

GeneXpert® Infinity System Training on Xpertise 6.8



Agenda:

- **Infinity Overview**
- **Xpertise Software Features**
- **Infinity Files**
- **Infinity Workflow**
- **Viewing Test Results**
- **Data Management**
- **Brief LIS Overview**
- **Troubleshooting**
- **Shut Down Protocol**
- **Maintenance**

Infinity Overview



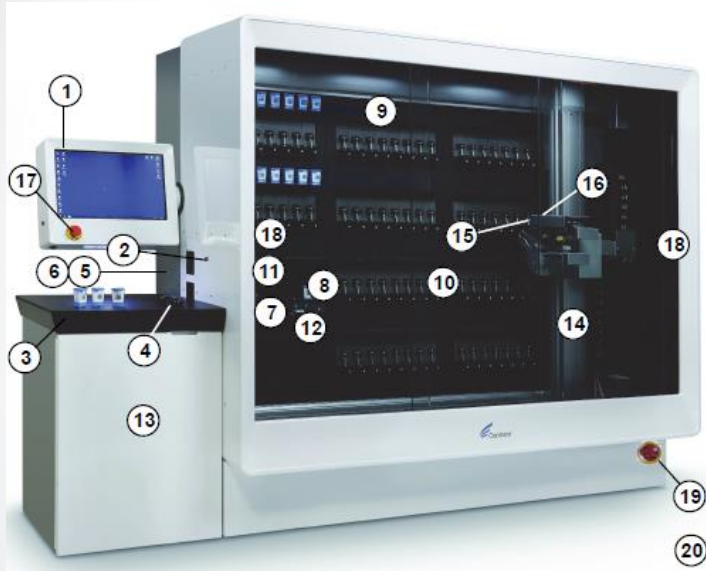
GeneXpert® Infinity Real-time PCR System



System Components

- GeneXpert Infinity
 - Conveyor, Gantry, Accumulator
 - Modules
 - Thermal and Optical system
 - Precision Fluidics
- Extraction and Reaction Cartridges
- Reagents
 - Dry and wet Reagents
- Computer System
 - Software, barcode scanner, LIS interface and LINK connectivity

GeneXpert® Infinity Components



1 - Monitor with touch screen

2 - Kiosk barcode scanner

3 - Keyboard (wireless)

4 - Mouse (wireless)

5 - Kiosk computer (in the main cabinet)

6 - Embedded Computer (in the main cabinet)

7 - Conveyor

8 - Lobby

9 - Accumulator Shelves

10 - GeneXpert Modules

11 - Shuttle

12 - Waste disposal shelf

13- Waste container (hidden)

14 - Robotic Gantry System

15 - Gripper

16 - Gantry Barcode Scanner

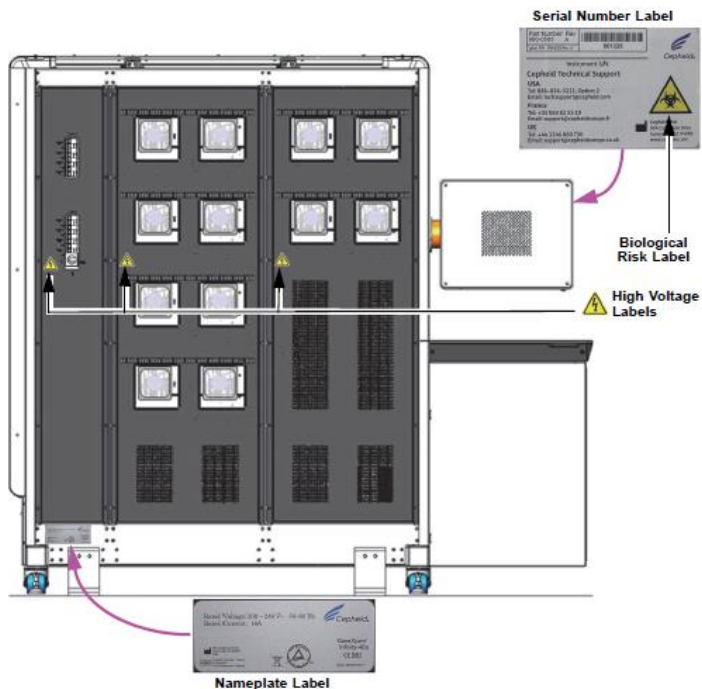
17 - Emergency STOP button

18 - Left and Right Door handles

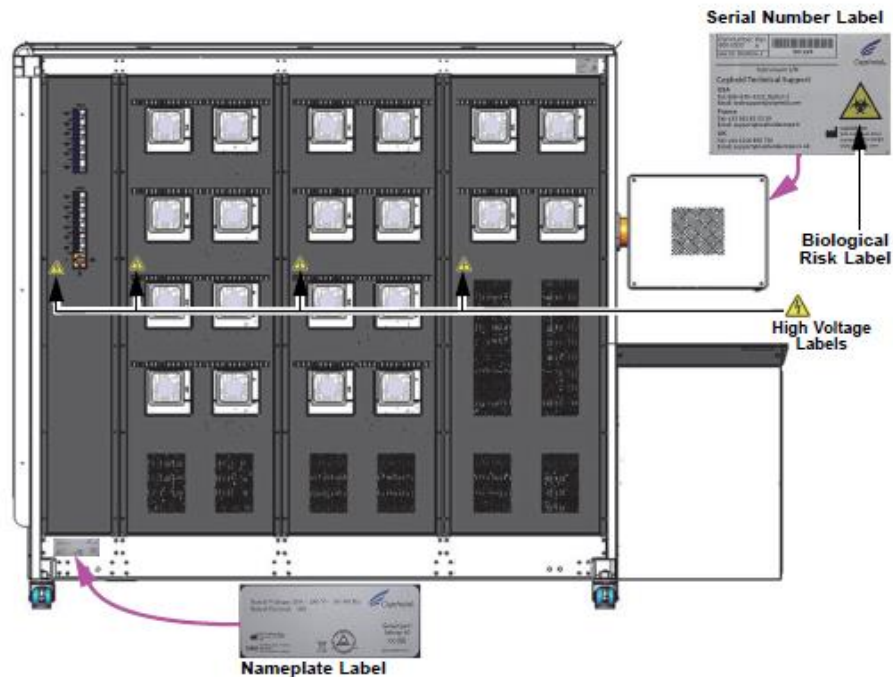
19 - UPS (hidden)

20 - AC Power Switch

View from the back

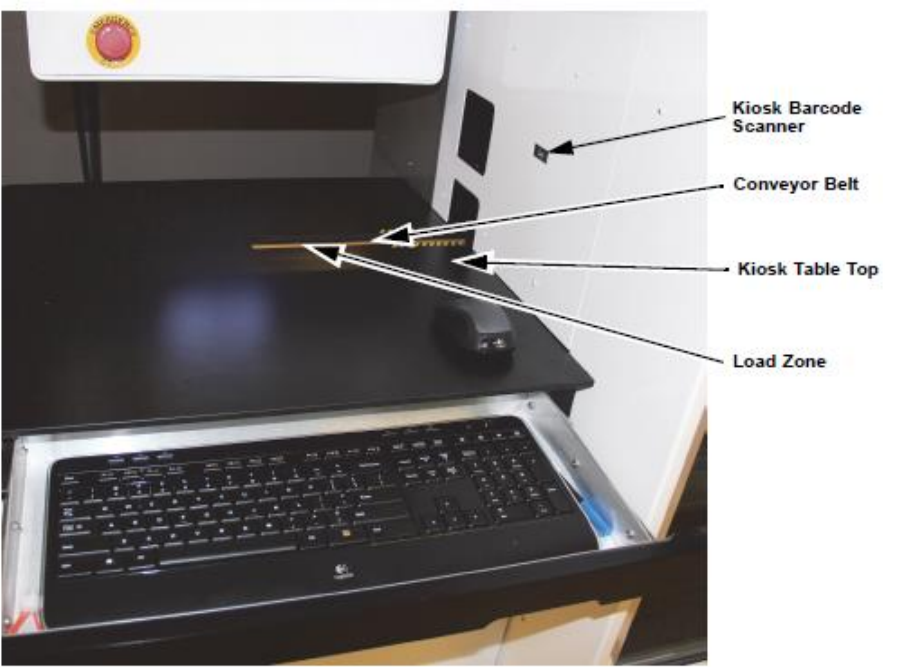
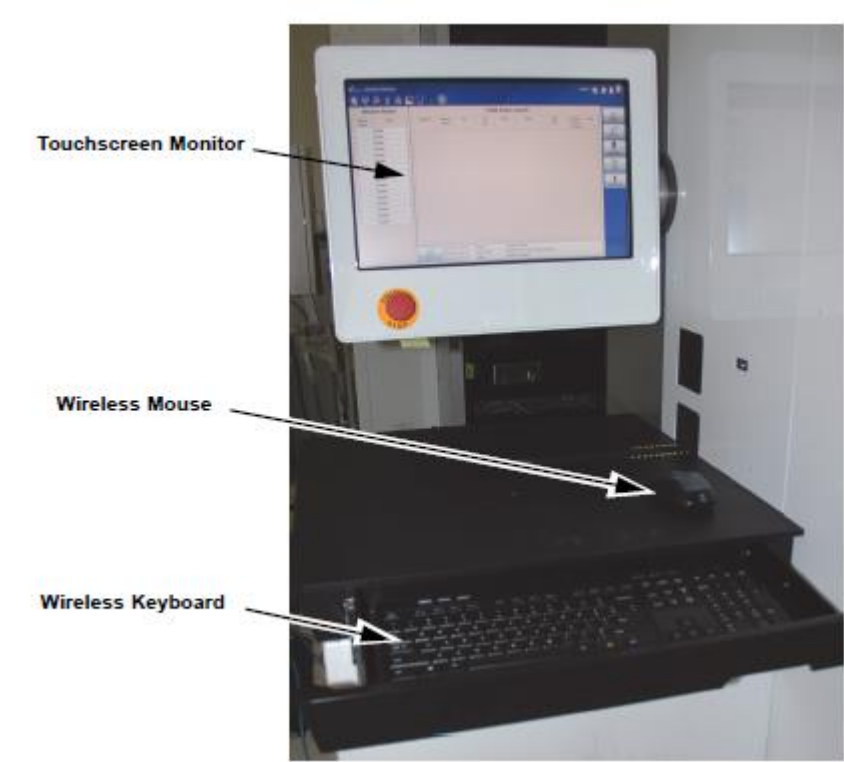


Infinity-48s



Infinity-80

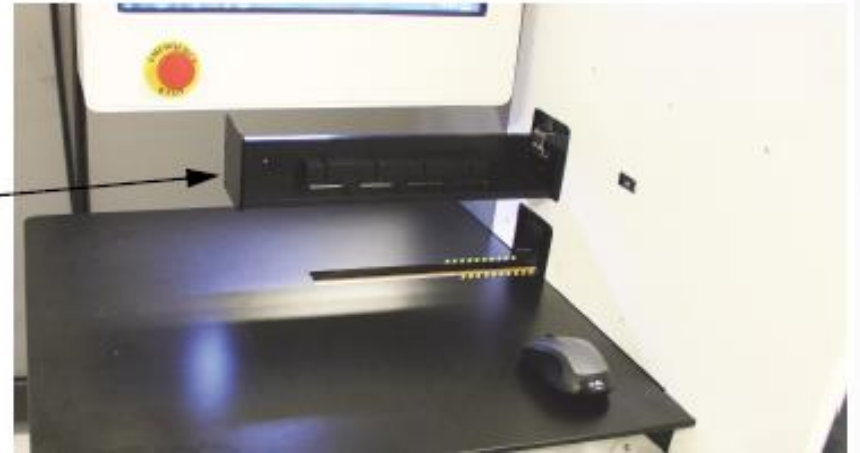
Kiosk View



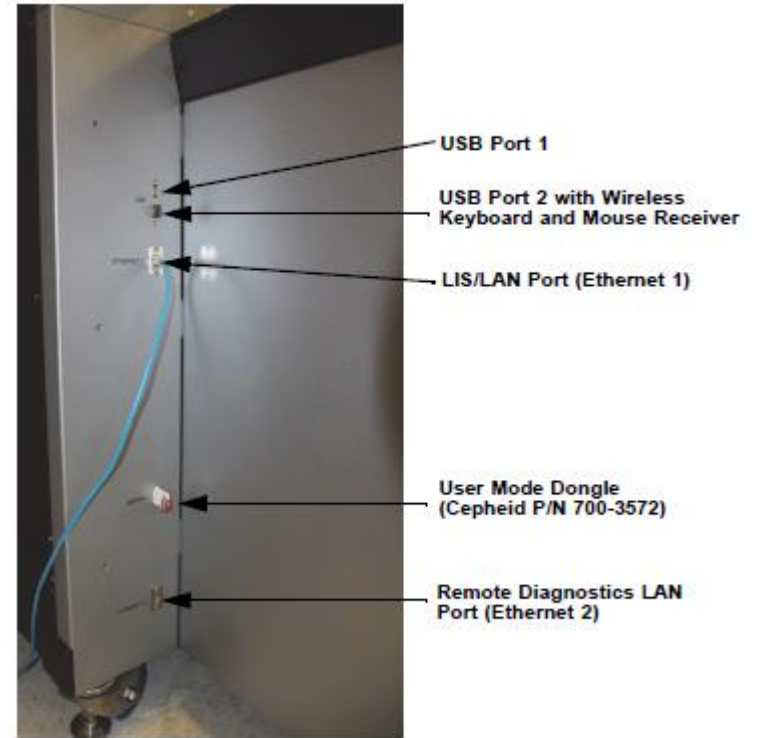
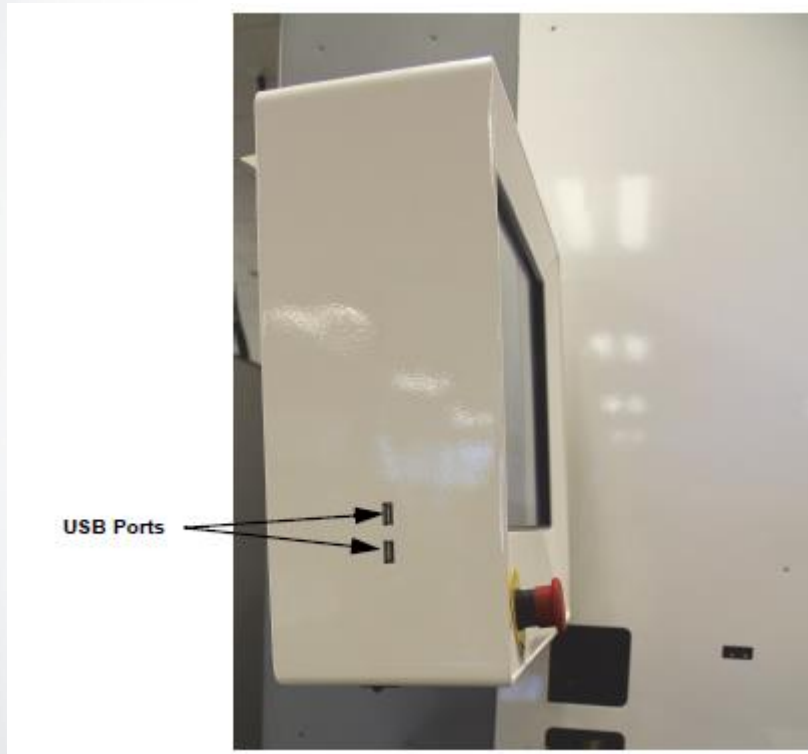
Kiosk View - 2



Shuttle Loading
Drawer (Open)



USB and Ethernet ports



Kiosk Barcode Scanner

1 – Cartridge

2 – Barcode reader (built – in)



Waste Container



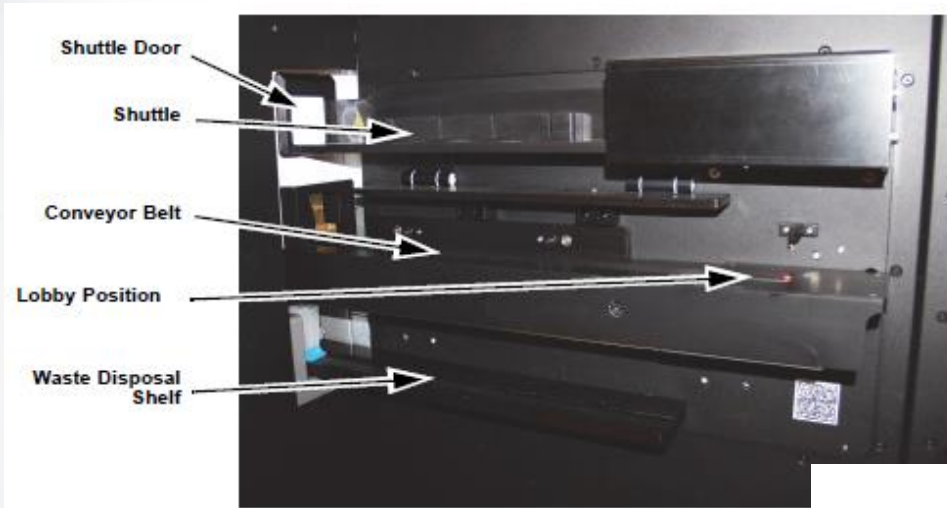
Waste Container
Cepheid P/N 300-9520
(10-Pack Kit)

Waste Access Door

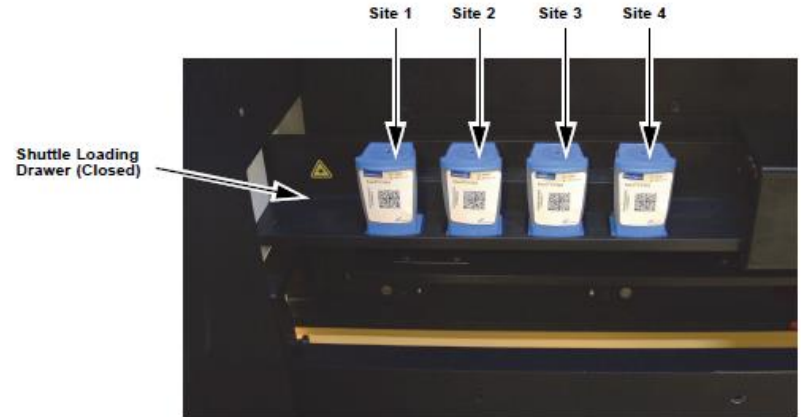


Waste Container Sensor

Lobby View



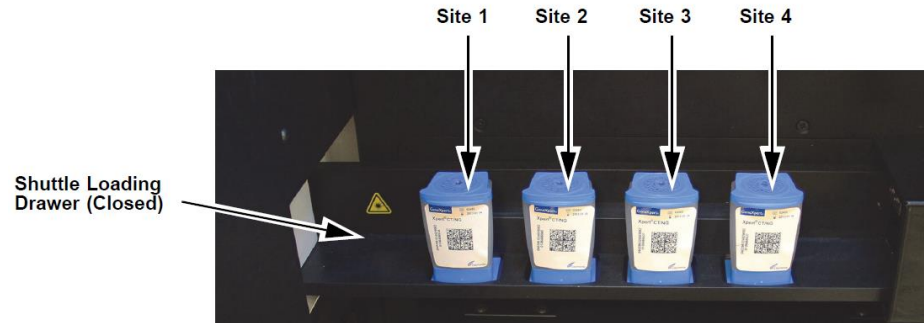
Filled shuttle



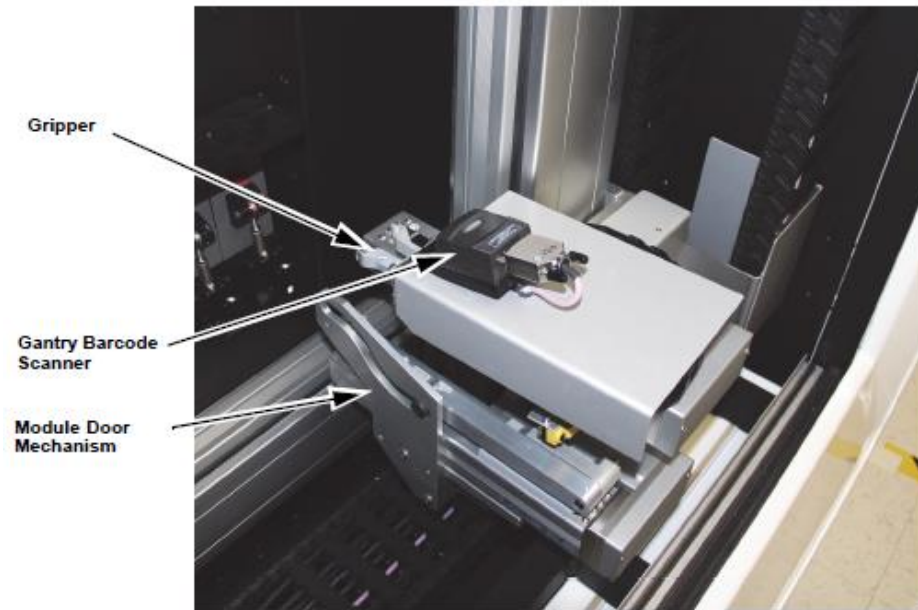
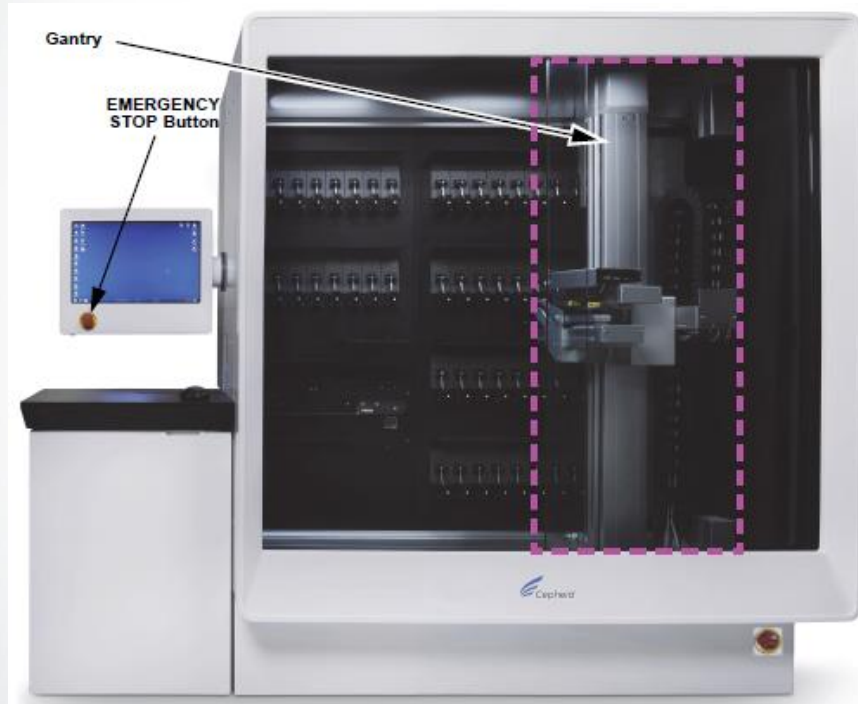
Shuttle

Function of the shuttle:

- Submit cartridges of STAT orders
- Remove retrieved or rejected cartridges

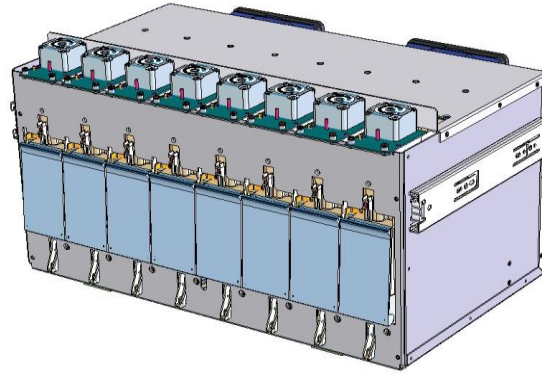


Robotic Gantry

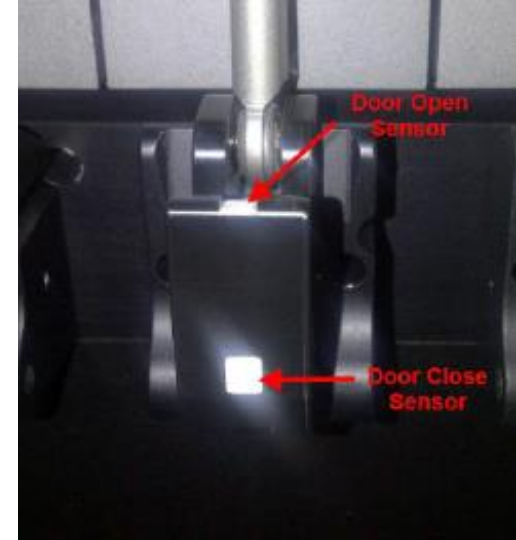
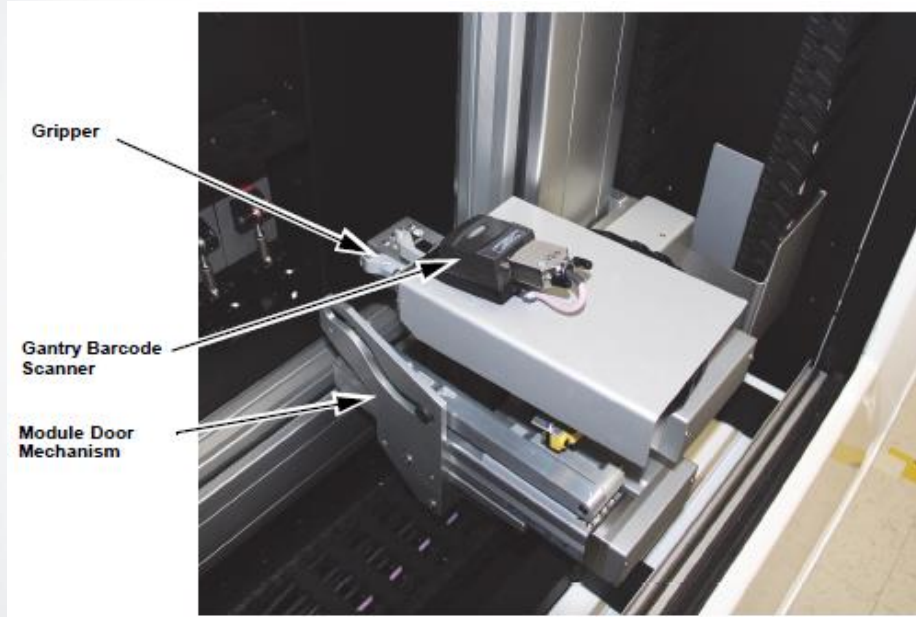


Robotic gantry consists of a gripper, a gantry barcode scanner and a module door mechanism

Modules – Eight-pack panel



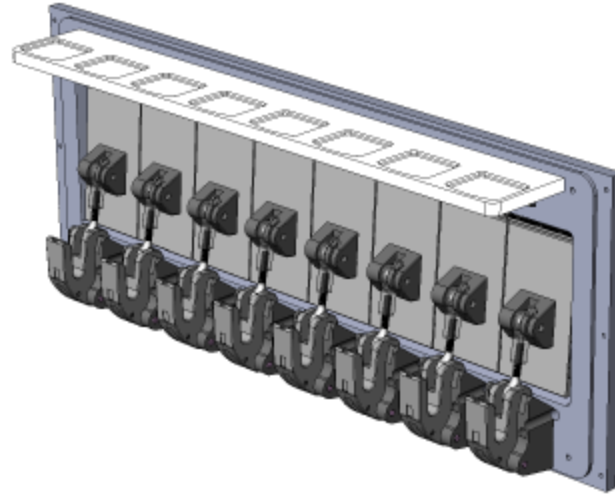
Door mechanism



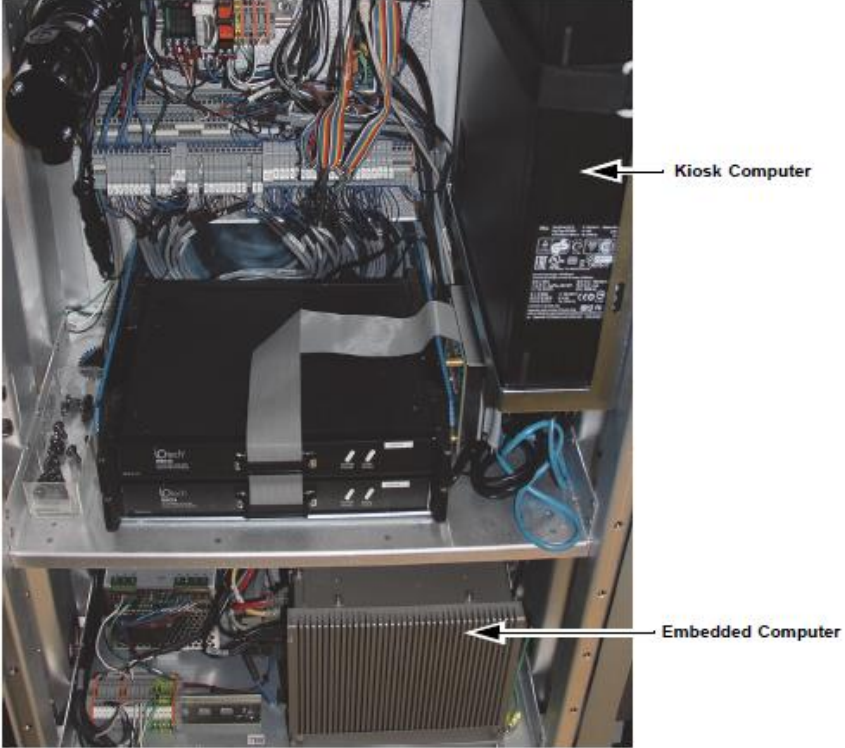
Reflecting squares that indicate whether door is open or closed

Accumulator

Accumulator shelf – 8 positions



Kiosk and Embedded Computer (in the main cabinet)



Xpertise Software Features



Home Screen

The screenshot shows the Xpertise Software Home Screen. At the top, there is a navigation bar with several icons and labels: 'View Outstanding Orders', 'View Another Test', 'Modules Available Status', 'Waste Capacity / Contents', 'Database Alert', 'Exit Program', 'Change Password', 'Logout', 'Login', and 'Current User Name'. Below this is a 'Dashboard' section with icons for 'Load or Retrieve Cartridges', 'Manage Host Orders', and 'Pause'. The main area is divided into 'Module Status' (a table of module names and statuses) and 'Tests Since Launch' (a table of test results). On the right side, there is a vertical sidebar with icons for 'MESSAGE', 'NEWS FEED', 'DATA MANAGEMENT', 'HELP', and 'USER MANUAL'. At the bottom, there is a 'Message Log' section showing system messages.

Module Status Table:

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Available
D2	Available
D3	Available
D4	Available
E1	Available
E2	Available
E3	Available
E4	Available
F1	Available
F2	Available
F3	Available

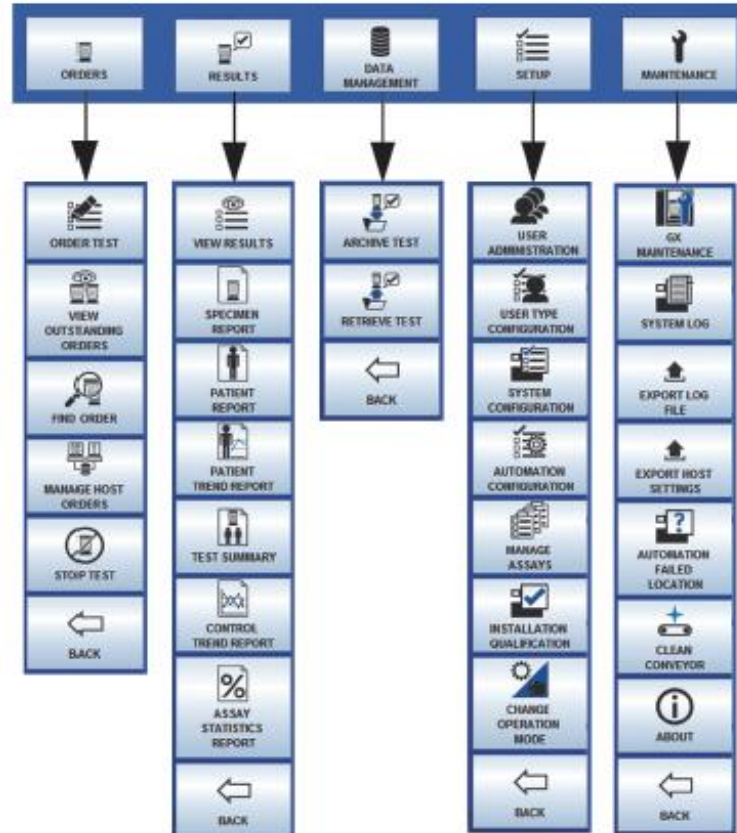
Tests Since Launch Table:

Future ID	Sample ID	Module Name	User	Test Type	Result	Notes	Start Date	Estimated Runtime	Status
1000119 16 08 05		Blank Screen		Preformed T221	Blank Screen	Blank Screen			
1000119 16 08 12		Insert Container		Preformed T222	Waste access door is locked				
1000119 16 08 24		System			System is down				

Message Log Table:

1000119 16 08 05	Blank Screen	Preformed T221	Blank Screen
1000119 16 08 12	Insert Container	Preformed T222	Waste access door is locked
1000119 16 08 24	System		System is down

Menu Panel Menu Map (Quick Finder)



Available workspaces

Tests Since Launch

Test Type	Result	Assay	Start Date	Estimated Minutes To Result	Status
-----------	--------	-------	------------	-----------------------------	--------

Test Icons →

Administration Icons →

Maintenance Icon →

- ORDERS
- RESULTS
- DATA MANAGEMENT
- SETUP
- MAINTENANCE

Message Log

Cepheid Xpertise Software

None

Module Status

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Available
D2	Available
D3	Available
D4	Available
E1	Available
E2	Available
E3	Available
E4	Available
F1	Available
F2	Available
F3	Available

Message Log

Type	Time	Subsystem	Message
	08/04/11 17:31:53	System	Software Initialization Database Integrity Check started
	08/04/11 17:31:53	System	Software Initialization Database Integrity Check completed
	08/04/11 17:33:30	Emergency Stop	Reminder 7202: Emergency Stop de-activated.
	08/04/11 17:33:30	Glass Doors	Reminder 7223: Glass Doors are closed.
	08/04/11 17:33:30	Glass Doors	Reminder 7223: Glass Doors are closed.
	08/04/11 17:33:31	Waste Container	Reminder 7323: Waste access door is unlocked.
	08/04/11 17:33:53	Glass Doors	Reminder 7221: Glass Doors are latched.
	08/04/11 17:33:56	Waste Container	Reminder 7322: Waste access door is locked.
	08/04/11 17:33:31	Waste Container	Reminder 7323: Waste access door is unlocked.
	08/04/11 17:33:53	Glass Doors	Reminder 7221: Glass Doors are latched.
	08/04/11 17:33:56	Waste Container	Reminder 7322: Waste access door is locked.

Ability to print the Message Log as a PDF file for Troubleshooting

Verifying Proper Installation and Setup



GeneXpert PC 03/05/19 17:18:13

**GeneXpert® Infinity System
Installation Qualification Report**

This report provides documented evidence of the installation of this GeneXpert® Infinity System.

System Information

Software	Version	Status
Xpertise™ Software	6.8	Pass
Java Runtime Environment	1.8.0_131	Pass
GX_Utils.DLL	0.8.4.0	Pass
SQL Database	2012 (SP3) (KB3072779) - 11.0.6020	Pass
Database	gx_db 3.1.9.0	Pass
Operating System	Windows 7 6.1 Service Pack 1	Pass
CIT Plug-In	1	Pass

Instrument Information
Instrument S/N 805034

Software	Version	Status
Infinity Server	2172.004	Pass
IOServer	1007	Pass

Gateway Name	Gateway S/N	Gateway Firmware
A	712374	2.0.18
B	712375	2.0.18
C	712378	2.0.18

Infinity Scheduler

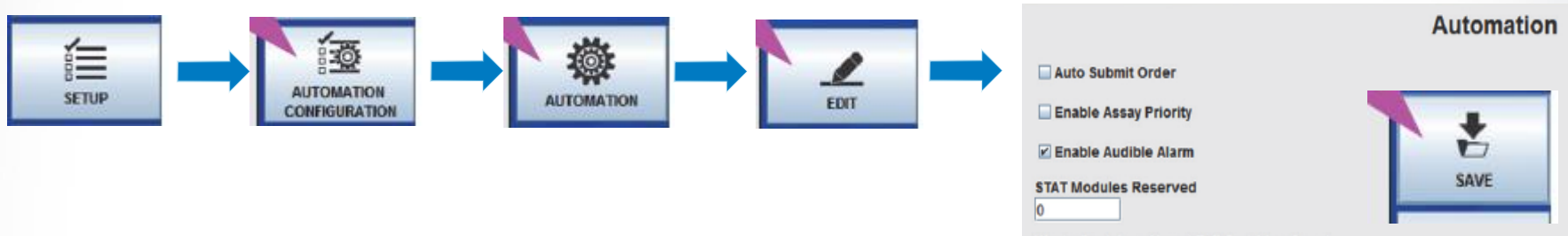
Priorities:

- **STAT*:** loads first, unless there is a cartridge that will expire
- **Assay Stability:** if there are 2 cartridges with similar expiration times, the one with the higher assay priority will go first
- **Assay Priority:** user defined in Manage Assays Menu

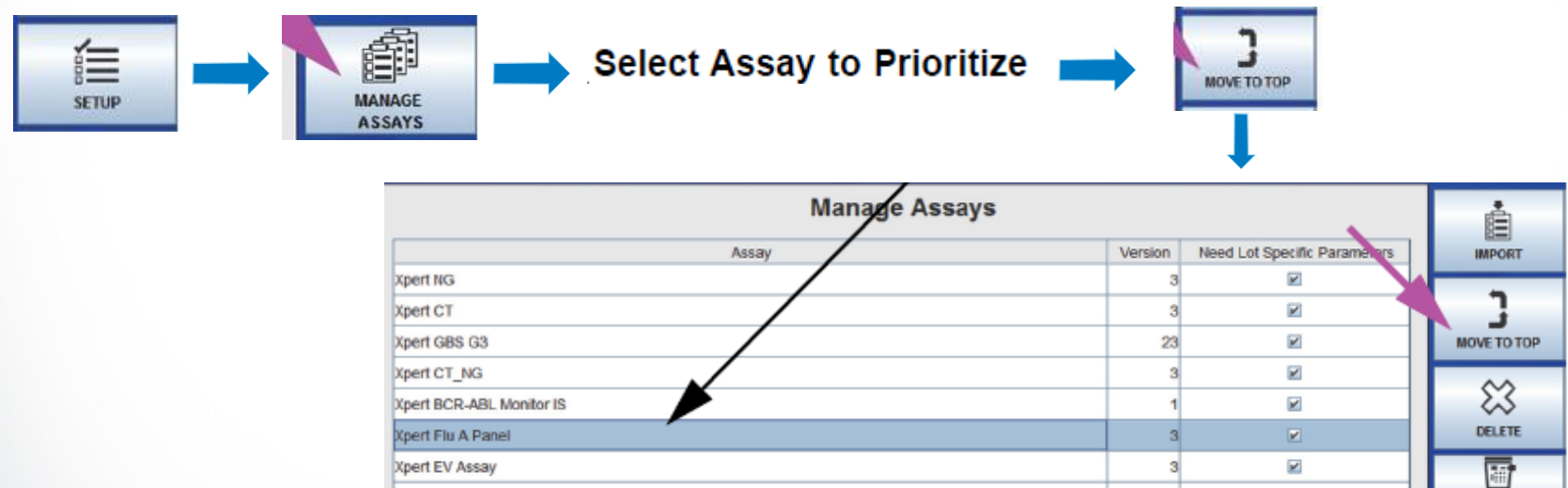
* STAT – latin for statim = immediately

Assay Priority

1






2



Monitoring Tests in Progress

Module Status		Tests Since Launch									
Module Name	Status	Patient ID	Sample ID	Mod Name	User	Test Type	Result	Assay	Start Date	Estimated Minutes To Result	Status
A1	Available	738743170...	738743170147	A4	Detail User	Specimen	NO RESULT	Xpert EV Assay	03/05/19 17:59:21	6	Running
A2	Available	H73874317...	S00385762929	A3	Detail User	Specimen	NO RESULT	Xpert EV Assay	03/05/19 17:59:31	3	Running
A3	Running										
A4	Running										
B1	Available										
B2	Available										

View Another Test										
Sample ID <small>(Use '_' as a single letter wildcard, '%' as multiple letter wildcard)</small>										
Xpert M 03051										
Patient ID	Sample ID	Mod Name	User	Test Type	Result	Assay	Start Date	Estimated Minutes To Result	Status	
kjgflkdjgskl	5489453874538	C1	Administratio...	Specimen	NEGATIVE	Xpert SA Nasal Co...	03/04/19 17:55:51		Done	 VIEW RESULTS  FIND  CLOSE
D205145	Xpert M 03051	A1	Administratio...	Specimen	NO RESULT	Xpert MRSA Assa...	03/04/19 16:23:45		Aborted	
	Xpert M 03051	D4	Administratio...	Specimen	NEGATIVE	Xpert MRSA_SA B...	03/04/19 16:23:24		Done	
	Xpert G 03051...	D3	Administratio...	Specimen	ERROR	Xpert GBS	03/05/19 16:22:59		Incomplete	
D205145	Xpert v 030518	D1	Administratio...	Specimen	NEGATIVE	Xpert vanA	03/04/19 16:22:34		Done	
D205145	Xpert M 03051	B4	Administratio...	Specimen	NEGATIVE	Xpert MRSA Assa...	03/05/19 16:22:08		Done	
	Xpert M 03051	C1	Administratio...	Specimen	NEGATIVE	Xpert MRSA_SA B...	03/05/19 16:21:23		Done	
D205145	Xpert M 03051	B3	Administratio...	Specimen	NEGATIVE	Xpert MRSA_SA B...	03/05/19 16:19:02		Done	
	Xpert M 03051	C1	Administratio...	Specimen	NEGATIVE	Xpert MRSA Assa...	03/05/19 16:17:38		Done	



Exclude Modules From Test



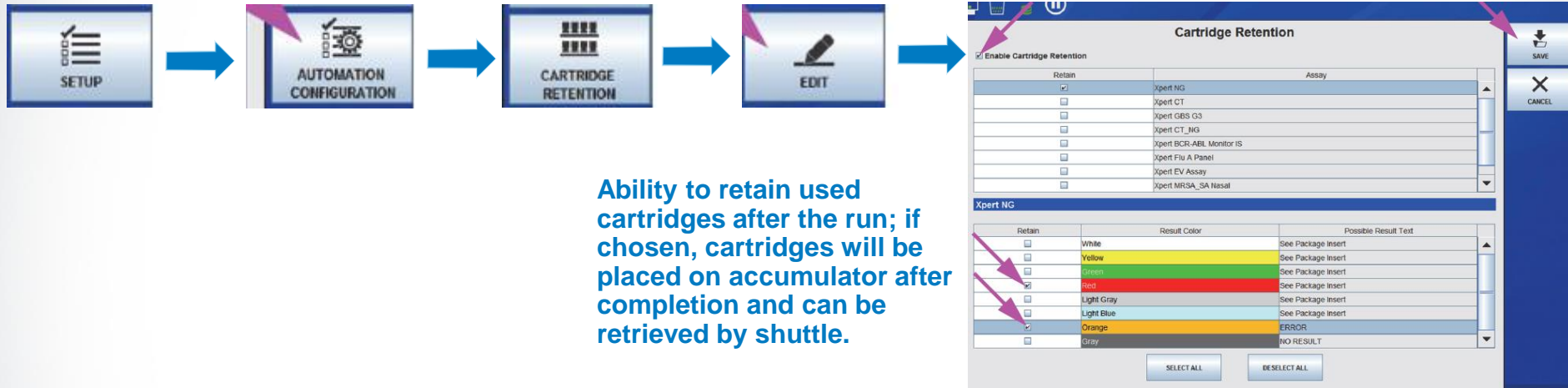
Any modules that have been disabled will be highlighted in yellow in the module status section.

The 'Exclude Modules From Test' dialog box contains a table with the following data:

	Module Name	Status	Module S/N	Estimated Minutes To Result
<input type="checkbox"/>	A1	Available	642969	
<input type="checkbox"/>	A2	Available	642999	
<input type="checkbox"/>	A3	Available	643030	
<input type="checkbox"/>	A4	Available	642845	
<input checked="" type="checkbox"/>	B1	Available	643015	
<input checked="" type="checkbox"/>	B2	Available	642812	
<input type="checkbox"/>	B3	Available	642706	
<input type="checkbox"/>	B4	Available	643243	
<input type="checkbox"/>	C1	Available	602699	
<input type="checkbox"/>	C2	Available	612818	
<input type="checkbox"/>	C3	Available	612666	
<input type="checkbox"/>	C4	Available	612816	
<input checked="" type="checkbox"/>	D1	Available	600323	
<input type="checkbox"/>	D2	Available	612665	
<input type="checkbox"/>	D3	Available	612004	
<input type="checkbox"/>	D4	Available	620358	

At the bottom of the dialog are four buttons: 'SELECT ALL', 'Deselect ALL', 'SELECT HIGHLIGHTED', and 'Deselect HIGHLIGHTED'. On the right side, there are 'SAVE' and 'CANCEL' buttons.

Cartridge Retention



Ability to retain an individual cartridge while test is in-progress

View Results

Patient ID* Patient ID 2

Sample ID

Assay* Version*

▶ Test Result ▶ Analyte Result ▶ Detail ▶ Amplification Curve ▶ Errors ▶ History ▶ Support

Result

Disclaimer

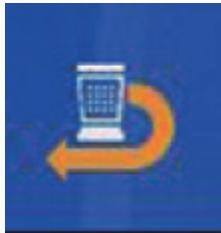
Sample Type Other Sample Type

User
Detail User

Retain Cartridge After Test Completion

Status

Removal of retrieved cartridges



Cartridge I/O

Shuttle Accumulator

	Accumulator Site	Needs Attention	Cartridge Status	Priority	Sample ID	Assay	Order Time	Cartridge SN
<input checked="" type="checkbox"/>	1		Rejected	Normal	127856789	Xpert C.diff-Epi	03/05/19 14:45	10015808

OPEN SHUTTLE

FILL SHUTTLE

MOVE TO SHUTTLE

CLOSE

Four pink arrows point to the 'Shuttle' and 'Accumulator' tabs, the checkbox in the first row, the 'Needs Attention' cell, and the 'CLOSE' button.

Infinity Files



File types used by the Infinity

Assay Definition (.gxa)

- File contains the sample preparation command sequence, thermal cycling protocol and analysis settings.
- Assay definition must be imported into the system software prior to scanning the cartridge.

Lot Specific Parameter (.gxr)

- If the assay requires LSP, it is embedded in the barcode of the cartridge. Barcode must be scanned for the software to recognize LSPs.

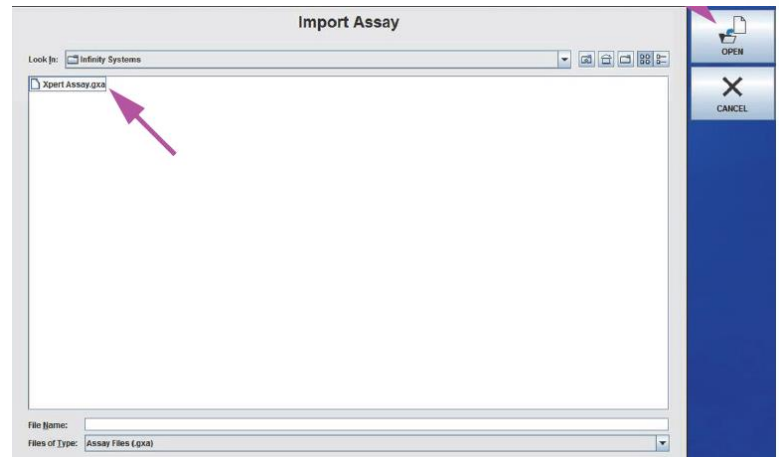
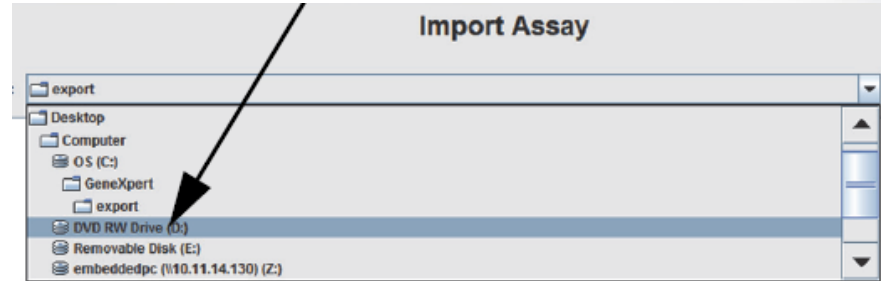
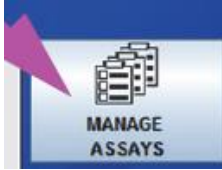
Run File (.gxx)

- Archived files used for back up and send to Technical Support for review.

Connect the external DVD drive to the Infinity



Import ADFs



New assay will appear here after import.

Manage Assays

Assay	Version	Need Lot Specific Parameters
Xpert BCR-ABL Monitor IS	1	<input checked="" type="checkbox"/>
HIV-1 Quant CE	1	<input checked="" type="checkbox"/>
Xpert GBS	3	<input checked="" type="checkbox"/>
Xpert Flu A Panel	3	<input checked="" type="checkbox"/>
Xpert EV Assay	3	<input checked="" type="checkbox"/>
Xpert MRSA_SA Nasal	1	<input checked="" type="checkbox"/>
Xpert CDIFFICILE	3	<input checked="" type="checkbox"/>



Infinity Workflow



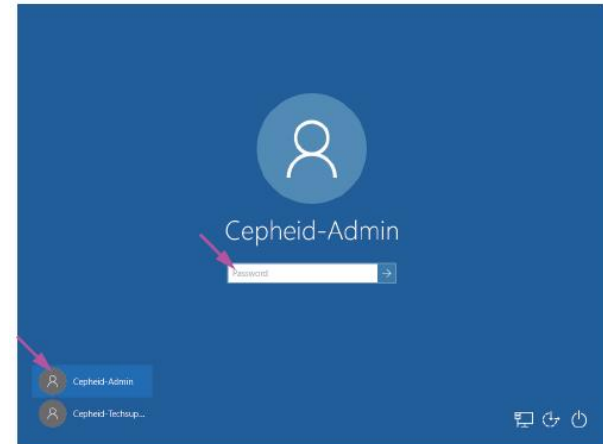
System Start Up



AC main power switch
Turned to „on“

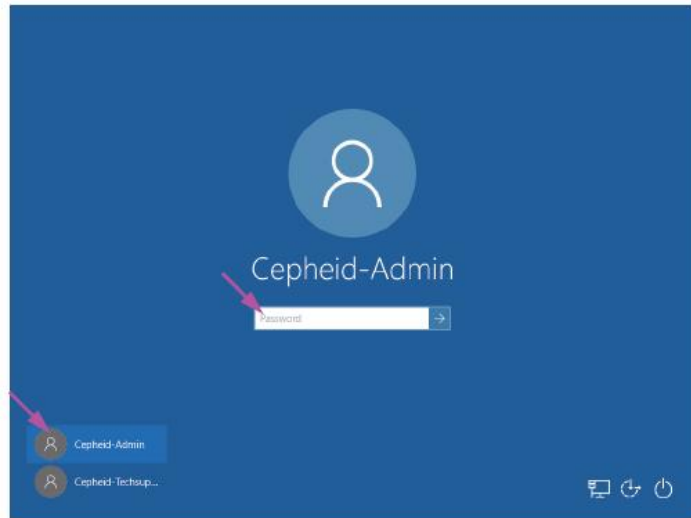


Wait for 2 minutes
(system will boot up),
kiosk computer and
embedded computer
will start communication



After the waiting time (**mandatory!**),
log in with your Windows password

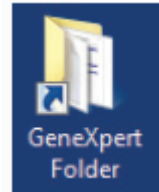
Start-Up and Desktop icons



Enter password, usually „cphd“



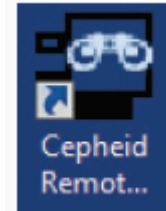
Xpertise Software
(double click to start)



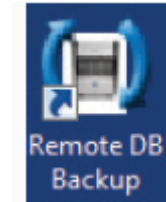
GeneXpert Folder



Infinity shutdown protocol



Cepheid Remote
Diagnostics
Access shortcut



GX support
Database
backup

Log on to Xpertise software (optional)

Module Name	Status
-------------	--------

Module Status

Login

User Name
defaf1

Password

OK

EXIT

03/05/19 17:55:42	System	GeneXpert® Infinity Xpertise Software, version 6.8, started 03/05/19 17:55:42
03/05/19 17:55:43	System	Software initialization Database Integrity Check completed

If admin users and basic users have been defined, log on by your user name and your password

Database Management Screen (optional)

Module Status

Module Name	Status
-------------	--------

Database Management

Do you want to perform Database Management tasks?

YES
NO

03/05/19 17:55:42	System	GeneXpert® Infinity Xpertise Software, version 6.7, started 03/05/19 17:55:42
03/05/19 17:55:43	System	Software Initialization: Database Integrity Check completed
03/05/19 17:57:06	System	User [Detail User] login.

If not opted out in the system configuration, Database Management will be performed (appears at software start and software exit)

Test Archive Reminder (optional)

Module Status

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Available
D2	Available
D3	Available
D4	Available

Test Archive Reminder

Archive is overdue. Do you want to archive now?

03/05/19 17:50:16 Gantry Recovered gantry to safe location.
 03/05/19 17:50:21 System Full Automation Operating Mode
 03/05/19 17:50:21 System Welcome to Genoptert in vitro System

Same applies to the Test Archive Reminder

Archive Test

Cloak IDs

Purge Selected Tests from List After Archiving (Recommended Monthly)

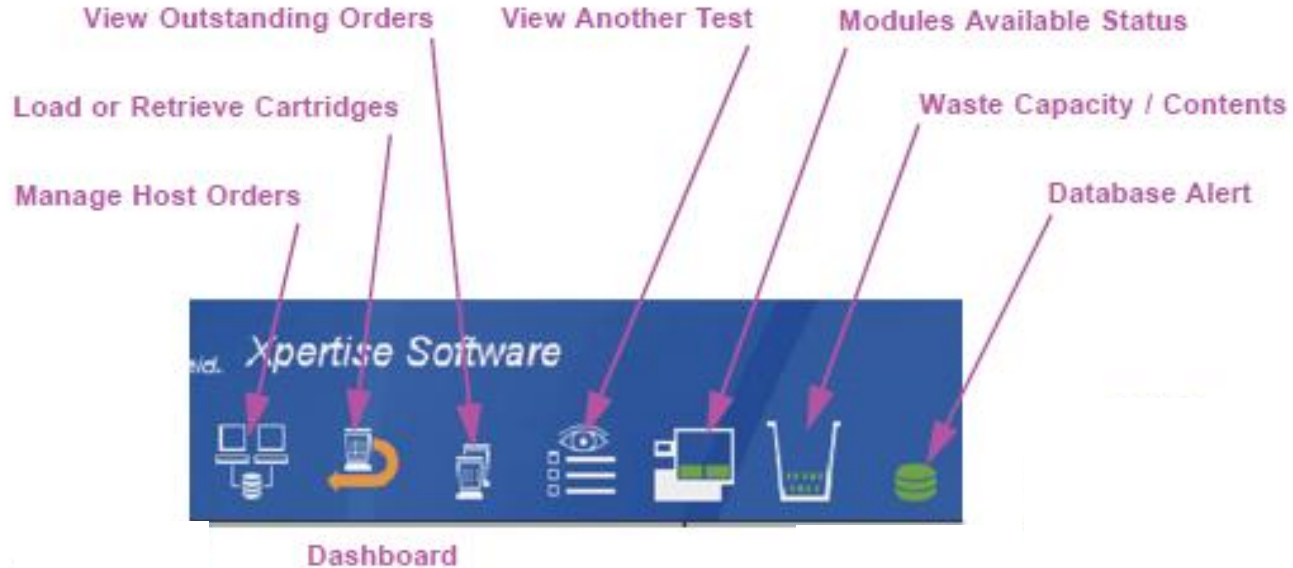
	Patient ID	Sample ID	Mod Name	User	Result	Assay	Status	Error	Start Date
<input type="checkbox"/>	H3518272003	UH489831	C3	<None>	NEGATIVE	xpert COIFF	Done	OK	07/14/18 17...
<input type="checkbox"/>	H1128748957	SD142231	A1	Detail User	NEGATIVE	xpert COIFF	Done	OK	07/30/18 15...
<input type="checkbox"/>	H1128748957	SD142231	A1	Detail User	ERROR	xpert BCR...	Aborted	Error	01/30/18 15...
<input type="checkbox"/>	H3518903826	HG636788	A3	Detail User	HIV-1 DETE...	HIV-1 Quant	Done	OK	05/08/18 15...
<input type="checkbox"/>	H3518903866	FTS49558	A2	Detail User	HIV-1 DETE...	HIV-1 Quant	Done	OK	08/08/18 15...
<input type="checkbox"/>	H3518903826	HG636788	A2	Administrat...	HIV-1 DETE...	HIV-1 Quant	Done	OK	08/09/18 14...
<input type="checkbox"/>	H3518903866	FTS49557	A3	Administrat...	HIV-1 DETE...	HIV-1 Quant	Done	OK	08/09/18 14...
<input type="checkbox"/>	H3518758826	TT555698	B3	Basic User	ERROR	HIV-1 Quant	Aborted	Error	09/16/18 14...
<input type="checkbox"/>	H3518903826	TG478589	B2	Administrat...	HIV-1 NOT ...	HIV-1 Quant	Done	OK	09/16/18 14...
<input type="checkbox"/>	H3518903495	CRS38763	B4	Administrat...	MTB NOT D...	xpert MTB...	Done	OK	09/16/18 13...
<input type="checkbox"/>	H3594038268	KW630987	B3	Administrat...	MRSA NEG.	xpert SA Na...	Done	OK	09/16/18 13...
<input type="checkbox"/>	H3518733826	GH487365	A3	Administrat...	MRSA NEG.	xpert SA Na...	Done	OK	09/16/18 13...
<input type="checkbox"/>	H3518987826	SR543267	A2	Administrat...	MRSA POSI...	xpert SA Na...	Done	OK	10/16/18 13...
<input type="checkbox"/>	H3518903826	CU155637	B3	Administrat...	MRSA NEG.	xpert SA Na...	Done	OK	10/16/18 13...

SELECT ALL Deselect ALL SELECT HIGHLIGHTED Deselect HIGHLIGHTED SELECT NEW ARCHIVE

OK CANCEL

If yes was chosen...

Dashboard icons



Additional Important Icons



Shuttle is open



Error is present



Glass door is unlatched



Silence alarm



Analysis Mode



Replace waste container/
close waste Door



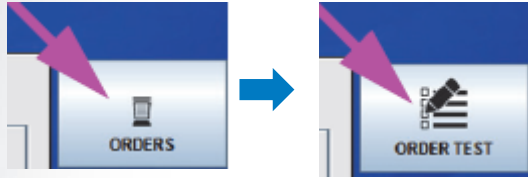
Manual Mode Operation

Available workflows

Two operation modes are possible:

- **Automation Mode (Regular workflow)**
- **Manual Mode (useable if the automated system is not fully functional)**

Order a test in Automation Mode



Order Test - Sample ID

Scan or type in Sample ID

SD038576292932

Sample ID is successfully scanned when you hear the beep.

STAT Priority

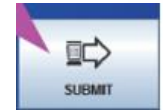
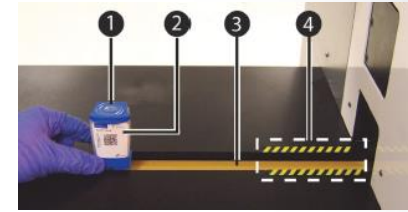
Patient ID: H738743170147
Patient ID 2: HG49586720395

Last Name: _____ First Name: _____
Name1 Patient

Date of Birth: 1995/03/14 Postal Code: 98765

Gender: Female Ethnicity: White

Buttons: CONTINUE, CLEAR ORDER



Order Test - Assay

Scan Cartridge Barcode

Cartridge barcode is successfully scanned when you hear the beep.

Patient ID: H738743170147
Sample ID: SD038576292932

Patient ID 2: HG49586720395

Last Name: _____ First Name: _____
Name1 Patient

Date of Birth: 1995/03/14 Postal Code: 98765

Gender: Female Ethnicity: White

Priority: _____

Buttons: CLEAR ORDER



Order Test - Patient Information

Scan or type in Patient ID

H738743170147

Patient ID is successfully scanned when you hear the beep.

Patient ID 2: HG49586720395

Last Name: _____ First Name: _____
Name1 Patient

Date of Birth: YYYYMMDD Postal Code: _____

Gender: <None> Ethnicity: <None>

Buttons: CONTINUE, DOB CALENDAR, END ORDER TEST

Optional

Order a test in Manual Mode

The flowchart illustrates the initial steps of the manual test ordering process. It starts with a home screen icon, followed by the 'ORDERS' screen, and then the 'ORDER TEST' screen. Each step is connected by a blue arrow pointing to the right.

Order Test - Patient Information

Scan or type in Patient ID
H203948050934

Patient ID is successfully scanned when you hear the beep.

Patient ID 2
HG49586720395

Last Name _____ First Name _____

CONTINUE
DOB CALENDAR
END ORDER TEST

Order Test - Sample ID

Scan or type in Sample ID
SD948375028

Sample ID is successfully scanned when you hear the beep.

Patient ID
H203948050934

Patient ID 2
HG49586720395

CONTINUE
CLEAR ORDER

Order Test - Assay

Scan Cartridge Barcode

Cartridge barcode is successfully scanned when you hear the beep.

Patient ID
H203948050934

Sample ID
SD948375028

Patient ID 2
HG49586720395

MANUAL BARCODE ENTRY
MANUAL ASSAY SELECTION
CLEAR ORDER

Order a test in Manual Mode

Order Test - Test Information

Patient ID
H203948050934

Sample ID
SD948375028

Patient ID 2
HG49506720395

Last Name
Name1

First Name
Patient

SUBMIT

CLEAR ORDER

Order Test - Module Selection

Use this module or select another

Select the module to run the test

A3

CONTINUE

CANCEL ORDER

Manual Load - Remove Used Cartridge

Confirm Module A3 is empty and leave the door open.

Press CONTINUE to proceed.

CONTINUE

CANCEL ORDER

Manual Load - Module Preparation and Self-Test

Standby while Module A3 is being prepared.

Manual Load - Load Cartridge

Load the cartridge in Module A3 with the flashing GREEN light, and close the module door.

Test Start Successful - Ready For Next Test

Successfully started the test.

Press ORDER NEXT TEST to order another test.

Press END ORDER TEST when you are done.

ORDER NEXT TEST



END ORDER TEST

Clear Test Orders – in Automation Mode


Order Test - Assay

Scan Cartridge Barcode



Cartridge barcode is successfully scanned when you hear the beep.



Order Test - Assay



YES to cancel this test order. All input will be cleared and restart from Patient ID entry.
NO to continue with this test order.



Clear Test Orders – in Automation Mode

Or (in case of outstanding orders):



View Order

Patient ID	H430596840405965		
Sample ID	SD39485875		
Assay*	Xpert CT_NG	Version*	3
Reagent Lot ID*	05821	Cartridge S/N*	427271437
Expiration Date*	07/19/19	Priority	Normal

CANCEL ORDER

CLOSE



View Outstanding Orders

A blue question mark icon inside a speech bubble.

YES to cancel this test order with sample ID [].
NO to continue with this test order.

YES

NO

Clear Test Orders – in Manual Mode

Order Test - Test Information

Patient ID
H203948050934

Sample ID
SD948375028

Patient ID 2
HG49586720395

Last Name **First Name**
Name1 Patient

Date of Birth **Postal Code**
1995/03/13 98765

Gender **Ethnicity**
Female White

Assay* **Version***
Xpert CT_NG 3


Reagent Lot ID* **Cartridge S/N***
07105 443432184


Expiration Date* **Priority**
2020/01/15 Normal

Test Type
Specimen

Sample Type **Other Sample Type**
Other

Notes

SUBMIT 

CLEAR ORDER 



Viewing Test Results

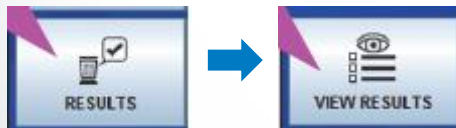


Viewing Test Results

View Another Test

Patient ID	Sample ID	Mod Name	User	Test Type	Result	Assay ^	Start Date	Estimated Minutes To Result	Status
H35185598...	U690762	B3	Detail User	Specimen	Flu HETERO...	Xpert Flu & FV Co...	03/05/19 17:29:35		Done
H35189059...	UJ787933	A3	Detail User	Specimen	Flu NORMA...	Xpert Flu & FV Co...	03/05/19 17:28:47		Done
H35188538...	HN237945	A2	Detail User	Specimen	Flu HOMOZ...	Xpert Flu & FV Co...	03/05/19 17:27:55		Done
H29495860...	SD43958674	B4	Detail User	Specimen	NEGATIVE	Xpert EV Assay	09/13/18 11:43:32		Done
H35189038...	SD4958104883	B3	Detail User	Specimen	NO RESULT	Xpert EV Assay	09/01/18 15:49:26		Stopped
H73874492...	HG3958203956	B2	Detail User	Specimen	NEGATIVE	Xpert EV Assay	09/01/18 12:52:35		Done
H73474347...	HD3049586721	B1	Basic User	Specimen	NEGATIVE	Xpert EV Assay	09/01/18 12:33:35		Done
738743170...	738743170147	A4	Detail User	Specimen	NEGATIVE	Xpert EV Assay	09/01/18 12:16:43		Done
H73874317...	SD038576292...	A3	Detail User	Specimen	NEGATIVE	Xpert EV Assay	05/01/18 12:13:32		Done
H35189055...	RL439664	B2	Detail User	Specimen	CT DETEC...	Xpert CT_NG	06/15/18 17:15:06		Done
H35189055...	TZ637890	A4	Detail User	Negative C...	CT NOT DE...	Xpert CT_NG	06/03/18 17:41:03		Done
H05688905...	HA233987	A3	Detail User	Specimen	CT DETEC...	Xpert CT_NG	06/03/18 17:39:54		Done

Alternatively:



Test Result View

View Results

Patient ID* Patient ID 2

Sample ID

Assay* Version*

Test Result | Errors | Support

Result
NEGATIVE

Disclaimer
For SW demonstration use only.

Sample Type
Other

Other Sample Type

User
Detail User

Status
Done

Notes

View for Basic Users (3 tabs)

View Results

Patient ID

Sample ID

Assay* Version*

Test Result | Analyte Result | Detail | Amplification Curve | Errors | History | Support

Result
FII NORMAL - EV NORMAL

Disclaimer
For In Vitro Diagnostic Use Only.

Sample Type
Other

Other Sample Type

User
Detail User

Status
Done

Upload Status
Uploaded

Notes

EDIT
REPORT
UPLOAD RESULT
PREVIOUS TEST
NEXT TEST
VIEW ANOTHER TEST
CLOSE

View for Admin Users (all tabs)

You can switch between previous and next test or choose from the list (view another test).
Applies to all user types!

Result tabs – available for all user types

View Results

Patient ID* Patient ID 2

Sample ID

Assay* Version*

▶ Test Result ▶ **Errors** ▶ Support

Reagent Lot ID*	Assay Type
<input type="text" value="00254"/>	<input type="text" value="In Vitro Diagnostic"/>
Cartridge S/N*	Expiration Date*
<input type="text" value="7506105378"/>	<input type="text" value="12/21/25"/>
Test Type	
<input type="text" value="Specimen"/>	
Priority	
<input type="text" value="Normal"/>	
Start Time	End Time
<input type="text" value="03/05/19 16:22:08"/>	<input type="text" value="03/05/19 17:39:54"/>
Error Status	
<input type="text" value="OK"/>	
S/W Version	Instrument S/N
<input type="text" value="6.8"/>	<input type="text" value="805034"/>
Module Name	Module S/N
<input type="text" value="A3"/>	<input type="text" value="643030"/>

EDIT

REPORT

PREVIOUS TEST

NEXT TEST

VIEW ANOTHER TEST

View Results

Patient ID* Patient ID 2

Sample ID

Assay* Version*

▶ Test Result ▶ **Errors** ▶ Support

#	Description	Detail	Time
1	Post-run analysis error	Error 5007: [SPC] probe check failed. Probe check value of 20.8 for reading number 2 was below the minimum of 26.0	03/05/19 18:40:28

Result tabs –available only for admin users

View Results

Patient ID Patient ID 2

Sample ID

Assay* Version*

Analyte Name	Ct	EndPt	Analyte Result	Probe Check Result
CT1	32.1	312	POS	PASS
NG2	0.0	4	NEG	PASS
NG4	0.0	1	NEG	PASS
SAC	0.0	1	NA	PASS
SPC	33.6	271	NA	PASS

View Results

Patient ID Patient ID 2

Sample ID

Assay* Version*

Analyte Name	Prb Chk 1	Prb Chk 2	Prb Chk 3	Probe Check Result	2nd Deriv Peak Height	Curve Fit
CT1	239	280	239	PASS	0.0	PASS
NG2	220	273	220	PASS	0.0	NA
NG4	41	52	41	PASS	0.0	NA
SAC	105	86	103	PASS	0.0	NA
SPC	357	390	355	PASS	0.0	NA

View Results

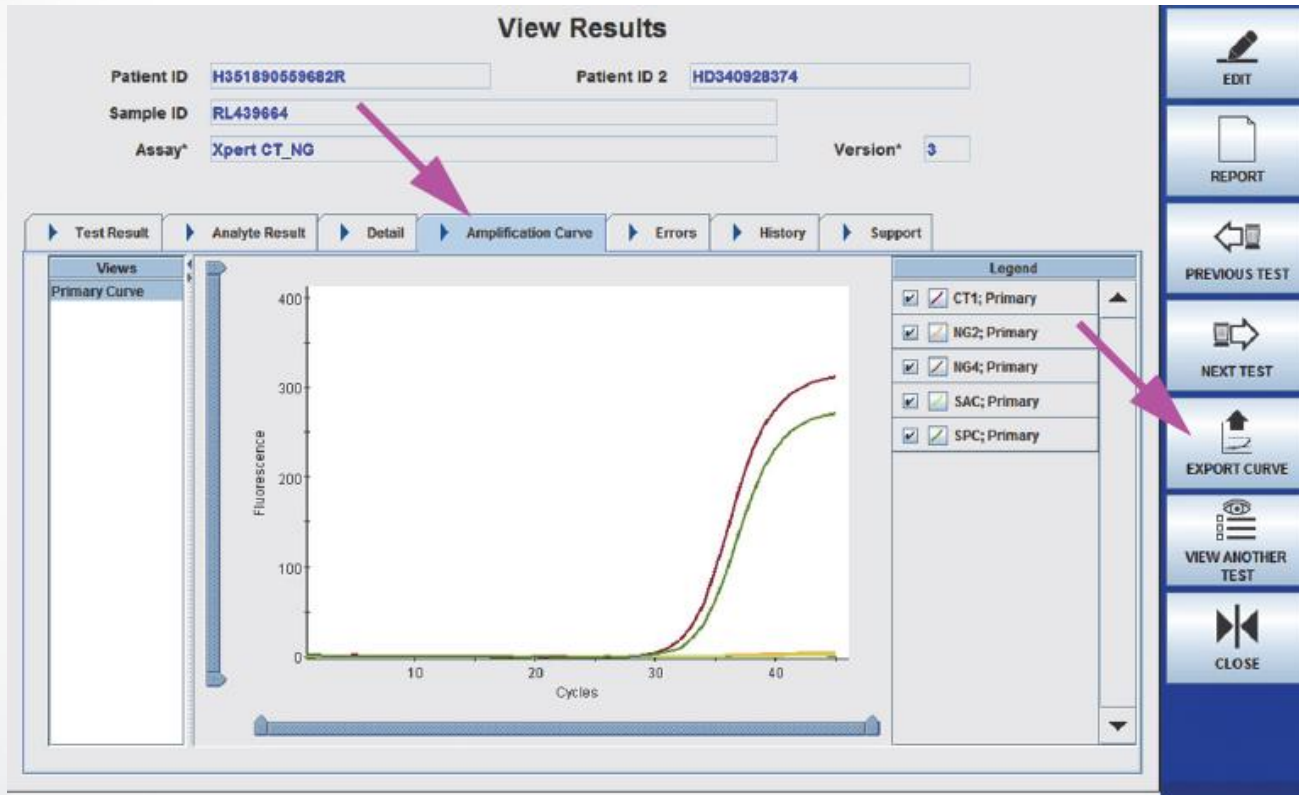
Patient ID Patient ID 2

Sample ID

Assay* Version*

Field Name	WAS	IS	User	Time
Patient ID	Patient Name 4	H351890559682R	<None>	03/05/19 10:51:51
Patient ID 2		HD340928374	Detail User	03/05/19 15:01:27

Amplification Curve View (only admin users)



Export Amplification Curve

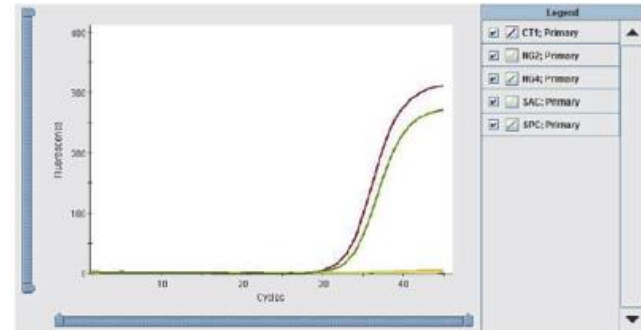


GeneXpert PC

03/05/19 18:59:50

Graph Report

Sample ID:	RL439664
Test Type:	Specimen
Assay Name:	Xpert CT_NG
Assay Type:	In Vitro Diagnostic
Assay Version:	3
Reagent Lot ID:	05814
Status:	Done
Error Status:	OK
Notes:	
Order Time:	03/05/19 17:14:14
Started At:	03/05/19 17:15:06
Ended At:	03/05/19 18:43:13
User:	Detail User
S/W Version:	6.8
Graph Name:	Primary Curve



Test Report



Content of the Report File differs between Basic and Admin Users

Test Report										
	Patient ID	Sample ID	Mod Name	User	Test Type	Result	Assay ^	Status	Error Status	Start Date
<input type="checkbox"/>	H351827299...	UH489831	C3	<None>	Specimen	NEGATIVE	Xpert CDIF...	Done	OK	07/14/18 1...
<input type="checkbox"/>	H351890559...	RL439664	B2	Detail User	Specimen	CT DETE...	Xpert CT_...	Done	OK	09/15/18 1...
<input type="checkbox"/>	H351890559...	TZ637890	A4	Detail User	Negative C...	CT NOT D...	Xpert CT_...	Done	OK	03/21/19 1...
<input type="checkbox"/>	H056889055...	HA233987	A3	Detail User	Specimen	CT DETE...	Xpert CT_...	Done	OK	03/21/19 1...
<input checked="" type="checkbox"/>	H351890550...	HA245654	A1	Detail User	Specimen	CT NOT D...	Xpert CT_...	Done	OK	03/21/18 1...
<input type="checkbox"/>	H350395485...	SD934854...	B1	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	05/13/18 1...
<input type="checkbox"/>	H351890382...	SD495810...	B3	Detail User	Specimen	NO RESULT	Xpert EV A...	Stopped	OK	05/01/18 1...
<input type="checkbox"/>	H738744925...	HG395820...	B2	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	05/01/18 1...
<input type="checkbox"/>	H734743470...	HD304958...	B1	Basic User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	05/01/18 1...
<input type="checkbox"/>	738743170147...	73874317...	A4	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	05/01/18 1...
<input type="checkbox"/>	H738743170...	SD038576...	A3	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	05/01/18 1...
<input type="checkbox"/>	H351855982...	UJ690762	B3	Detail User	Specimen	File HETER...	Xpert Fil &...	Done	OK	09/15/18 1...
<input type="checkbox"/>	H351890596...	UJ787933	A3	Detail User	Specimen	File NORMA...	Xpert Fil &...	Done	OK	09/15/18 1...
<input type="checkbox"/>	H351885382...	HN237945	A2	Detail User	Specimen	File HOMOZ...	Xpert Fil &...	Done	OK	09/15/18 1...
<input type="checkbox"/>		Xpert F 01...	A1	Detail User	Specimen	NEGATIVE	Xpert Flu A...	Done	OK	01/30/19 1...
<input type="checkbox"/>	H351890345...	CR538763	B4	Administra...	Specimen	MTB NOT ...	Xpert MTB...	Done	OK	03/16/19 1...
<input type="checkbox"/>	H351877782...	GK563895	B1	Detail User	Specimen	ERROR	Xpert MTB...	Aborted	Error	03/21/19 1...
<input type="checkbox"/>	H356129382...	TF277659	B4	Detail User	Specimen	MTB NOT ...	Xpert MTB...	Done	OK	03/21/19 1...
<input type="checkbox"/>	H395903826...	KW630987	B3	Administra...	Specimen	MRSA NE...	Xpert SA N...	Done	OK	03/21/19 1...

Basic Users

Test Report										
<input checked="" type="checkbox"/> Include Amplification Curve										
	Patient ID	Sample ID	Mod Name	User	Test Type	Result	Assay ^	Status	Error Status	Start Date
<input type="checkbox"/>	HIV-IVD	HIV-Factor...	A6	Detail User	Positive Co...	HIV DETE...	HIV-Factor...	Done	OK	01/17/18 1...
<input type="checkbox"/>	HIV-IVD	HIV-Factor...	A5	Detail User	Positive Co...	HIV DETE...	HIV-Factor...	Done	OK	01/17/18 1...
<input type="checkbox"/>	HIV-IVD	In Range	A1	Basic User	Positive Co...	HIV DETE...	HIV-Factor...	Done	OK	01/16/18 1...
<input type="checkbox"/>	HIV-IVD	HIV-Factor...	A1	Basic User	Positive Co...	HIV DETE...	HIV-Factor...	Done	OK	02/18/18 0...
<input type="checkbox"/>	HIV-IVD	HIV-Factor...	A5	Detail User	Positive Co...	HIV DETE...	HIV-Factor...	Done	OK	03/17/18 1...
<input type="checkbox"/>	HIV-IVD	HIV-Factor...	A1	Detail User	Positive Co...	HIV DETE...	HIV-Factor...	Done	OK	07/17/18 1...
<input type="checkbox"/>	H11287489...	SD142231	A1	Detail User	Specimen	ERROR	Xpert BCR...	Aborted	Error	07/30/18 1...
<input type="checkbox"/>	H11287489...	SD142231	A1	Detail User	Specimen	NEGATIVE	Xpert CDIF...	Done	OK	07/30/18 1...
<input type="checkbox"/>	H35182729...	UH489831	C3	Detail User	Specimen	NEGATIVE	Xpert CDIF...	Done	OK	05/05/18 1...
<input type="checkbox"/>	H35189037...	HA245614	A1	Detail User	Specimen	ERROR	Xpert CDIF...	Done	Error	08/29/18 1...
<input type="checkbox"/>	H05688905...	HA233987	A3	Detail User	Specimen	CT DETEC...	Xpert CT_...	Done	OK	09/03/18 1...
<input checked="" type="checkbox"/>	H35189055...	HA245654	A1	Detail User	Specimen	CT NOT D...	Xpert CT_...	Done	OK	09/03/18 1...
<input type="checkbox"/>	H35189055...	RL439664	B2	Detail User	Specimen	CT DETEC...	Xpert CT_...	Done	OK	09/15/18 1...
<input type="checkbox"/>	H35189055...	TZ637890	A4	Detail User	Negative C...	CT NOT D...	Xpert CT_...	Done	OK	02/15/19 1...
<input type="checkbox"/>	738743170...	73874317...	A4	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	03/05/19 1...
<input type="checkbox"/>	H73474347...	HD304958...	B1	Basic User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	03/05/19 1...
<input type="checkbox"/>	H73874317...	SD038576...	A3	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	03/05/19 1...
<input type="checkbox"/>	H73874492...	HG395820...	B2	Detail User	Specimen	NEGATIVE	Xpert EV A...	Done	OK	03/05/19 1...

Admin Users

Other Reports



GeneXpert PC 03/05/19 17:54:33

Control Trend Report

- Selection Criteria -

Date Range: All
 Assay: Xpert-C. difficile G2
 Assay Version: 2
 Reagent Lot Number: All
 Test Type(s): Negative Control 1
 Analyte(s): SPC, Toxin B
 Data Type: Cycle Threshold, EndPt

- 4 Test(s) Found -

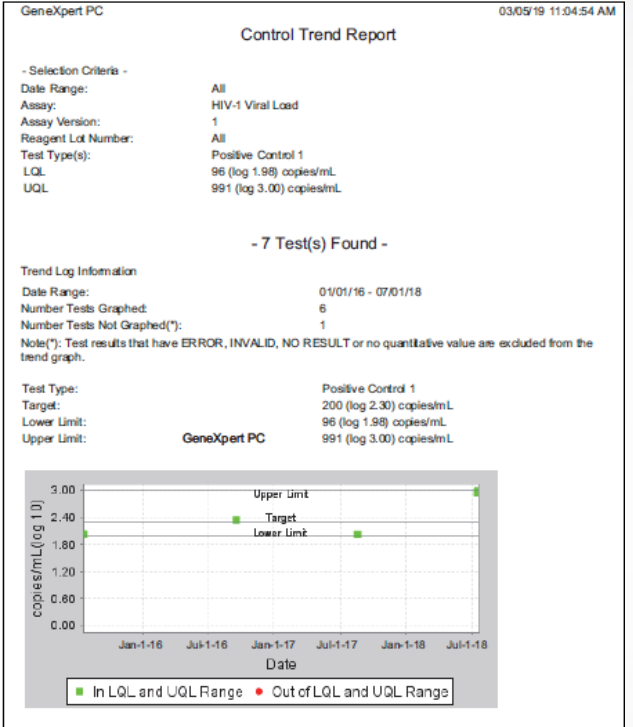
Trend Log Information

Date Range: 01/20/19 - 01/28/19
 Number Tests Graphed: 4
 Number Tests Not Graphed(*): 0

Note(*): Tests with errors, aborted, or stopped with insufficient data are excluded from the trend graph.

Test Type: Negative Control 1

Test Result: Number of Test Results For [Toxicigenic C.diff NEGATIVE]: 4



Data Management



Data Management Tasks

- **Archiving/Retrieving Tests**
 - Creating or retrieving a copy of the data
 - Automatic Archive available
- **Database Backup/Restore**
 - Create copy of all user profiles, system configuration, ADFs and data (available at start-up and at shutdown)
- **Compact Database**
 - Available at Start-up and Shutdown only
- **Check Database Integrity**
 - Integrity check is performed at launch
- **External Remote DB Backup utility (to be found on the Windows Desktop)**
 - Back up data with encrypted patient information

Brief LIS Overview



Host Status



Host Status
(white if not connected)



Host



Host connection lost

Host Test Order Table

The screenshot displays the Xpert Software interface. On the left, the 'Module Status' table shows the status of modules A1 through B4, all of which are 'Available'. The main area is titled 'Manage Host Orders' and contains a table with columns for Patient ID, Patient ID 2, Patient Name, Sample ID, Assay, Priority, and Host Order. Two rows are visible, both with a 'Selected' checkbox. The 'Host Download Status' section at the bottom shows a list of download activities with columns for time, system, and user.

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available

Selected	Patient ID	Patient ID 2	Patient Name	Sample ID	Assay	Priority	Host Order
<input checked="" type="checkbox"/>	P1344320	H2139842	Name4, Patient	81254306	Xpert G88	Normal	03/05/19 1...
<input checked="" type="checkbox"/>	P32141244	H324902344	Name4, Patient	81254322	Xpert PLU A...	Normal	03/05/19 1...

Host Download Status:

Time	System	User
03-05-19 12:01:45	Systems	User [Detail User] login
03-05-19 12:02:00	Systems	User [Detail User] login
03-05-19 12:02:17	Systems	User [Detail User] login

Host Download Status

Enable Host Communication



Module Status

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Available
D2	Available
D3	Available
D4	Available

Host Communication Settings

Enable Host Communication

Use Cepheid Link (Only check if you have the Cepheid Link middleware solution for sample interoperability)

Host ID

Automatic Host Query After Sample ID Scan

Automatic Test Order Download

Automatic Result Upload

Use Instrument Specimen ID

Protocol

HL7

ASTM

Communication Settings

Server

Server IP Address: Port #:

Client

Edit



Module Status

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Available
D2	Available
D3	Available
D4	Available

Host Communication Settings

Enable Host Communication

Use Cepheid Link (Only check if you have the Cepheid Link middleware solution for sample interoperability)

Host ID

Cepheid Port Prefix:

Automatic Host Query After Sample ID Scan

Automatic Test Order Download

Automatic Result Upload

Use Instrument Specimen ID

Protocol

HL7

ASTM

Communication Settings

Server

Server IP Address: Port #:

Client

Save

Caution



Cepheid recommends to always confirm that LIS uploaded results match GeneXpert results after any changes to the GeneXpert or host system, including, but not limited to, changes to the following:

- GeneXpert software version
 - GeneXpert assay definition files and version
 - GeneXpert host communication settings
 - Host middleware software or configuration changes
 - LIS software or configuration changes
-

Troubleshooting



Pause Mode



- The Pause mode should be used only when manually adjusting or removing a cartridge.
- Do not remove a cartridge without following the “remove cartridge” protocol!
- When Pause is activated:
 - Cartridge order processing **STOPS**
 - Cartridges in modules continue to **RUN**
 - Gantry at the end of its current move **STOPS**
 - Conveyor Belt **STOPS**
 - Glass doors **UNLATCH**
- When normal operation is resumed, all processing continues.

Emergency Stop Function



Emergency Stop should only be used for situations where immediate termination of moving parts is required to prevent user injury or instrument damage.

During emergency stop, the following actions occur:

- **All cartridge transfer functions are suspended.**
- **All user interface features are suspended.**
- **The cartridges in the modules will continue to run.**

To resume from emergency stop, you must:

- **Remove all cartridges from the Conveyor. They can be reprocessed.**
- **Do not move or add cartridges to other areas of the system under any circumstances.**

Note: If stopped for too long, cartridges may expire.

Emergency Stop

1

Emergency Stop

Press UNLATCH GLASS DOORS to open the Glass Doors to access the system.
Warning: You must be trained to access the instrument.

If a cartridge is stuck or fallen, remove it from the system.
Remove all cartridges from the conveyor.
Do not move or add cartridges to other areas in the system under any circumstances.
To resume normal operation, untwist the Emergency button.

Press RESUME to return to normal operation.



3

Emergency Stop

After completing your operation, untwist the Emergency button.
Press RESUME to return to normal operation.



4

Emergency Stop

Close all glass doors.
And then press LATCH GLASS DOORS.



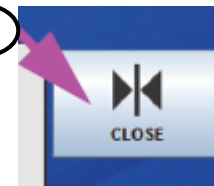
2

Do not forget to untwist the Emergency Stop button by turning it clockwise!

5



6



Retrieving Cartridges from Accumulator

ONLY AVAILABLE IN AUTOMATION MODE!!!



Outstanding order needs attention icon (shown on dashboard)

View Outstanding Orders										
Needs Attention	Cartridge Status	Priority	Patient ID	Sample ID	Assay	Location	Order Time	Estimated Minutes To Result	Minutes To Expire	
	Detected	Normal	123456789	127856789	Xpert C.diff-Epi	ACC 1	03/05/19 14:45		7	
	Ordered	STAT	123456778	123786789	Xpert C.diff-Epi	Kiosk	03/05/19 14:58		180	
										
										

Retrieving cartridges from Accumulator



Cartridge I/O

Shuttle Accumulator

	Accumulator Site	Needs Attention	Cartridge Status	Priority	Sample ID	Assay	Order Time	Cartridge SN
<input checked="" type="checkbox"/>	1		Rejected	Normal	127856789	Xpert C.diff-Epi	03/05/19 14:45	10015808

OPEN SHUTTLE
FILL SHUTTLE
MOVE TO SHUTTLE
CLOSE

Diagram description: This screenshot shows the 'Cartridge I/O' interface. At the top, there are two status indicators: 'Shuttle' (with 4 bars) and 'Accumulator' (with 4 bars). Below is a table with columns for Accumulator Site, Needs Attention, Cartridge Status, Priority, Sample ID, Assay, Order Time, and Cartridge SN. The first row shows site 1 with a 'Rejected' status and a red house icon. On the right side, there are four buttons: 'OPEN SHUTTLE', 'FILL SHUTTLE', 'MOVE TO SHUTTLE', and 'CLOSE'. Purple arrows point to the 'Shuttle' and 'Accumulator' indicators, the 'Needs Attention' icon, and the 'OPEN SHUTTLE' button.



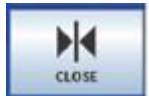
Cartridge I/O

Shuttle Accumulator

Shuttle Site	Needs Attention	Cartridge Status	Priority	Sample ID	Assay	Order Time	Cartridge S/N
1		Retained	Normal	127856789	Xpert C.diff-Epi	09/05/18 14:45	7508105376

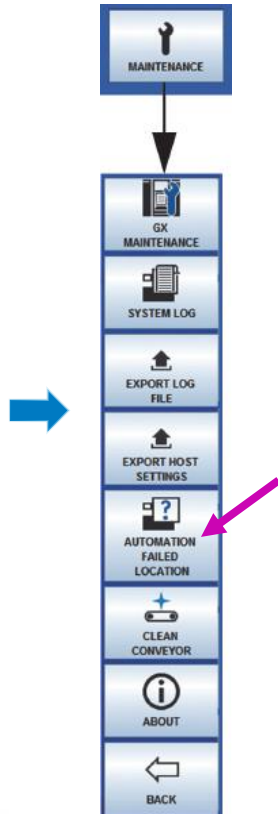
OPEN SHUTTLE
CLOSE

Diagram description: This screenshot shows the 'Cartridge I/O' interface after a cartridge has been moved. The 'Shuttle' indicator now has 4 bars, and the 'Accumulator' indicator has 2 bars. The table shows site 1 with a 'Retained' status. On the right side, there are two buttons: 'OPEN SHUTTLE' and 'CLOSE'. Purple arrows point to the 'Shuttle' and 'Accumulator' indicators and the 'CLOSE' button.



Clearing an Automation failed location

Module Status	
Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Automation Failure
D2	Available
D3	Available
D4	Available



Clear Site Panel

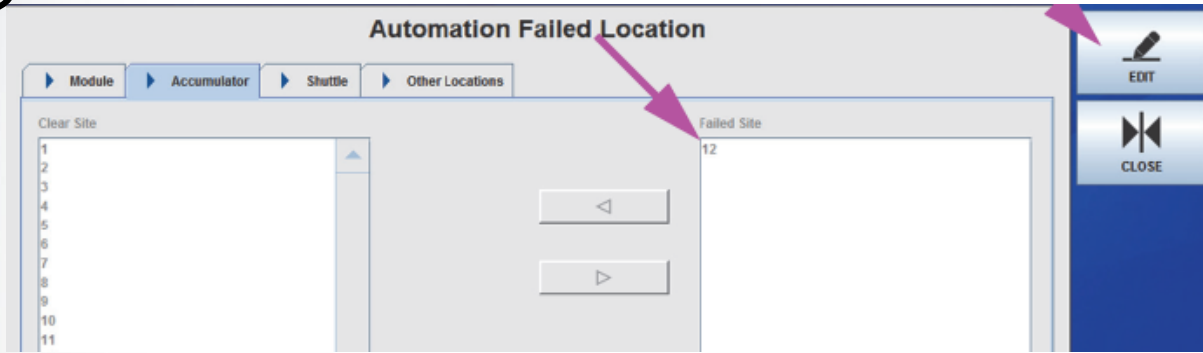
Failed Site Panel

Check which location has a failed site:

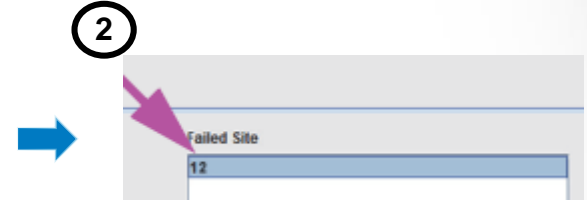
- Open failed location: accumulator, shuttle or lobby
- Closed failed location: module

Open failed location (accumulator, shuttle or lobby)

1



2



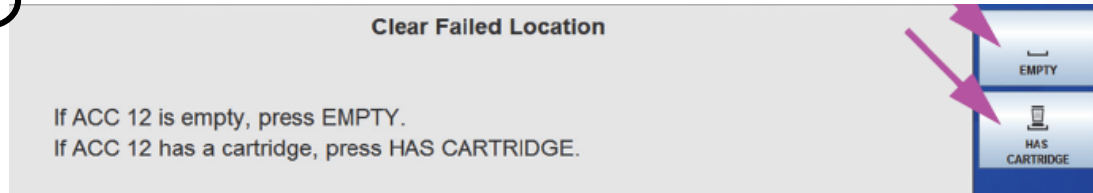
3



4



5



Open failed location (accumulator, shuttle, lobby)

6

Clear Failed Location



CONTINUE

Unable to clear the failed location ACC 12 because it still has a cartridge.
Pause the system and remove the cartridge, then go back to Clear Failed Location workspace to clear the location.

7

Clear Failed Location



CONTINUE

To complete clearing failed location(s),
Press CONTINUE and then Pause the system to remove cartridge(s) at: ACC 12

8

Repeat steps 1 - 5

9



Closed failed location (module)

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Automation Failure
D2	Available
D3	Available
D4	Available

Automation Failed Location

Module | Accumulator | Shuttle | Other Locations

Clear Site: A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4, D1, D2, D3, D4, E1, E2, E3, E4, F1, F2, F3, F4, G1, G2, G3, G4

Failed Site: D1

Buttons: < >

Buttons: EDIT, CLOSE



Clear Failed Location

Switch to Manual Operation Mode to clear the following failed modules: D1
After failed locations are cleared, switch back to Automation Operation Mode.

Button: CONTINUE

Closed failed location (module): change of Operation Mode

The system must be in Manual Mode to clear a failed module location!

Change Operation Mode:



Change Operation Mode

Current Operating Mode
Automation Mode

Operation Mode Configuration

Automation Mode

Manual Mode

SAVE

CANCEL



Closed failed location (module)



Leaving Automation Mode - Remove Cartridges

Remove all cartridges from the Accumulator, Shuttle, Conveyor and Modules and then press CARTRIDGE(S) REMOVED.

Shuttle Accumulator Module

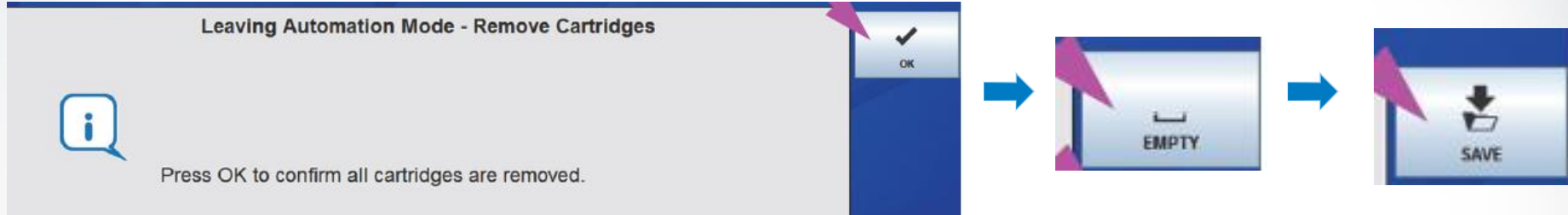
Shuttle Site	Needs Attention	Cartridge Status	Priority	Sample ID	Assay	Order Time	Cartridge S/N

CARTRIDGE(S) REMOVED

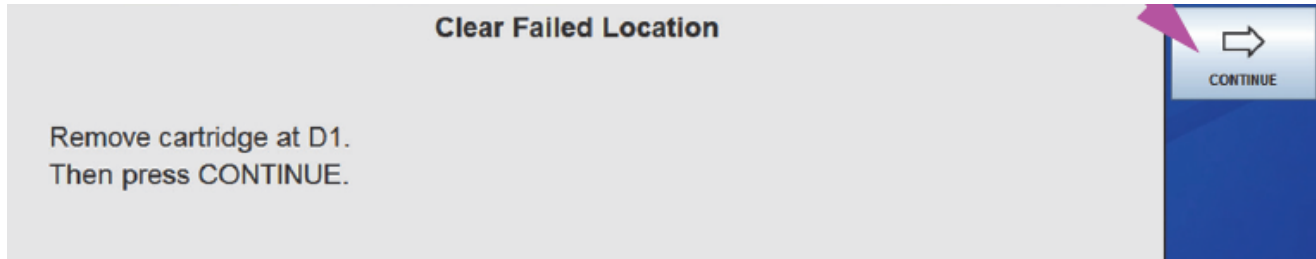
Any tests that are currently running in the GeneXpert modules will continue to run after the system switches to Manual mode. These cartridges will need to be removed manually from the GeneXpert modules after they have finished.

Any tests that have been ordered but have not yet started (outstanding orders) will be cancelled after the change to Manual mode. These tests can be ordered again in Manual mode or they can be ordered again in Automation mode if they have not expired. If there are outstanding tests that will be cancelled, the Leaving Automation Mode - Remove Cartridges workspace shown in [Figure 5-95](#) will be modified to indicate that there are outstanding tests that will be cancelled.

Closed failed location (module)



if



Closed failed location (module)

Module Status

Module Name	Status
A1	Available
A2	Available
A3	Available
A4	Available
B1	Available
B2	Available
B3	Available
B4	Available
C1	Available
C2	Available
C3	Available
C4	Available
D1	Automation Failure
D2	Available
D3	Available
D4	Available

Automation Failed Location

Module | Accumulator | Shuttle | Other Locations

Clear Site

Failed Site

D1

EDIT

CLOSE

Pick failed site

CLOSE

Automation Failed Location

Module | Accumulator | Shuttle | Other Locations

Clear Site

Failed Site

D1

EDIT

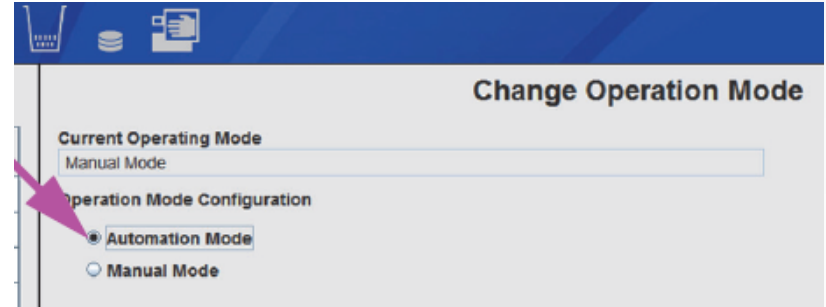
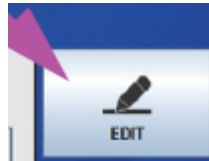
CLOSE

SAVE

CLOSE

Change Operation Mode: Manual to Automation Mode

Check that all runs have finished and all modules are empty!



Press OK to change to Automation Mode, close the Glass Doors and shut down immediately.
Press CONTINUE to save the new operation mode and close the Glass Doors. Automation Mode will be effective after exit and software is restarted.
Press CANCEL to remain in editing.



Shutdown Protocol

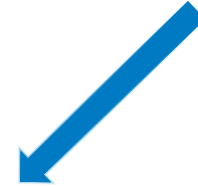
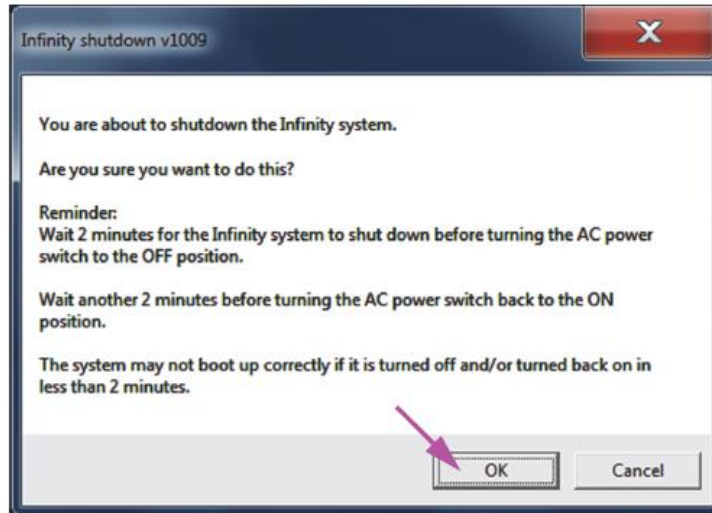
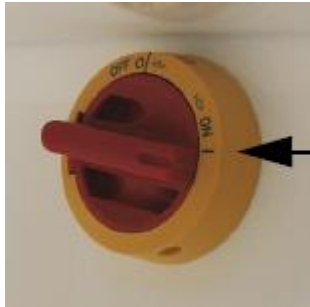
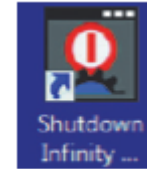


Infinity Shutdown Protocol

Before you exit, ensure that there are no tests in process. There will be a warning if tests are still running!



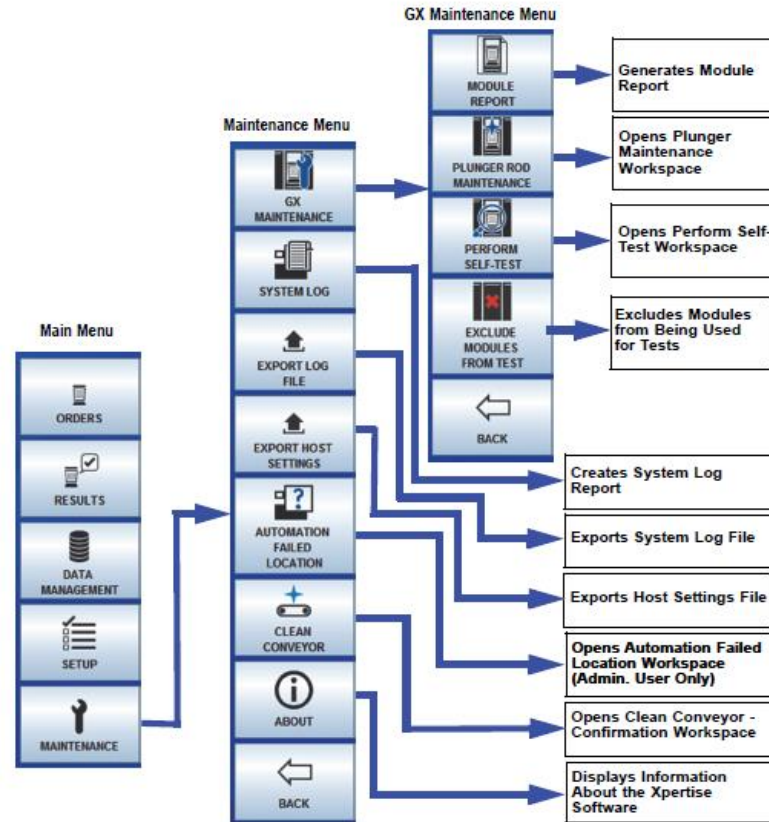
Archiving and Database Management Reminders may appear. Follow the Instructions that appear.



Maintenance



GX Maintenance Menu



CE-1VD. For *in vitro* diagnostic use.

Service and Maintenance

GeneXpert® Infinity Maintenance Log

Month and Year:

Name of Institution: Infinity Serial Number: Quarterly Maintenance Performed:

Annual Maintenance Performed:

Instructions: 1. Enter the name of your institution, GeneXpert Infinity Serial Number, Annual Maintenance Performed Date, Quarterly Maintenance Performed Date, and the current Month and Year in the fields above.
 2. For each maintenance activity listed below check the box(es) under the day of the month that the activities were performed and enter your initials (2 characters maximum) in the bottom row.
 3. Save the file after entering the data. We recommend saving one file each month for a complete record of activities.

Weekly Maintenance	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Clean kiosk table top, keyboard and monitor ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quick Clean Conveyor belt ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perform System Shutdown ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monthly Maintenance																															
Vacuum rear fan filter ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Archive / Purge Tests ^{2,3}	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quarterly Maintenance																															
Clean Kiosk Scanner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Conveyor Belt ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Cartridge Bays and Plunger Rods ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Instrument Surfaces ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Replace or Clean Fan Filters ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yearly Maintenance																															
Check Instrument Calibration ⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As Necessary																															
Print System Log and Module Reports ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Empty / Replace Waste Container ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Back up Database ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Instrument Surfaces ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check keyboard and mouse battery. Replace as required. ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technician Initials (Two Letters)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Refer to Chapter 9 (Service and Maintenance) in the Operator Manual for detailed procedure. 3. Frequency of data management and data storage location can be determined by individual laboratory.
 2. Refer to Chapter 5 (Operating Instructions) in the Operator Manual for detailed procedure. 4. Calibration check to be performed by Cepheid Field Service Engineer or customer.
 NOTE: These are minimum recommendations for cleaning. Your institution may require that maintenance be performed on a more frequent basis.
 Reference: GeneXpert Infinity Operator Manual (PIN 302-0763, Rev. A)



Disinfect the Kiosk table top, Monitor, Mouse, Keyboard	Weekly
Clean the Rear Fan Filters	Monthly
Clean Instrument Surfaces	Quarterly
Disinfect the Cartridge Bay interior	Quarterly & on demand
Disinfect the Syringe Plunger Rod	Quarterly & on demand
Clean Conveyor Belt	Weekly (quick clean) & Quarterly (extensive)
Empty Waste Container	On demand
Check Instrument Calibration	Annually



Materials needed for Maintenance (not provided)

- Bleach solution (0.5% final active chlorine concentration or a 1:10 dilution factor of a household chlorine bleach)
- 70% ethanol
- Deionized water
- Lint-free wipes or paper towels
- Disposable gloves
- Eye protection

Cleaning the Kiosk Table Top, Monitor, Mouse & Keyboard

Materials required:

- Bleach solution (0.5% final active chlorine concentration or a 1:10 dilution factor of household chlorine bleach prepared within one day of use)
- 70% ethanol or denatured ethanol (70% ethanol containing 5% isopropanol and 5% methanol)
- Deionized water
- Lint-free wipes or paper towels
- Disposable gloves
- Eye protection

1 Remove the mouse and all other items from the kiosk table top.

Thoroughly moisten a lint-free wipe or paper towel with the bleach solution.

Wipe the table top surface thoroughly with the lint-free wipe or paper towel. Use additional lint-free wipes or paper towels, as needed, to ensure adequate coverage. Allow the bleach solution to remain on the surface a minimum of two minutes.

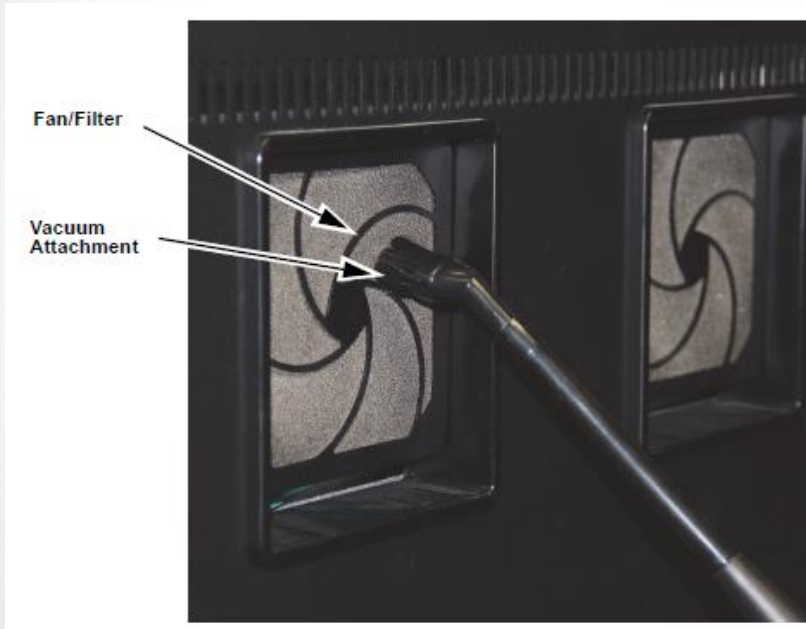
Discard the used lint-free wipe according to your standard laboratory procedure.

2 Thoroughly moisten a lint-free wipe or paper towel with the 70% ethanol solution.

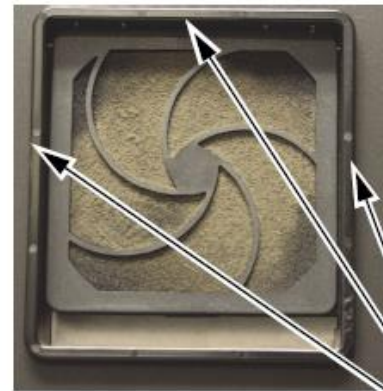
Wipe the table top, keyboard, mouse and monitor thoroughly with the lint-free wipe or paper towel. Use additional lint-free wipes or paper towels, as needed.

Discard the used lint-free wipes or paper towels according to your standard laboratory procedure.

Cleaning of the Rear Fan Filters



Eventually the Fan filters need to be replaced.
For more information, please refer to the Operator Manual!



Clean the Instrument Surfaces (quarterly maintenance)

Before you start, ensure that all test have finished and that no cartridges are left in the modules! The initiate The shutdown protocol!

Important

For the quarterly cleaning procedure, do not use a bleach solution. A bleach solution is to be used only in the event of a spill.

Materials required:

- 70% ethanol or denatured ethanol (70% ethanol containing 5% isopropanol and 5% methanol)
- Lint-free wipes or paper towels
- Disposable gloves
- Eye protection



Clean Gantry Rail Covers



Clean Door Rail



Clean Instrument Floor

Clean the Instrument Surfaces – in case of spill



Important

The GeneXpert Infinity system must be completely shut down when cleaning the instrument surfaces.

Materials required:

- Bleach solution (0.5% final active chlorine concentration or a 1:10 dilution factor of household chlorine bleach prepared within one day of use)
- 70% ethanol or denatured ethanol (70% ethanol containing 5% isopropanol and 5% methanol)
- Lint-free wipes or paper towels
- Disposable gloves
- Eye protection

Thoroughly moisten a lint-free wipe or paper towel with the bleach solution.

Wipe affected surfaces inside the instrument. Change lint-free wipes or paper towels frequently while wiping.

Allow the bleach solution to remain on the surfaces at least two minutes but no longer than five minutes.

Repeat Step 1 through Step 4 two more times for a total of three times.

Thoroughly moisten a lint-free wipe or paper towel with the 70% ethanol solution.

Wipe affected surfaces inside the instrument. Change lint-free wipes or paper towels frequently while wiping.

Discard the used lint-free wipe or paper towel according to your standard laboratory procedure.

Clean the Conveyor Belt (quick clean, weekly)



Do not use alcohol or ethanol to clean the conveyor belt. Alcohol or ethanol can damage the conveyor belt material.

Materials required for weekly quick clean:

- Deionized water
- Lint-free wipes or paper towels
- Disposable gloves
- Eye protection



to remove particulate debris



Thoroughly moisten a lint-free wipe or paper towel with deionized water.

Hold the lint-free wipe or paper towel tightly (to avoid it being pulled from your hand) against the exposed surface of the conveyor belt for two rotations of the belt (approximately two minutes).

Dry the belt using a new lint-free wipe or paper towel. Hold the lint-free wipe or paper towel tightly (to avoid it being pulled from your hand) against the exposed surface of the conveyor belt for two rotations of the belt (approximately two minutes).

Clean the Conveyor Belt (quarterly or in case of spill)



Do not use alcohol or ethanol to clean the conveyor belt. Alcohol or ethanol can damage the conveyor belt material.

Materials required:

- Bleach solution (0.5% final active chlorine concentration or a 1:10 dilution factor of household chlorine bleach prepared within one day of use
- Deionized water
- Lint-free wipes or paper towels
- Disposable gloves
- Eye protection



to clean and disinfect or in the event of spill

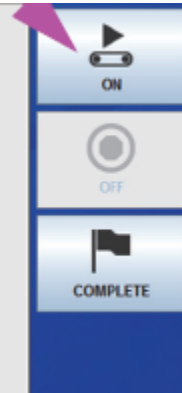
Clean the Conveyor Belt (quarterly or in case of spill)



Clean Conveyor

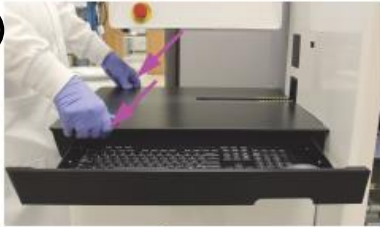
The kiosk top should be removed.

1. Select ON to start the conveyor.
2. Clean the conveyor.
3. Select OFF to stop the conveyor.
4. Put kiosk top back in place.
5. Select COMPLETE to close the workspace.

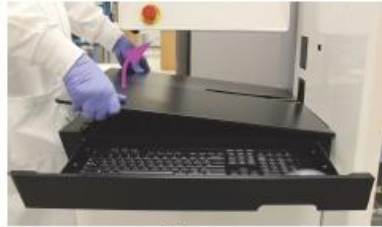


Clean the Conveyor Belt (quarterly or in case of spill)

1



A



B



C

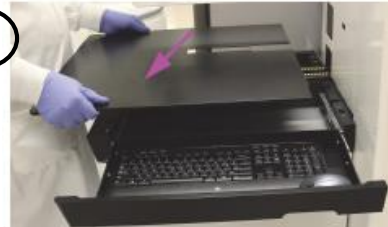


D

2



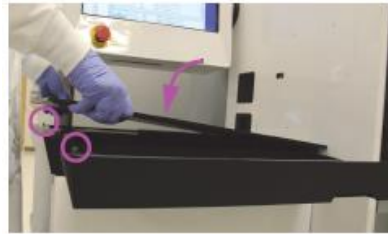
3



A



B



C

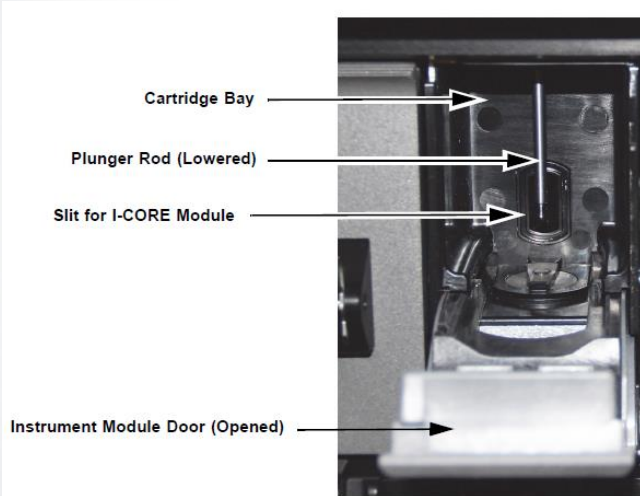


D

It is possible to pinch your fingers when installing the kiosk table top. To avoid pinching your fingers, perform the following steps exactly as instructed.

Cleaning the Cartridge Bays & the Plunger Rods

Ensure that no tests are running and that no cartridges are left in the modules before you start!



Prevent entrance of any liquid into the slit of the I-Core Module!

Biological Risks



Wear disposable gloves, eye protection and other personal protective equipment mandated by your institution's safety policies while performing this cleaning procedure. Wearing personal protective equipment prevents exposure to chemical and biologically hazardous materials.

The materials required for this procedure are:

- A final concentration of 1:10 dilution of household chlorine bleach (used within 1 day of preparation)

Important

Perform the bleach wipe-down three separate times on the interior surfaces of the cartridge bay, allowing the bleach to remain on the surfaces for two minutes after each wipe. After the final two minutes, remove the bleach residue by thoroughly wiping the cartridge bay and plunger rod with ethanol.

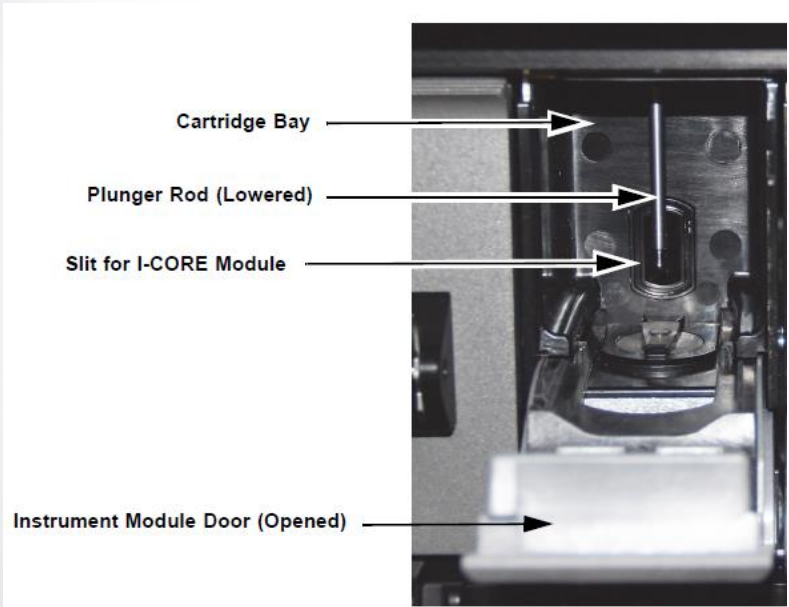
- 70% ethanol or denatured ethanol (70% ethanol containing 5% isopropanol and 5% methanol)
- Soft lint-free wipes

Caution



Do not use 70% isopropanol alcohol for cleaning the cartridge bay and plunger rod. Isopropanol alcohol can degrade plastics.

GX Maintenance Workspace



Plunger Rod Maintenance

Select one or more modules and press CLEAN.


	Module Name	Status	Module S/N	Estimated Minutes To Result	Tests Since Last Cleaned
<input checked="" type="checkbox"/>	A1	Available	642969		54
<input checked="" type="checkbox"/>	A2	Available	642999		48
<input checked="" type="checkbox"/>	A3	Available	643030		44
<input checked="" type="checkbox"/>	A4	Available	642845		48
<input type="checkbox"/>	B1	Available	643015		54
<input type="checkbox"/>	B2	Available	642812		52
<input type="checkbox"/>	B3	Available	642706		40
<input type="checkbox"/>	B4	Available	643243		49
<input type="checkbox"/>	C1	Available	602699		31
<input type="checkbox"/>	C2	Available	612818		101
<input type="checkbox"/>	C3	Available	612666		101
<input type="checkbox"/>	C4	Available	612816		100
<input type="checkbox"/>	D1	Available	600323		203
<input type="checkbox"/>	D2	Available	612665		97

GX Maintenance Workspace – cont'

Plunger Rod Maintenance

1. Open the glass doors.
2. Open the selected module doors.
3. Remove cartridges from the modules.
4. Press CONTINUE.


Selected Modules
A1
A2
A3
A4



Plunger Rod Maintenance

1. Clean the plunger rods and module bays.
2. Close all module doors.
3. Close the glass doors.
4. Press COMPLETED.

Selected Modules
A1
A2
A3
A4



Plunger Rod Maintenance

Please wait while plunger rods are being lowered.

Keep hands clear of modules until plunger rods are lowered.



Empty Waste Container



Check waste container icon on dashboard! Click on icon and follow the instructions on the screen!

Biological Risks



Remove the waste container bag carefully to avoid puncturing of the bag by the cartridges. If the bag punctures, liquid from the cartridges may leak.

Biological Risks



Biological specimens, transfer devices, and used cartridges should be considered capable of transmitting infectious agents requiring standard precautions. Follow your institution's environmental waste procedures for proper disposal of used cartridges and unused reagents. These materials may exhibit characteristics of chemical hazardous waste requiring specific disposal. If country or regional regulations do not provide clear direction on proper disposal, biological specimens and used cartridges should be disposed per WHO [World Health Organization] medical waste handling and disposal guidelines.

Warning



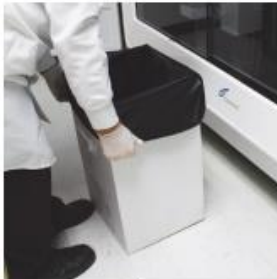
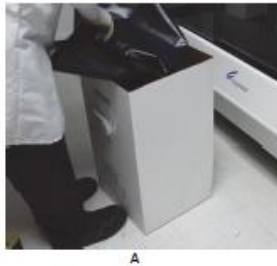
A bag filled with cartridges is very heavy (approximately 17 kg (38 lbs.)). Use proper lifting techniques when lifting the waste container and bags with cartridges.

Caution



Be careful not to damage the metal latch that protrudes from the door while removing the waste container. See [Figure 9-46](#).

Empty Waste Container



Waste Container

Is the waste container empty?

YES

NO





Thank You.



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