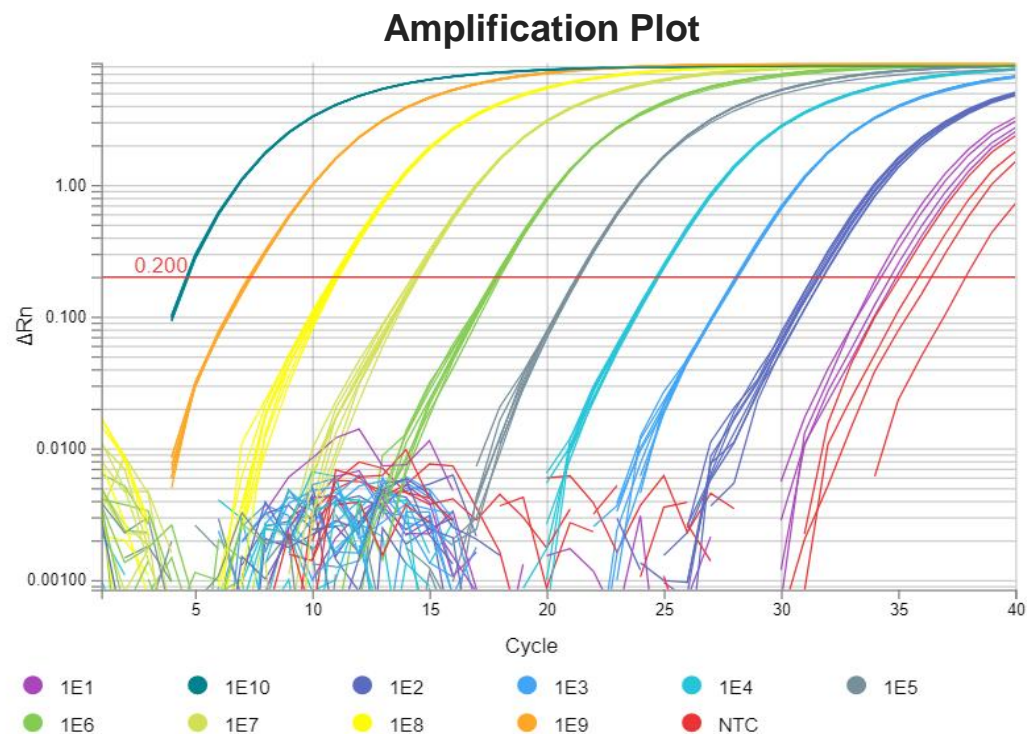


Ethernet

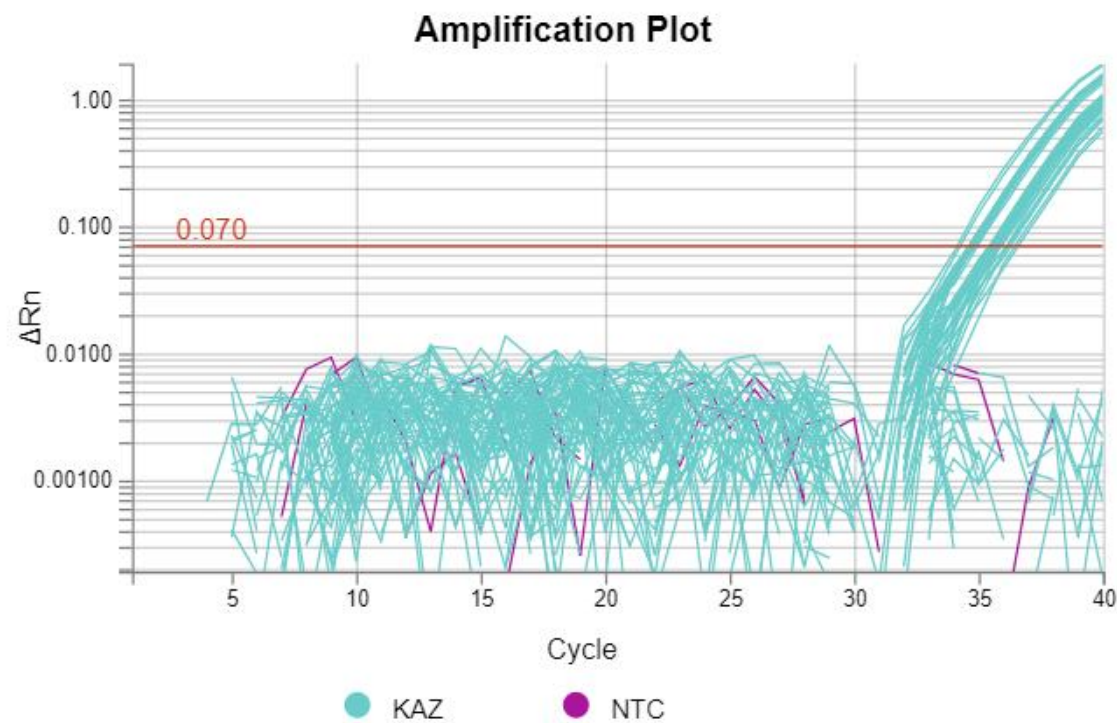


10-Log Dynamic Range and Single Copy Sensitivity

Dynamic Range Demonstration

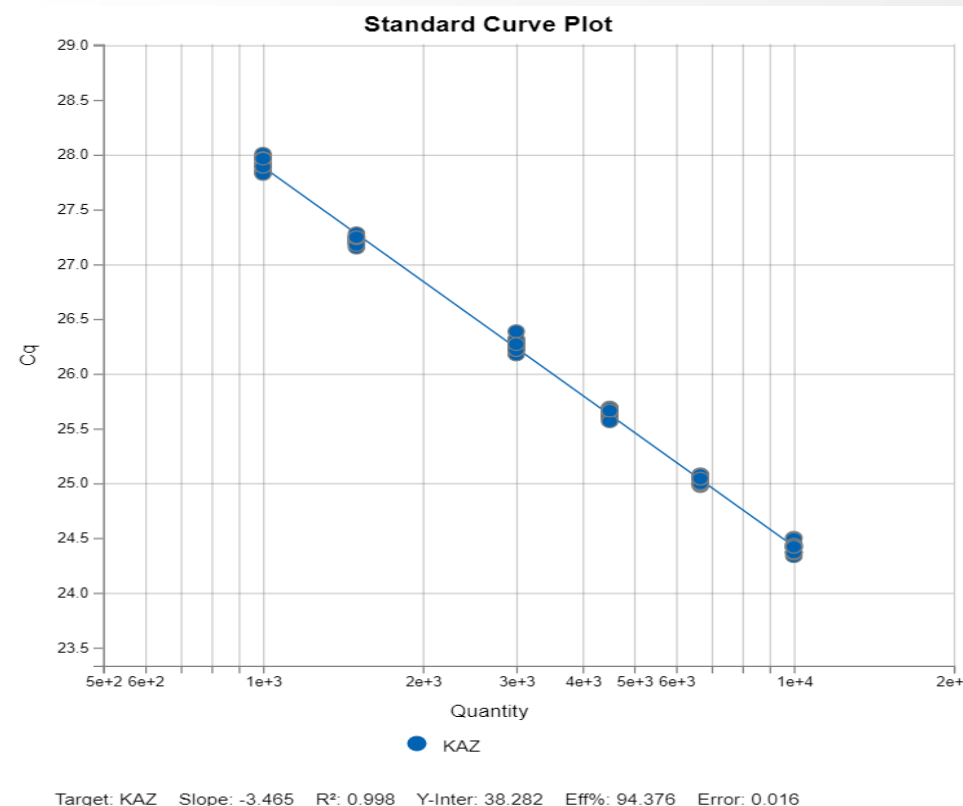
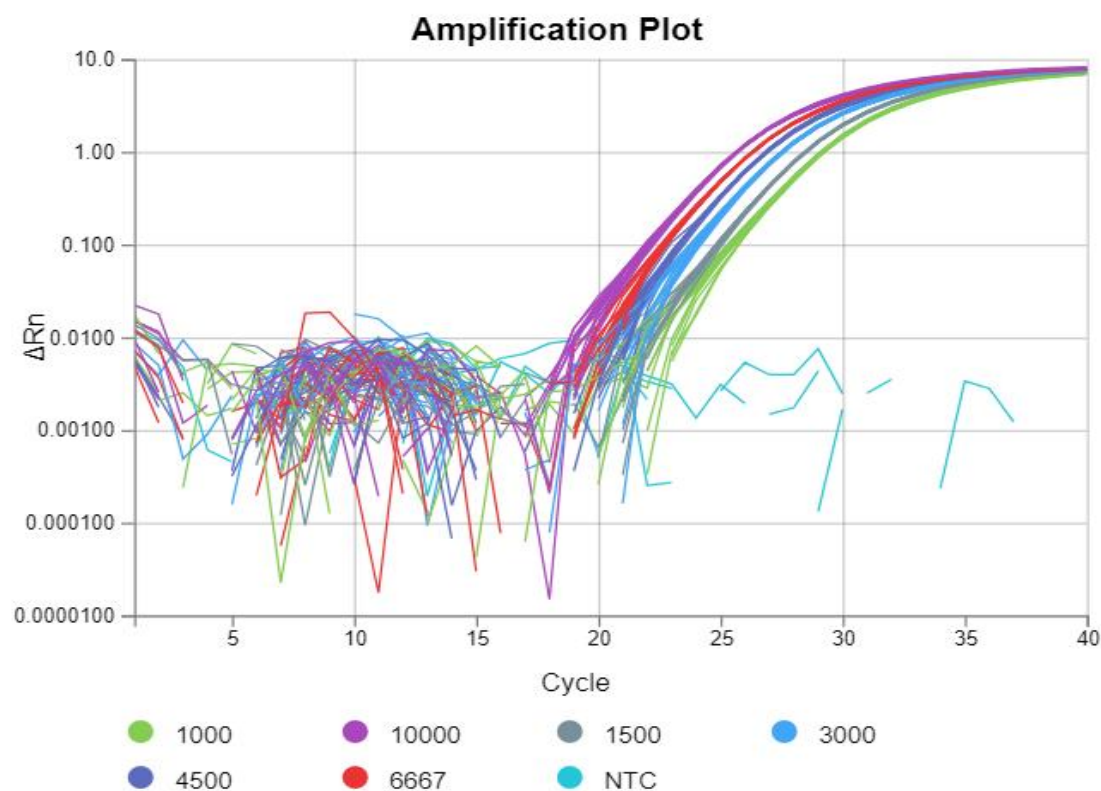


Single Copy Detection Demonstration



Highly reproducible separation over 10 logs of input amount
Consistently detect single copy input

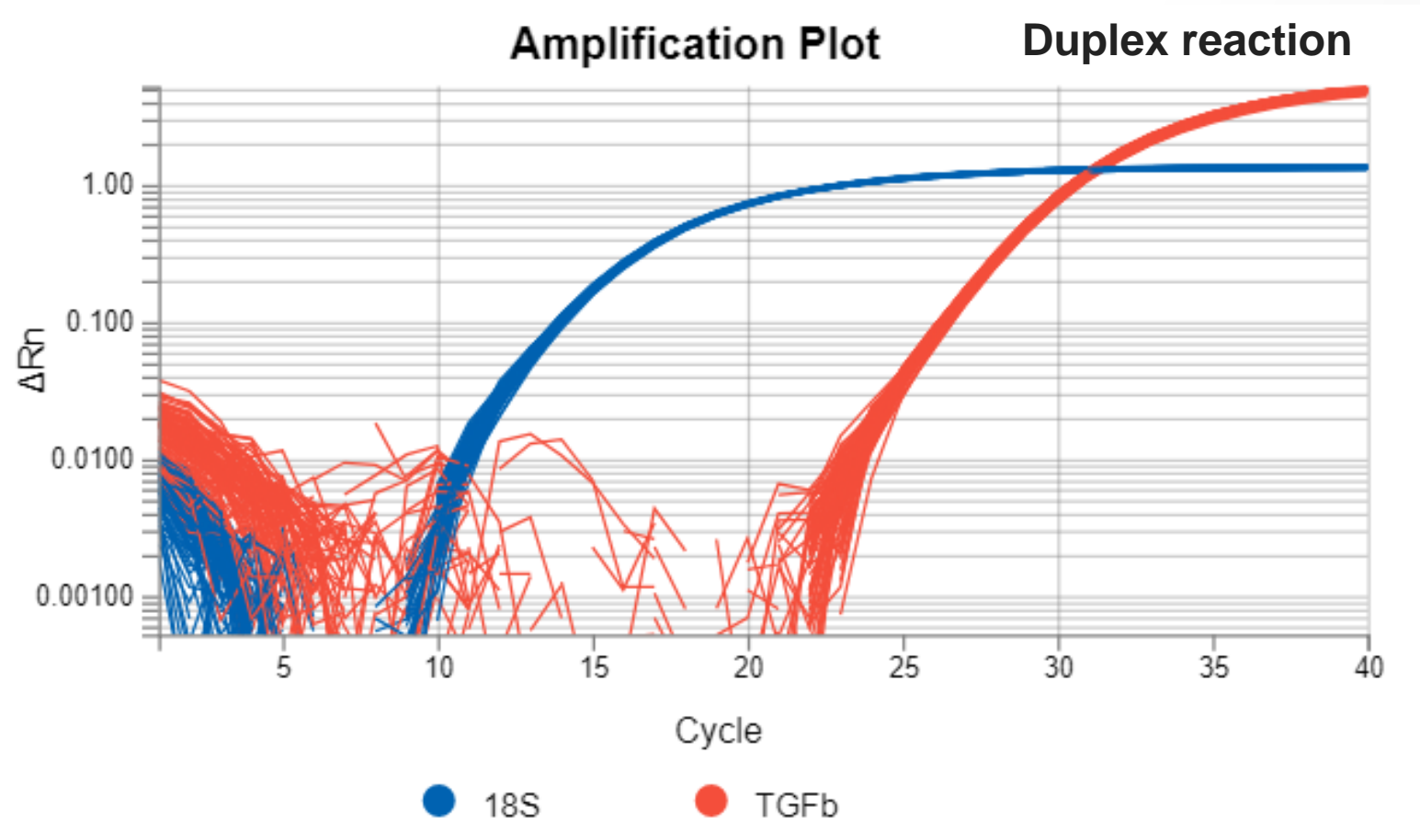
1.5-Fold Discrimination—TaqMan Fast Advanced Master Mix



- KAZ plasmid amplified with PE2 TaqMan assay
- Standard Fast run conditions

Consistent discrimination of 1.5-fold differences in input quantity over wide range of concentrations

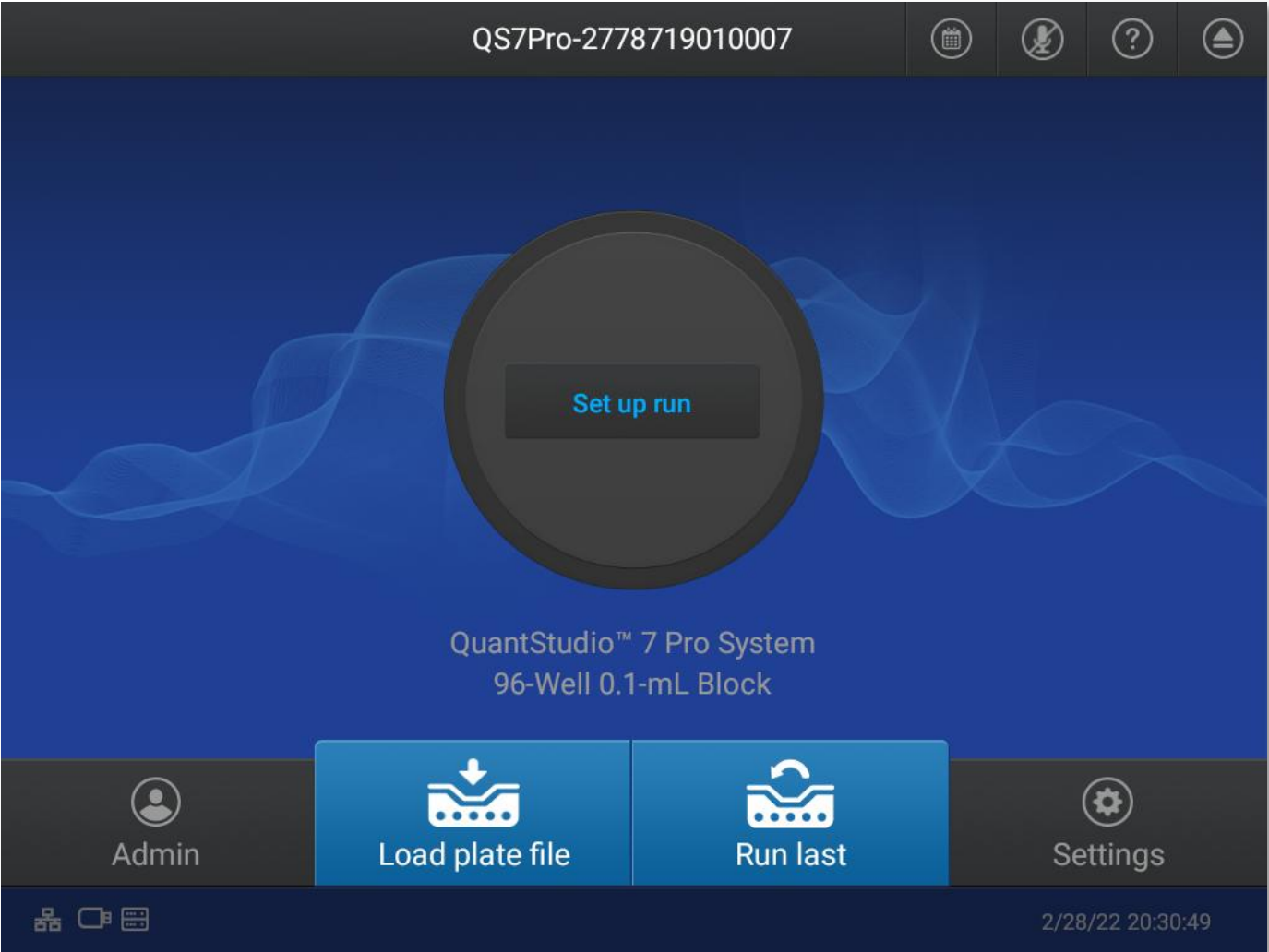
Superb Uniformity in ~40 Minutes



Target	Dye	C _T	Std. Dev. (C _T)
18S	VIC™	13.909	0.0721
TGFβ	FAM™	27.340	0.0767

Consistent C_T values across 96 replicates per target adds confidence in reproducibility

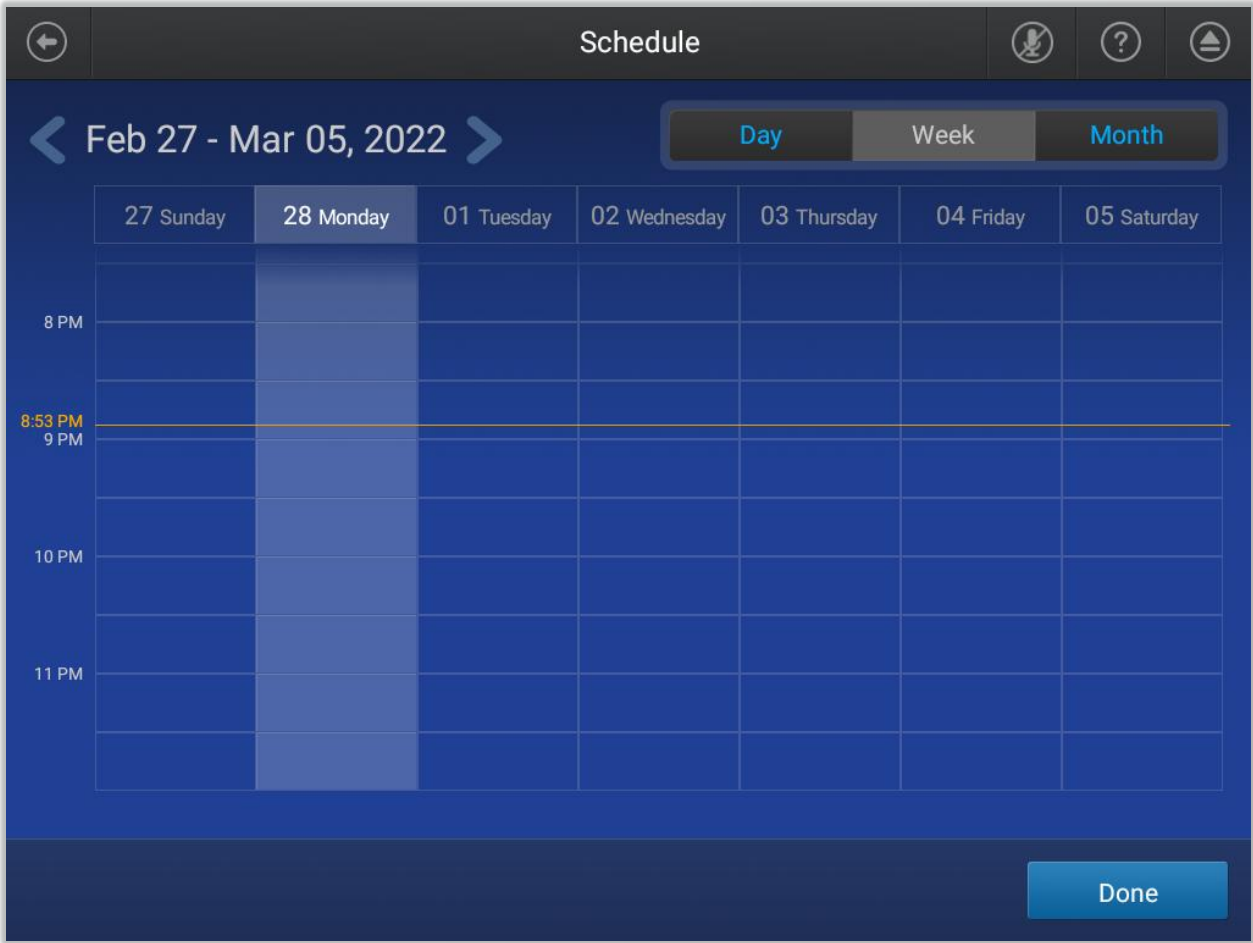
Touch Screen



Instrument Scheduling



Instrument Scheduler – similar to booking a conference room, user can reserve a time on an instrument. The instrument schedule is published over Thermo Fisher Connect so users can view it anytime, anywhere.



Run Setup



Based on pre-set file naming convention, which can include plate file name, user name, time stamp barcode and even some custom text.

Full plate editing functionality

A copy of the data file will be saved on the instrument by default and any of the designated location.

Export results in CSV file to same location as data file

←

QS7Pro-96-Well-0-1ml-PCR-Melt-Fast

Data file properties

Properties

Method

Plate

Data file name

QS7Pro-96-Well-0-1ml-PCR-Melt-Fast

Plate barcode

Optional

Select the locations to save your data file.

Connect platform
Not connected

USB drive
Connected

Network drive
10.223.69.141/share

This instrument
QS7Pro-2778719010007

☐ Export run result with

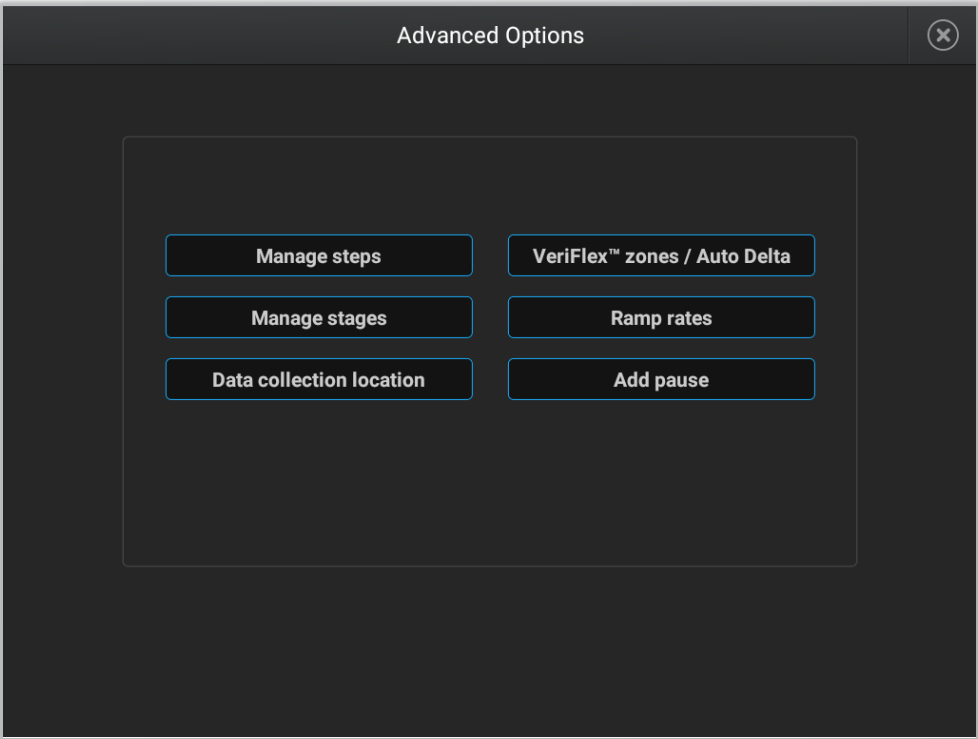
Default setting

Actions

Cancel

Start run

Editing Run Method



A set of advanced options are grouped together for convenience

Full Editing Tools for Plate Details



Plate layout by sample or target

Interactive plate grid for well assignment

Import sample setup instead of manual data entry

QS7Pro-96-Well-0.1ml-PCR-Melt-Fast

Color By: Samples

Properties

Method

Plate

	1	2	3	4	5	6	7	8	9	10	11	12
A	U	U										
B	U	U										
C	U	U										
D	U	U										
E	U	U										
F	U	U										
G	U	U										
H	U	U										

Sample information

Name: s1

Type: UNKNOWN

Target information

Name: target1

Reporter: FAM

Quencher: NFQ-MGB

Passive Reference: ROX (Press actions to change)

Actions

Cancel

Start run

Edit well assignment one by one or in bulk

Tap here to go into edit mode

Editing Plate Details – Sample, Well Assignment, Reagent, Target/SNP Definitions

Wells A4, B4, C4, D4

Wells Samples Target/SNP Reagents

	1	2	3	4	5	6	7	8	9	10	11	12
A	U	U	U	U								
B	U	U	U	U								
C	U	U	U	U								
D	U	U	U	U								
E	U	U	U	U								
F	U	U	U	U								
G	U	U	U	U								
H	U	U	U	U								

Cancel Done

Wells A4, B4, C4, D4

Wells Samples Target/SNP Reagents

Sample name

Type

Clear All Cancel Done

Wells A1

Wells Samples Target/SNP Reagents

Target ▼

Targets in selected wells. Tap target to change it or an empty row to add targets.

#	Target name	Reporter	Quencher
○	target 1	FAM	NFQ-MGB
○			
○			
○			
○			
○			
○			
○			

Clear All Cancel Done

Add New Reagent

Reagent name

Barcode

Reagent type

Lot #

Part #

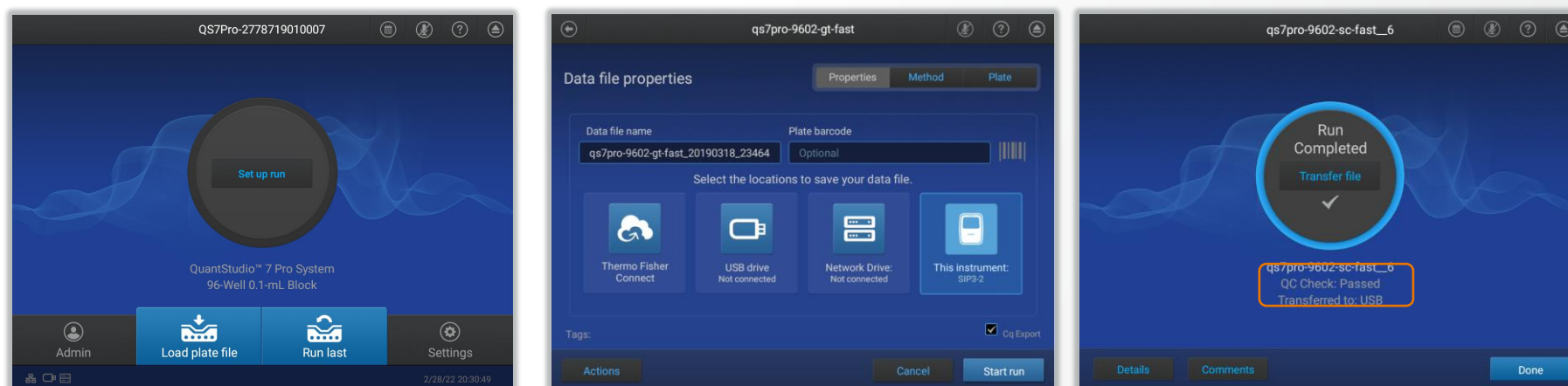
Expiration date

Cancel Save Reagent

- Define sample and target
- Edit well assignment by bulk
- Support both target and SNP in single plate
- Track reagent at well or plate level

On-Instrument Quality Check

- Conveniently monitor quality of the amp curves from the touchscreen
- Ultimate convenience of primary analysis on the instrument
- Setup, start, monitor run, and export Cq result from the touchscreen

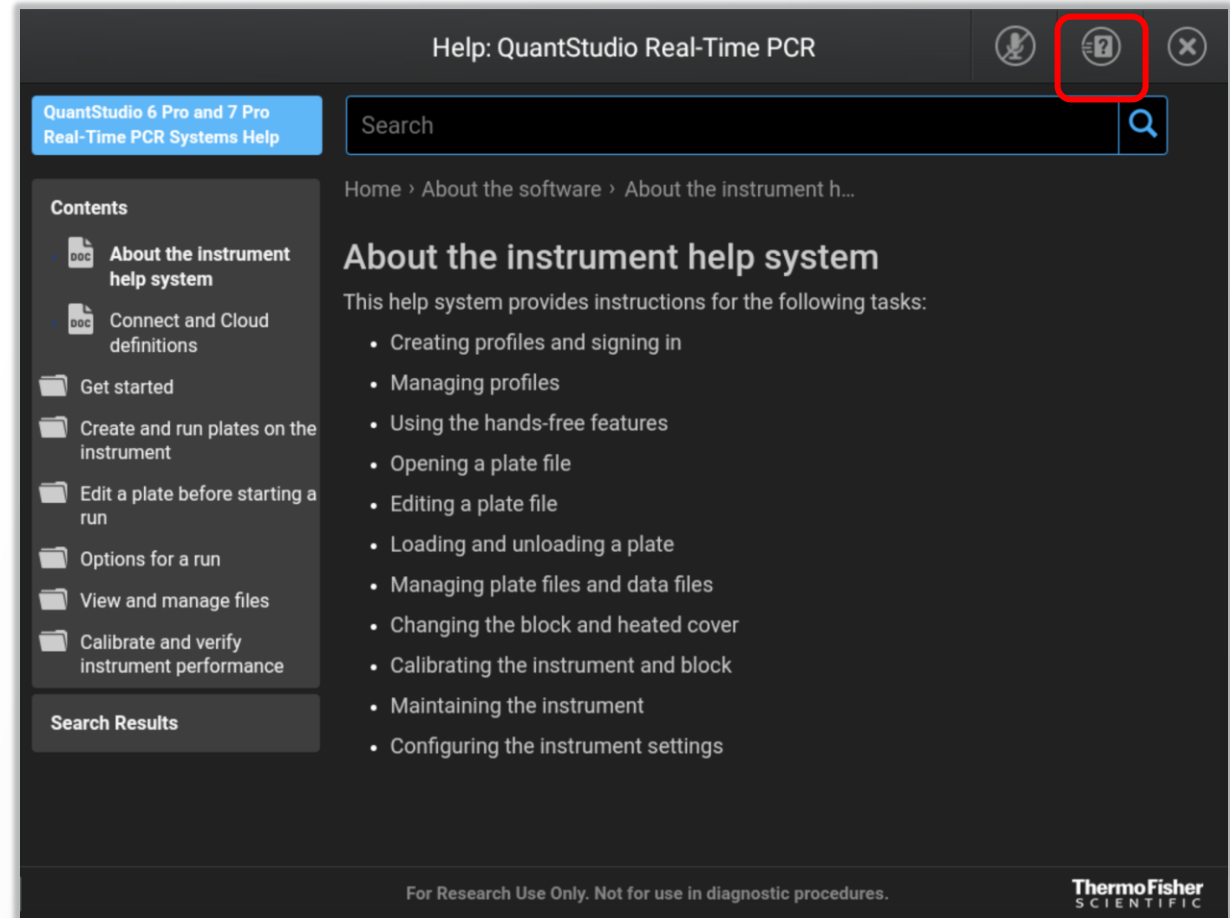


Tip: QC check is done automatically for each run with target assignment

Same as Curve QC check available in DA

Context Sensitive Help

- Launch by pressing the help button or by voice command
- Relevant help topics will be shown
- Search/Browse for other topics



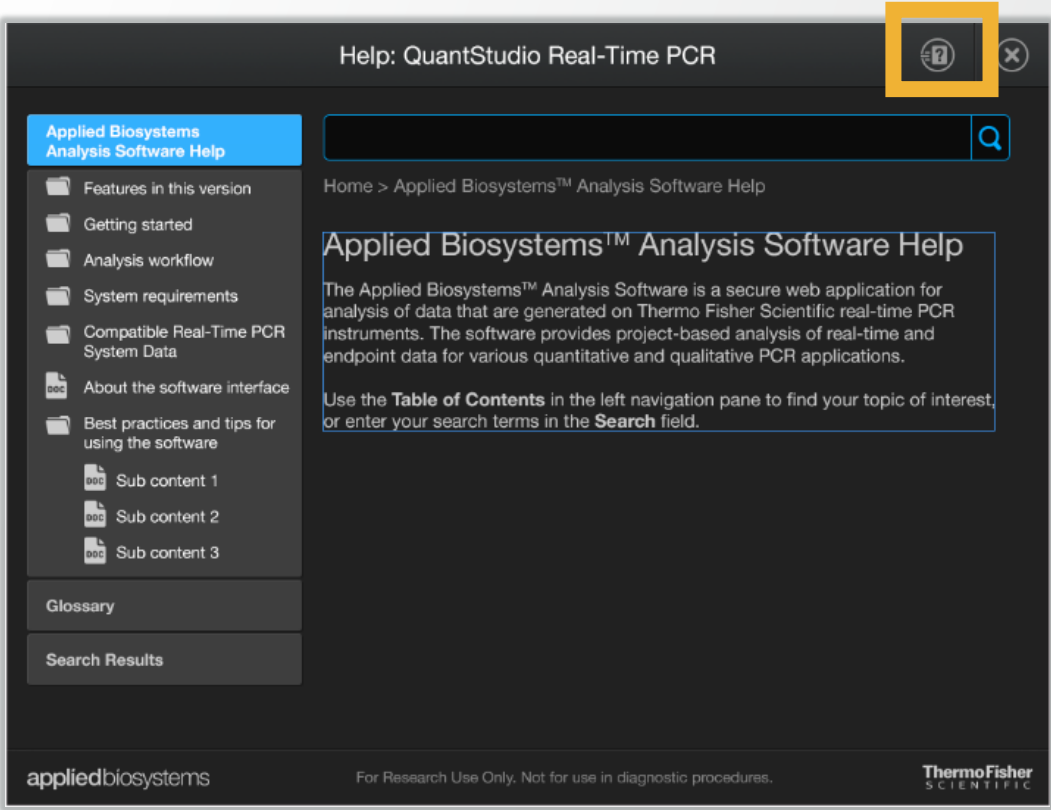
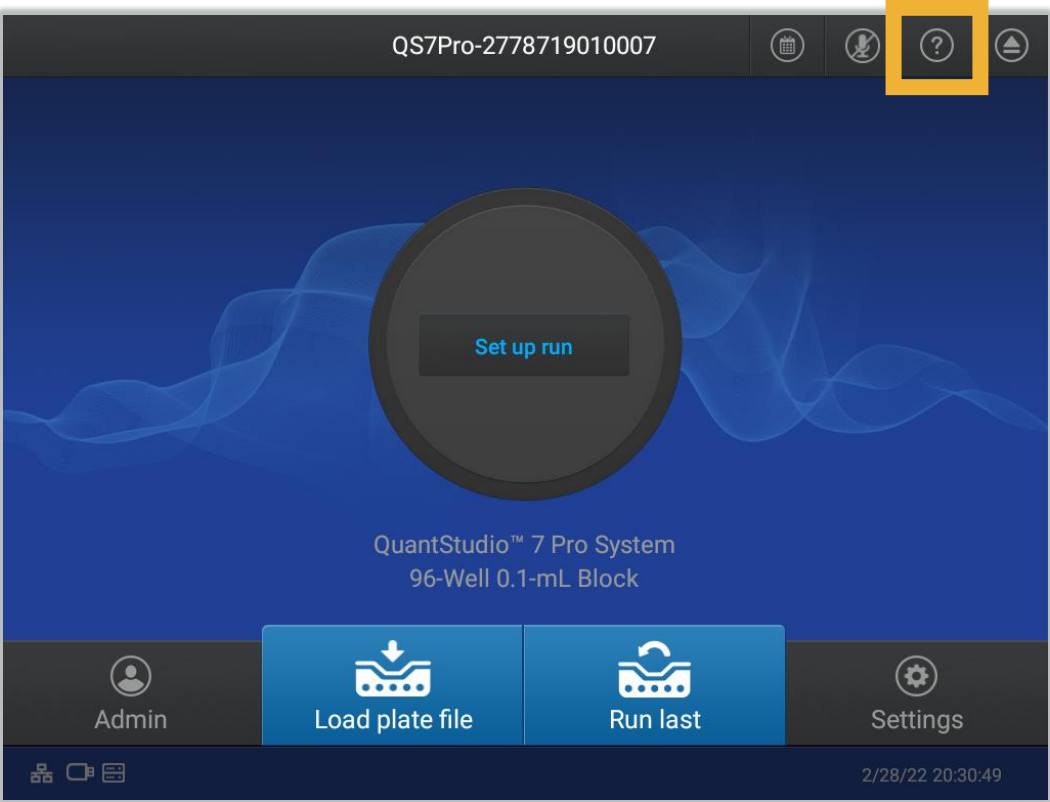
- Access Smart Help within the online help or under the Maintenance & Service menu option
- Follow the step-by-step guideline to submit a request to the Thermo Fisher Scientific support team



To use Smart Help feature:

- QuantStudio 6/7 Pro must be connected to Connect.
- User does not have to be logged into an individual Connect account
- Instrument will need to be under warranty or have active service contract (AB Assurance)

How to Get to Smart Help



Smart Help – Easy as 1-2-3

1. Select type of support

2. Describe request, attach data files and log for troubleshooting

3. Submit

The first screenshot shows the 'Smart Help' window with the question 'What type of support do you need?'. It offers two options: 'Technical Support' (Report a technical issue with the instrument. The support team will contact you.) and 'Instrument Service' (Request service for your instrument. The support team will contact you.). The 'Describe issue' button is highlighted.

The second screenshot shows the 'Technical support issue' form. It has a text area for 'Write a short description of your technical issue' with a timer and a microphone icon. To the right, there are fields for 'Contact preference' (Email, Phone, Country, Method) and a checkbox for 'Include instrument log file'. The 'Send' button is highlighted.

The third screenshot shows a confirmation screen with a large checkmark and the text 'Your support request was successfully sent. You will receive an email confirming this request'. A 'Close' button is at the bottom right.

SR#:2-4745172942,Technical Support:Technical support issue



QA_LifeScience-CNTS

Thu 4/4/2019 05:29 PM

To: Lam, Gloria



Reply all

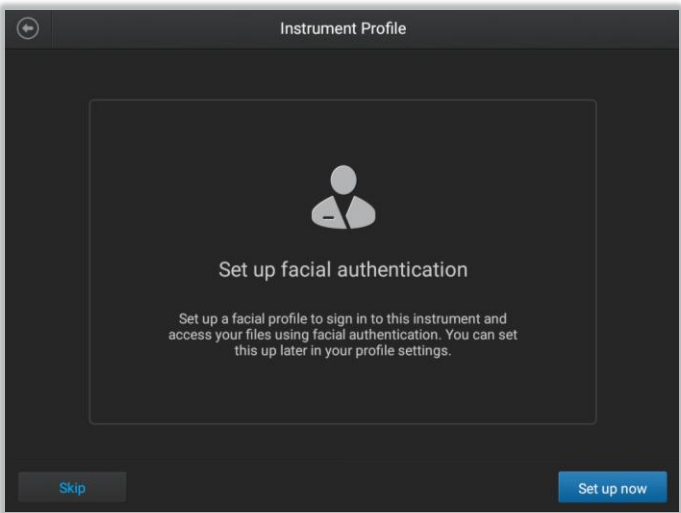
The reference number for your inquiry is: 2-4745172942

You should receive an email response from us within 2 business days.

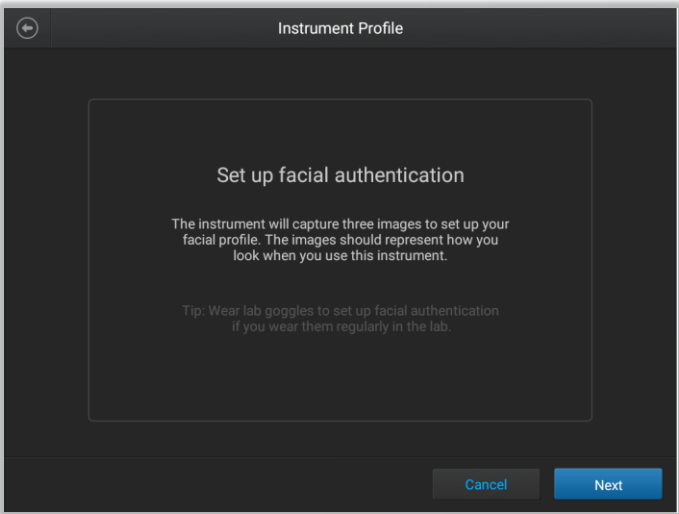
For 24/7 access to tools and resources developed by our award-winning Technical Support team, please visit our Technical Resources page at www.thermofisher.com/support.

- Support ticket routed to the technical support team
- The email notification with the reference number is the proof that a support ticket is actually created in the system. On screen confirmation indicates the information is successfully sent only.

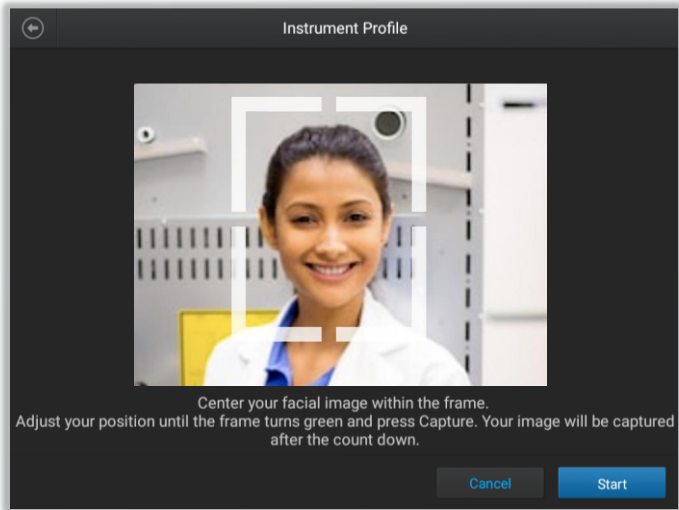
Facial Profile Registration Workflow



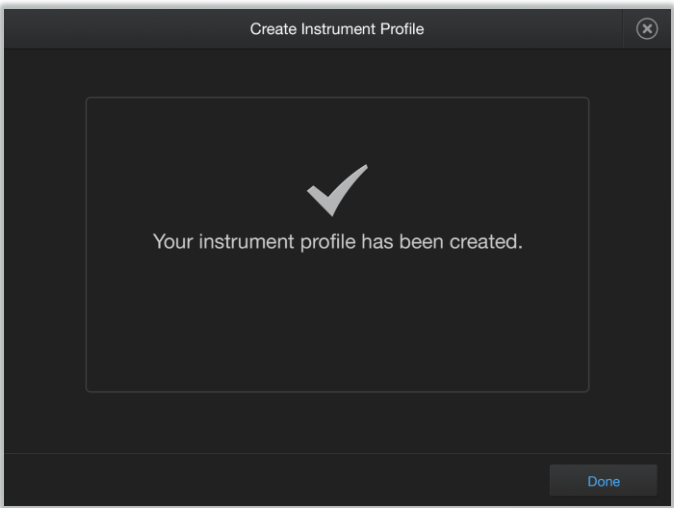
User has the option to setup facial profile as part of their account.



System provides instructions so user knows what to expect.



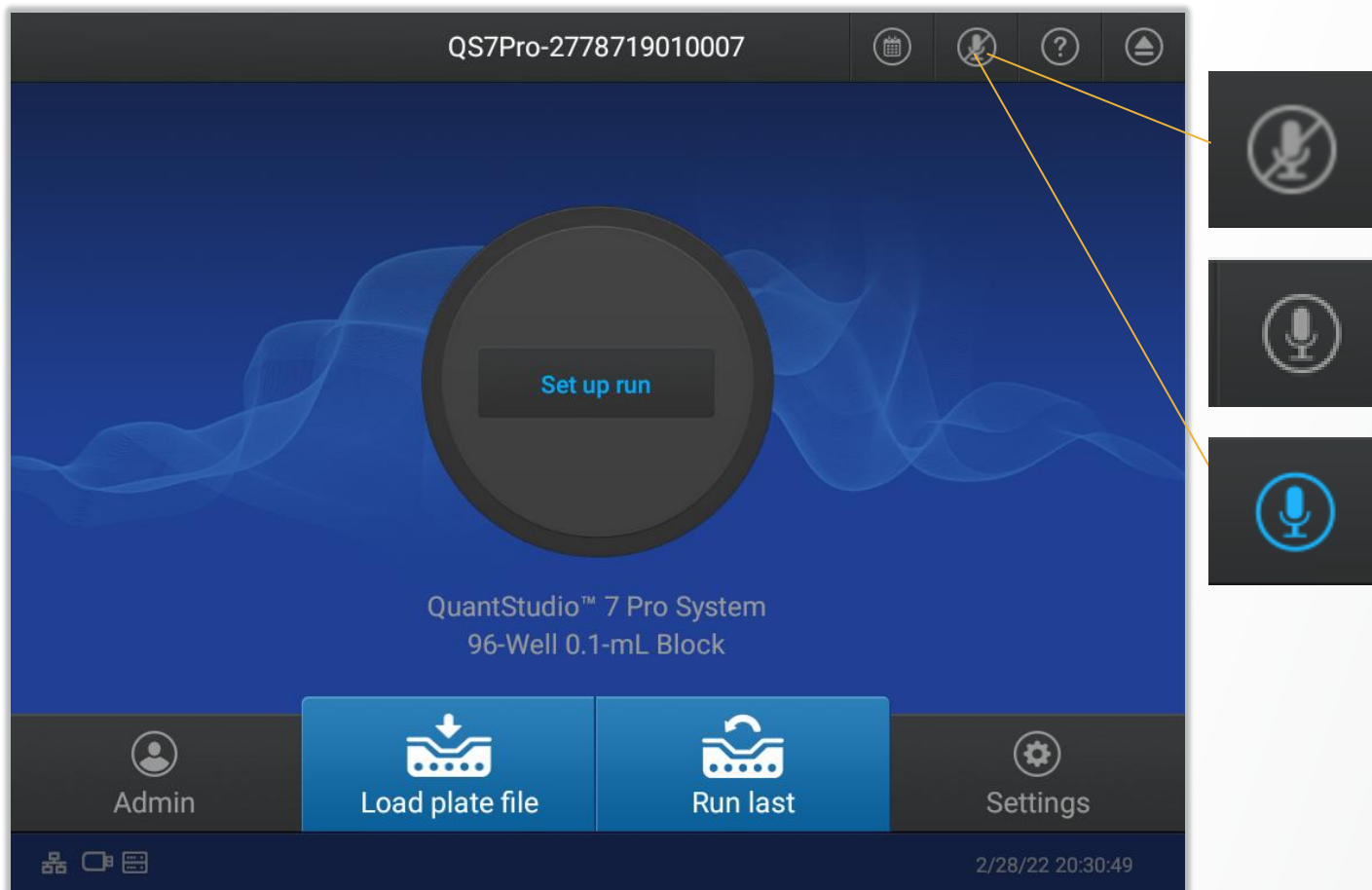
A step by step wizard to take 3 photos.



The three photos are used to generate irreversible vectors representing the user's facial profile.

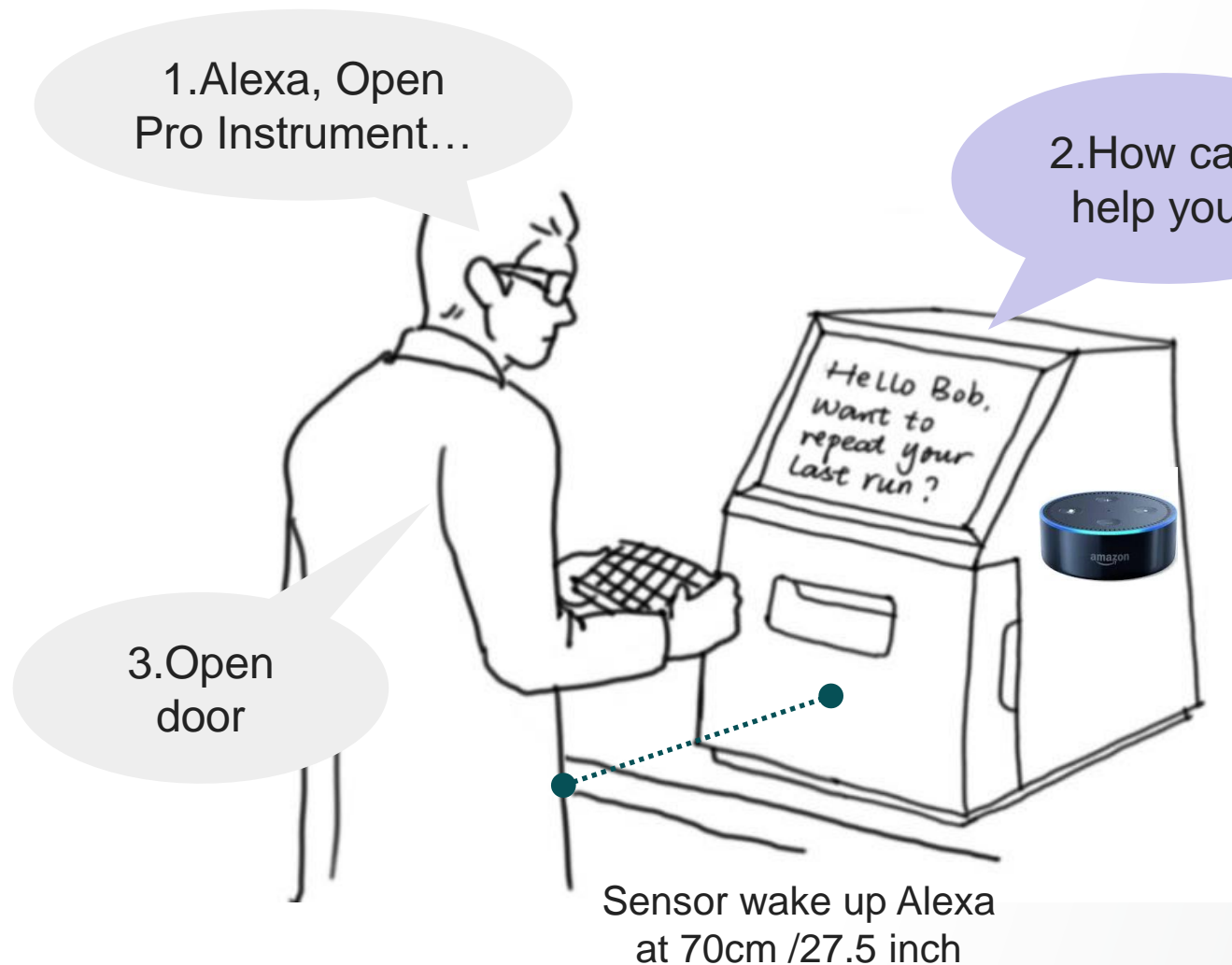
A confirmation message is displayed to inform user of successful registration.

Voice Command

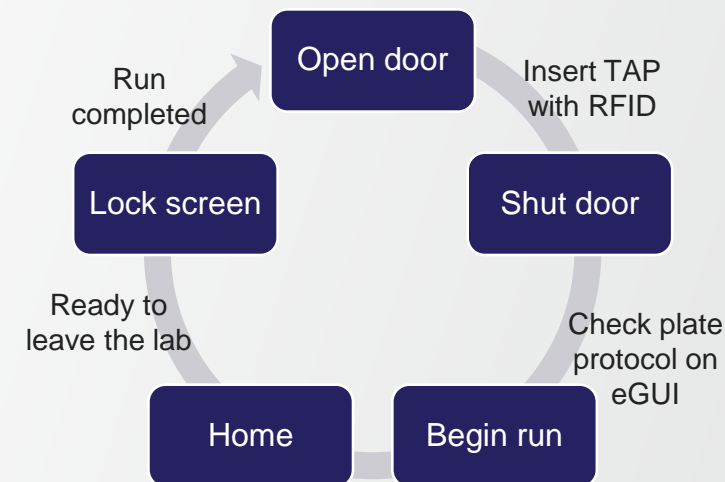


- Voice commands must be enabled
 - Gray mic with a strike = disabled by system admin
 - Gray mic = enabled by system admin
- User can tap the mic icon to mute or unmute
 - Red mic = muted
- Color of the icon reflects the different mode of Alexa
 - Blue mic = listening to command
 - Amber mic = processing

How to Use Voice Commands



Smart hands-free workflow



Direct access to critical features

- ✓ Go Home
- ✓ Help
- ✓ Smart Support (aka Smart help)
- ✓ Change Block
- ✓ Calendar

Voice Commands & Synonyms

Open door

open drawer
I want to open the door
open the door
open the instrument door
open instrument door

Shut door

close drawer
I want to close the door
close door
close the door
close instrument door
close the instrument door
shut the door

Begin run

I want to initiate Run
I want to commence the run
Can you start the run for me
Let me start run
Can you start run
I want to start run
I want to start a run
start run
start the run
begin the run

End run

abort run
STOP
Will you stop the run
I need to stop the run
I am stopping the run
Can you stop the run
stop run
stop the run
end the run

Home

Back Home
Can you take me to the Home screen
I want to go to home screen
go home

Help

help screen
help page
Can you help me
Please help
I need help
get help

Smart support

Call support
Can you call support
Give me smart support
I want support
get smart support

Change block

Help me with changing block
I want to change block
Can you change block
how do I change the block
change block
install block

Instrument scheduler

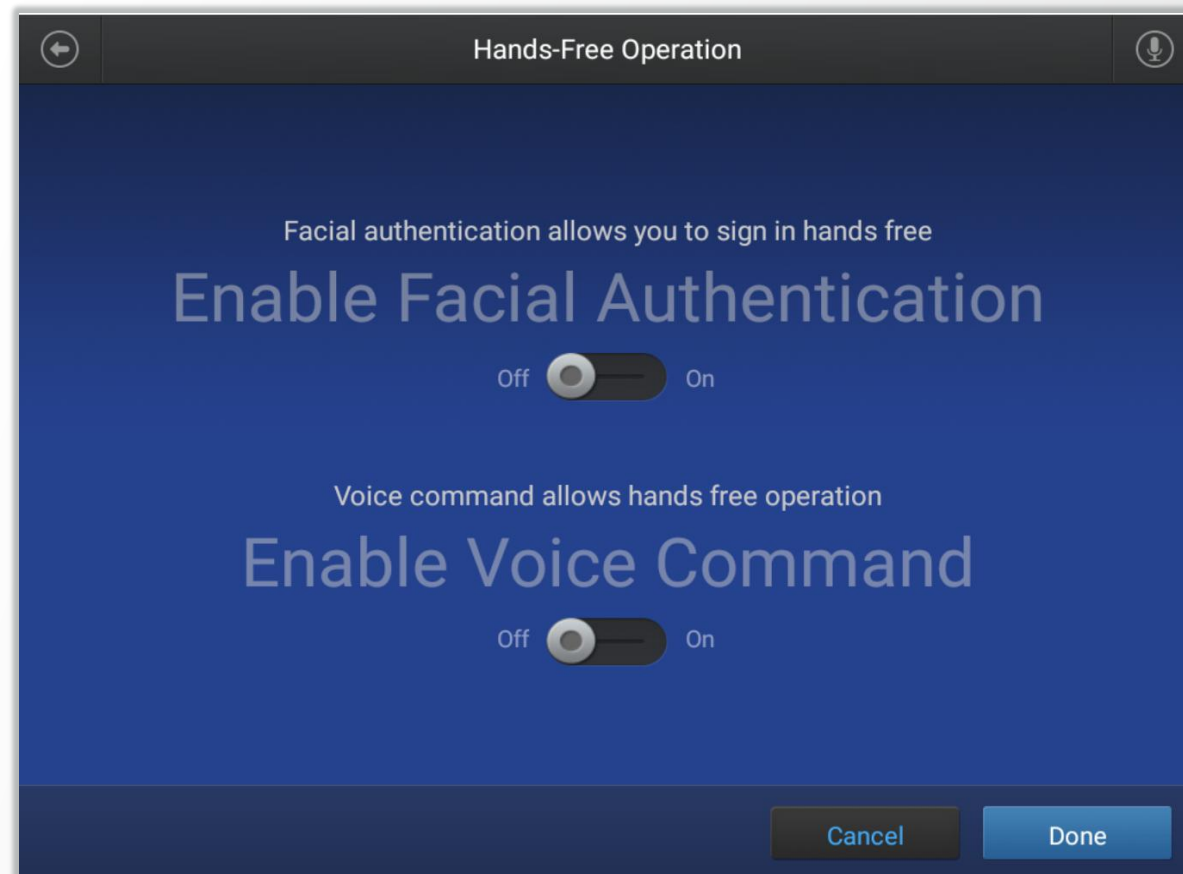
instrument schedule
Calendar

Lock screen

I want to lock the screen
Can you lock the screen
lock screen
lock the screen

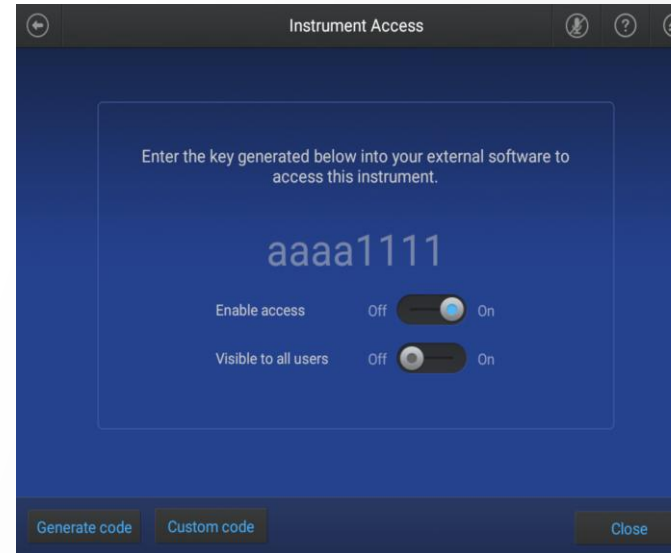
User Privacy

- **System Optional** – hands-free features require system administrator to enable
- **User Optional** – Individual user has a choice to register their facial profile or un/mute the microphone for voice commands
 - Without a facial profile, user can be authenticated using username and password.
 - User can delete the facial profile at will.
- No photo is stored in the instrument. During facial profile registration, user's photos are processed into irreversible vector (facial data)
- Facial data is used for authentication purpose only. It is encrypted and stored on instrument only.
- No voice is stored in the instrument. Voice fragment is sent to Amazon for processing directly and its not identified with individual user.



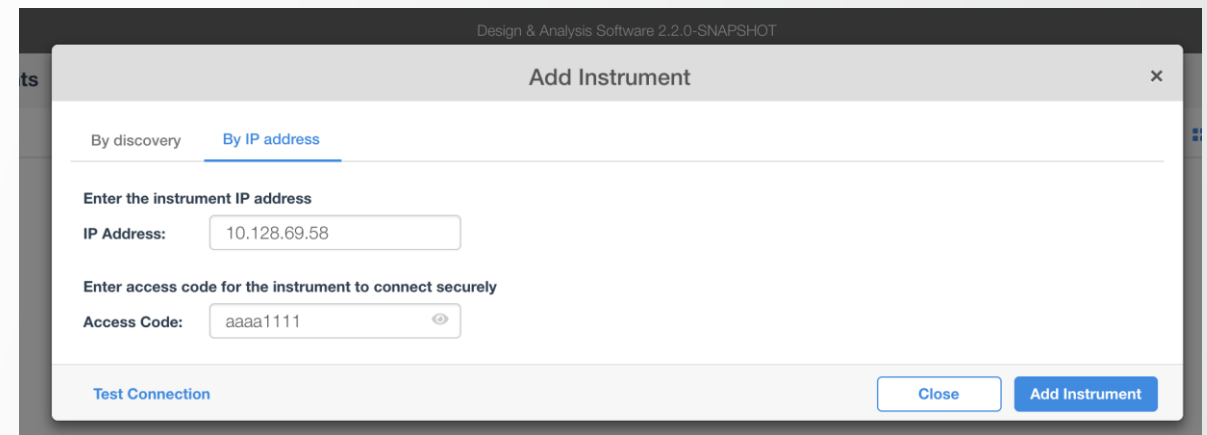
Device Access

- Security Feature – allow admin to control remote software (DA2) access
- Admin can authorize specific instances of the software to connect to the instrument
- Use of a device specific key
 - System generated or custom
 - Can be shared/hidden from standard instrument users
 - Once connected, user can send plate file to run queue



1) Settings>Instrument Settings>
Instrument Access

2) Manage Instrument>Action>
Add Instrument



Feature Comparison for Different Configuration Options

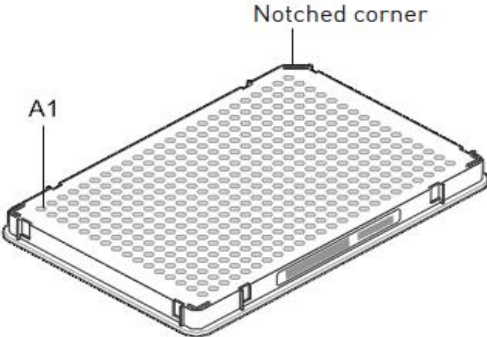


New Features when connected the QuantStudio Pro device to...	Thermo Fisher Connect	Local Network	Standalone Computer*
Facial Authentication	✓	✓	✓
TaqMan Array Plates with RFID	✓	✓	✓
Voice Commands	✓	✗	✗
Smart Help	✓	✗	✗
Instrument Scheduler	✓	✗	✗
MAC Support	✓	✓	✗
Remote Run Monitoring	Smart phone InstrumentConnect	✗	✗
Online Data Sharing	Thermo Fisher Connect	✗	✗
Online Data Analysis	Thermo Fisher Connect	✗	✗

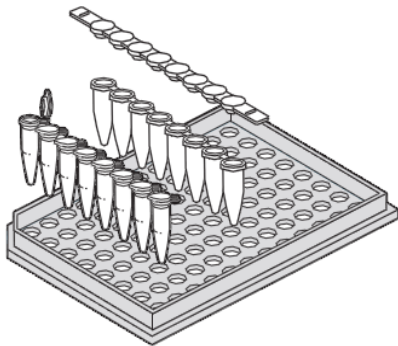
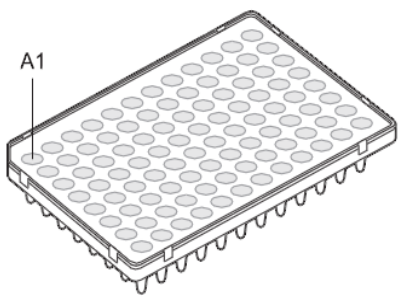
* Thermo Fisher PC required

QuantStudio™ 7 PRO consumables

Disposables – 384 well (supported volume 5 to 20 µl)

Sample block	Consumable	
384-well plate	 <p>The diagram shows a 384-well plate with a grid of wells. A label 'A1' points to the first well in the first column. A label 'Notched corner' points to the corner of the plate where the wells are notched.</p>	<ul style="list-style-type: none">• MicroAmp® Optical Adhesive Film• MicroAmp® Optical 384-Well Reaction Plate with Bar Code• MicroAmp® EnduraPlate™ Optical Reaction Plates with Barcode

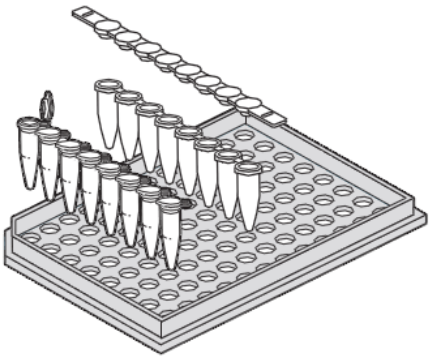
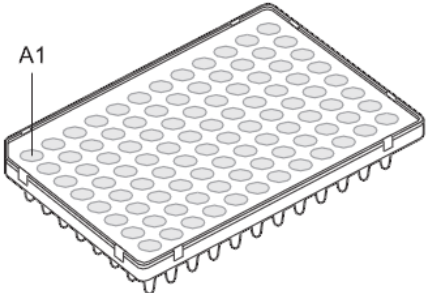
Disposables – 96-well Block 0.1 ml (supported volume 10 to 30 µl)

Sample block	Consumable	
96-well fast plate, 0,1ml		<ul style="list-style-type: none"> • MicroAmp® Optical 8-Cap Strip • MicroAmp® Fast 8-Tube Strips • MicroAmp® Fast Reaction-Tube w/ caps • MicroAmp® Fast 96-Well Tray /Retainer
		<ul style="list-style-type: none"> • MicroAmp® Optical Adhesive Film • MicroAmp® Optical 96-Well Fast Reaction Plate with Bar Code



- Tubes/Strips to combine with 4379983
- Tray for 96w 0.1 ml block
- Box of 10 tray/retainer sets

Disposables – 96-well Block 0.2 ml (supported volume 10 to 100 µl)

Sample block	Consumable	
96-well plate, 0.2 mL		<ul style="list-style-type: none"> • MicroAmp® Optical 8-Cap Strip • MicroAmp® 8-Tube Strips (0.2-mL) • MicroAmp® Reaction Tubes without Caps (0.2-mL) • MicroAmp® 96-Well Tray/Retainer Set
		<ul style="list-style-type: none"> • MicroAmp® Optical Adhesive Film • MicroAmp® Optical 96-Well Reaction Plate with Bar Code • MicroAmp® EnduraPlate™ Optical 96-Well Clear GPLE Reaction Plates with Barcode



- Tubes/Strips to combine with 4381850
- Tray for 96w 0.2 ml block
- Box of 10 tray/retainer sets

Recommendations

- Prepare the 96-plates in a MicroAmp Splash Free 96 well base
- This base can protect plate wells from the bottom
- Can also hold the plate fix while pipetting
- Catalog number to order: 4312063 (box of 10 bases)



- Centrifuge the plate 1 min x 900g
- Do not use markers on the plates/tubes

How to Use Single Tubes and Tube-strips

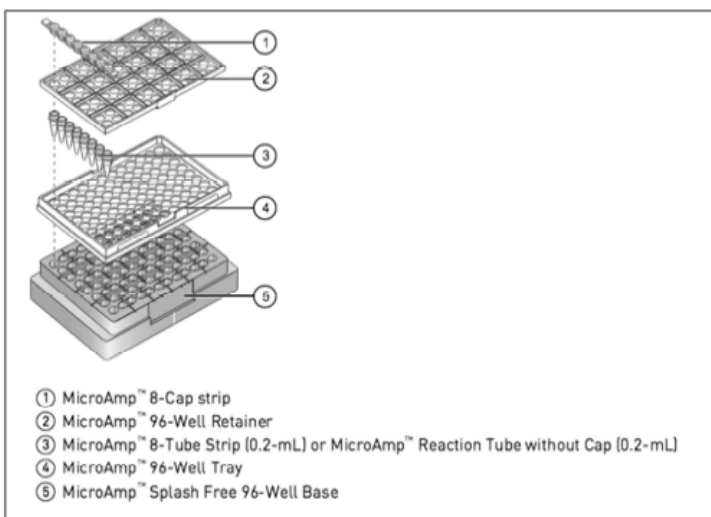
appliedbiosystems
by Thermo Fisher Scientific

Using Applied Biosystems™ MicroAmp™ Tubes and Strips with a Tray/Retainer on the Applied Biosystems™ QuantStudio™ 3 and 5 Real-Time PCR Systems

When using individual 0.1/0.2ml tubes and strips on the QuantStudio 3 and 5 Real-Time PCR 96-well Systems the following adaptations should be made :

1. Assemble the MicroAmp tubes/strip and caps on the Blue Tray/Retainer (SKU 4381850 for 0.2ml or SKU 4379983 for 0.1ml) following the instructions available online at:

https://tools.thermofisher.com/content/sfs/manuals/100033471_MicroAmpReactionPlates_TubeStrips_Tubes_UB.pdf



2. Once the tubes/strips are securely capped, place the blue Tray/Retainer on the instrument block with the black adapter on the block:

- Plastics should be optical
- Seal properly with the required tools
- Use the proper tray/adaptor
- Balance the tube positions



Maintenance and Service

Recommended Calibration and Verification

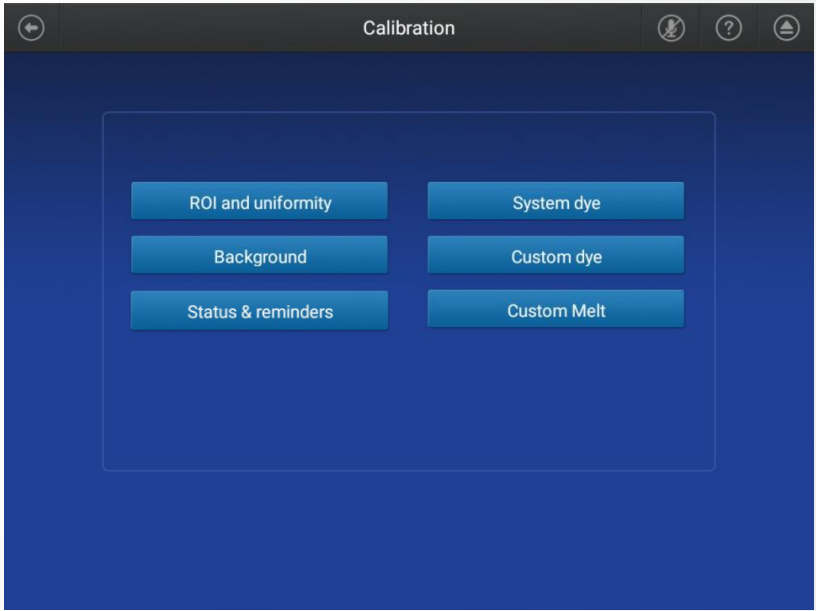
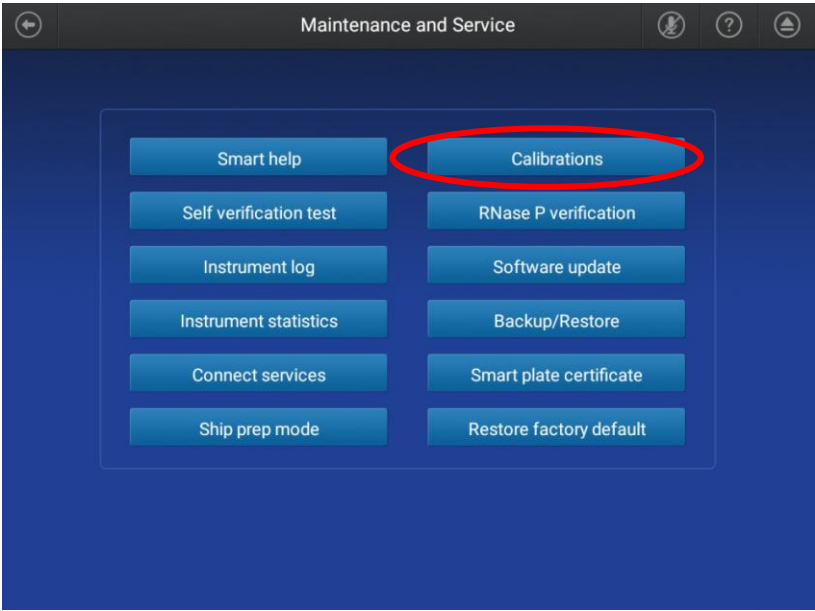


Calibration	Recommended frequency
ROI/uniformity	Every two years
	<ul style="list-style-type: none">Always perform new Background and Dye calibrations after an ROI/Uniformity calibration.
Dye	Every two years
	<ul style="list-style-type: none">During a Dye calibration, only the dyes on the given spectral calibration plate are calibrated.
Background	Every month
	<ul style="list-style-type: none">As needed: To check for contamination.
	<ul style="list-style-type: none">As needed: To obtain the most accurate data for the removal of background fluorescence.
RNase P verification	After installing or moving the instrument.
	After performing instrument or block calibrations.
	As needed to confirm instrument performance.

Check software updates 1-2 times per year at : <https://www.thermofisher.com/qpcrsoftware>

Access the maintenance from the touchscreen

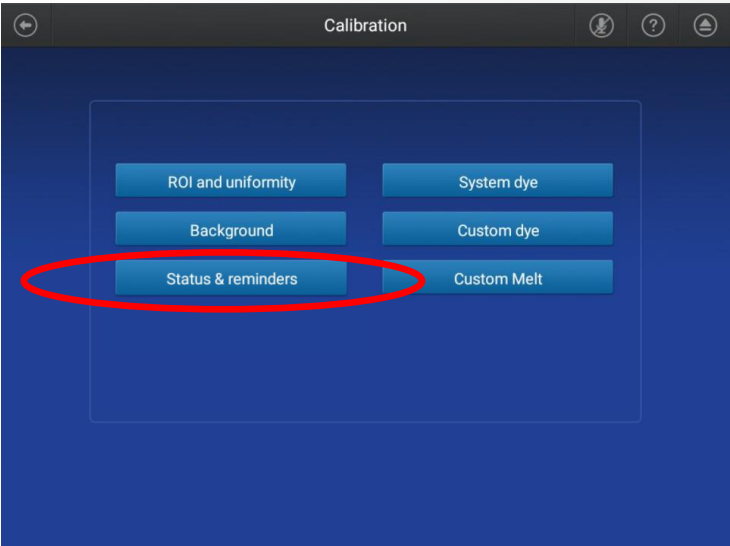
From Settings > Maintenance and Service



Maintenance Reminders



- The status of each calibration type is shown
- Select a calibration row to view the history of that specific calibration type, then touch **Done**.
- Touch **Edit** to set the calibration reminder settings and expiration intervals
- Calibration agenda can be exported for archiving purpose by touching **Export**

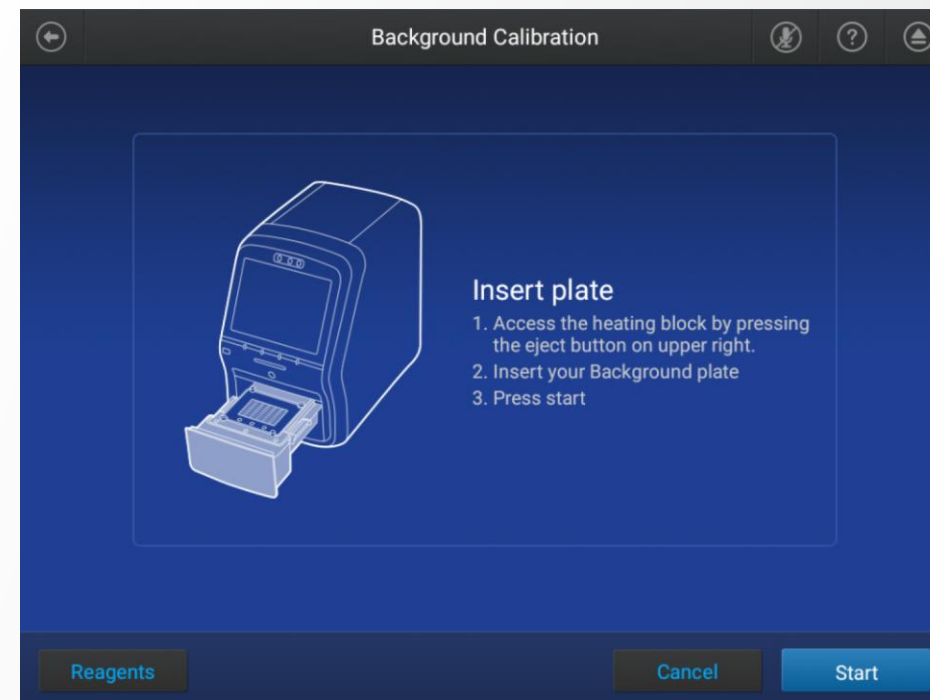
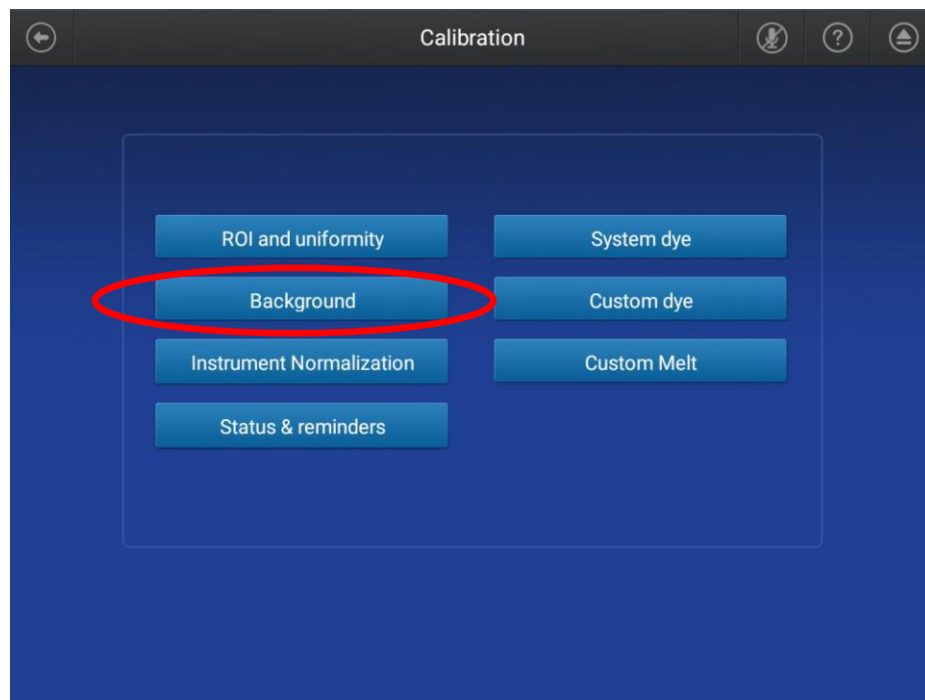


The screenshot shows the 'Status and Reminders' screen with a table of calibration data. The table has columns: Type, Status, Last Calibrated, Expiration Date, and Reminders. The data is as follows:

Type	Status	Last Calibrated	Expiration Date	Reminders
ROI	Current	1/15/21 15:55:45	1/15/23 15:55:45	
Uniformity	Current	1/15/21 16:10:38	1/15/23 16:10:38	
Background	Current	1/15/21 16:10:31	1/15/23 16:10:31	
Dye Plate 1	Current	1/15/21 16:20:58	1/15/23 16:20:58	
Dye Plate 2	Current	1/15/21 16:32:46	1/15/23 16:32:46	
Dye Plate 3	Current	1/15/21 16:39:11	1/15/23 16:39:11	
RNase P	Not Calibrated			
CMELT	Current	2/9/22 18:25:37	2/9/24 18:25:37	
Custom Melt	Current	2/9/22 18:25:37	2/9/24 18:25:37	
CHRM	Current	2/9/22 18:59:45	2/9/24 18:59:45	
Custom Melt	Current	2/9/22 18:59:45	2/9/24 18:59:45	

At the bottom of the screen, there are buttons for 'Edit', 'Export', 'Cancel', and 'View'.

Check thermal block for fluorescent contamination



Insert a background plate and click «start»

Background plate must be prepared using our AB plate and AB optical adhesive film
Use deionized water to each well of the reaction plate.
The recommended volume for a 96-well plate is 20 μ L.

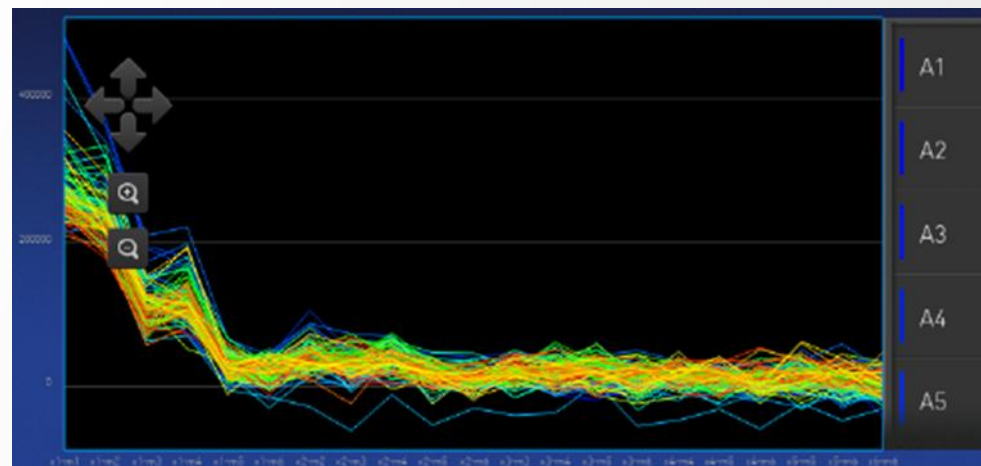
Check thermal block for fluorescent contamination

- When the run is complete select View Results to check the calibration status and get an overview of the results

Calibration status

Passed

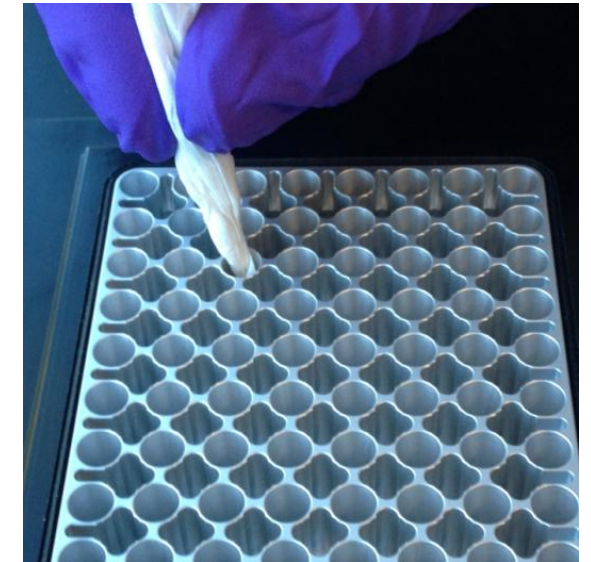
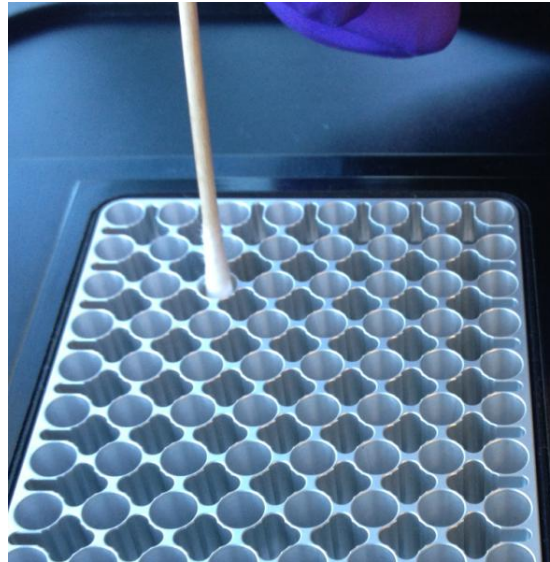
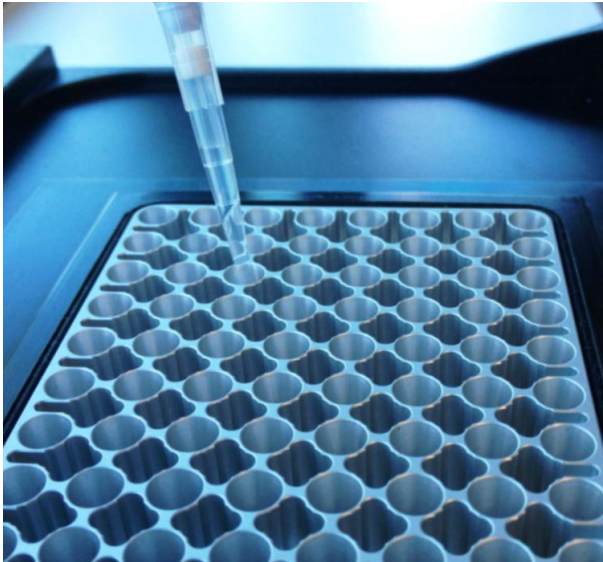
Failed



- If Calibration status is failed, look for wells showing abnormal fluorescence signal and proceed with cleaning

Block Cleaning

- Add deionized water in the well

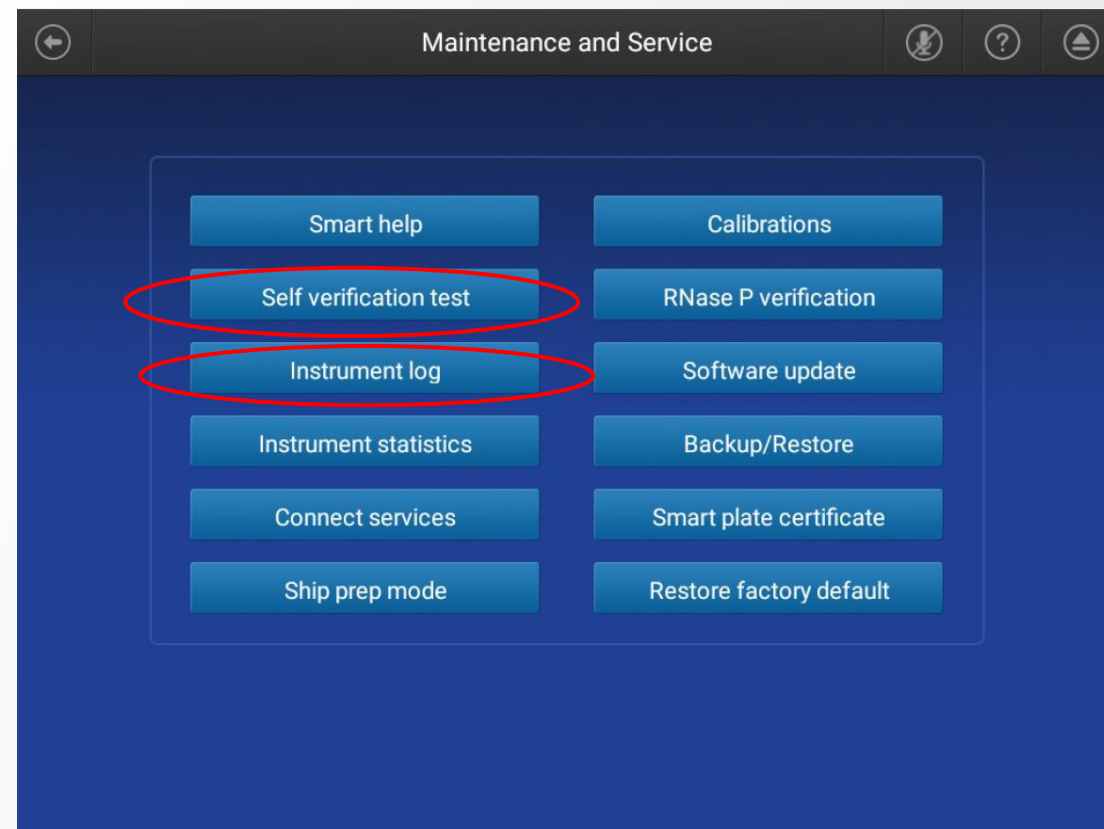


Block item may differ from photograph

- Use a cotton bud or Kimwipes® wiper to dry the well
- Perform a new Background
- If contamination remains repeat using 95% Ethanol and rinse with dH2O
- Perform a new background
- If contamination remains call a Thermo Fisher Representative

Self Verification Test and Log files

- For instrument malfunctions, please perform the self verification test and export the log files to USB drive
- Send log files to Thermo Fisher Representative



Register to Become Notified upon New Software Release

- Go to: <https://www.thermofisher.com/qpcrsoftware>
- Fill the form
- Get notified when an update is available

Design and Analysis Software Version 2.2, QuantStudio 6/7 Pro systems

[Download \(Windows 10\)](#) [Download \(MAC\)](#) [Release notes](#)

Touchscreen Instrument Operating Software Version 1.2.0, QuantStudio 6/7 Pro systems

[Download](#) [Release notes](#)

If you would like to use the Securities, Audits and e-Signature Module for the QuantStudio 7 Pro Systems, you may download the software below.

SAE Admin Console Version 2.0

[Download](#)

Application Profiles

[QuantStudio 7 Pro](#) [Design and Analysis Software](#)

To be notified when new software releases are available for your instrument, please fill out the form below.

* Required field

First Name *	Email *
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Name of Institution *	Postal Code/Zip *
<input type="text"/>	<input type="text"/>
Telephone *	Location *
<input type="text"/>	<input type="text" value="Select"/>

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UPDATE

Power to the pros

Updates are now ready for you to install

[Update software](#)

You requested to be notified when a new software or firmware update is released for the Applied Biosystems™ QuantStudio™ 6 and 7 Pro Real-Time PCR Systems.

Read the release notes and [download the update today »](#)