



## The New GeneXpert® System

New Systems. Same game-changing performance.

 **Cepheid®**  
A better way.



## WE CAN'T THINK OF BETTER WORDS THAN "GAME CHANGING"

Improving patient outcomes is the primary goal of any diagnostic system. But our GeneXpert® family of systems have set a new standard in workflow flexibility, 24/7 testing accuracy, and user-friendly design — delivered in an astonishingly beautiful and compact package.

But we've done more than just repackage a good thing — we've improved on the fit, form, and function of the most popular molecular diagnostic platform on the market.

GeneXpert System technology is the cornerstone of our unique approach to a molecular diagnostics product suite, which allows us to offer a complete menu of tests on a single, fully scalable, consolidated workstation.

The GeneXpert System is available in a one, two, four, or 16-module configuration. All have our proven GeneXpert module at their analytic heart, and use the same patented cartridge technology for every Xpert® test.



GeneXpert I

GeneXpert II

GeneXpert IV

GeneXpert XVI



66 MINUTES  
XPRT MRSA

45 MINUTES  
XPRT VANA/VANB

45 MINUTES  
XPRT C. DIFFICILE





## GAME CHANGER : SPEED

When it comes to speed, other molecular analyzers simply can't compete.

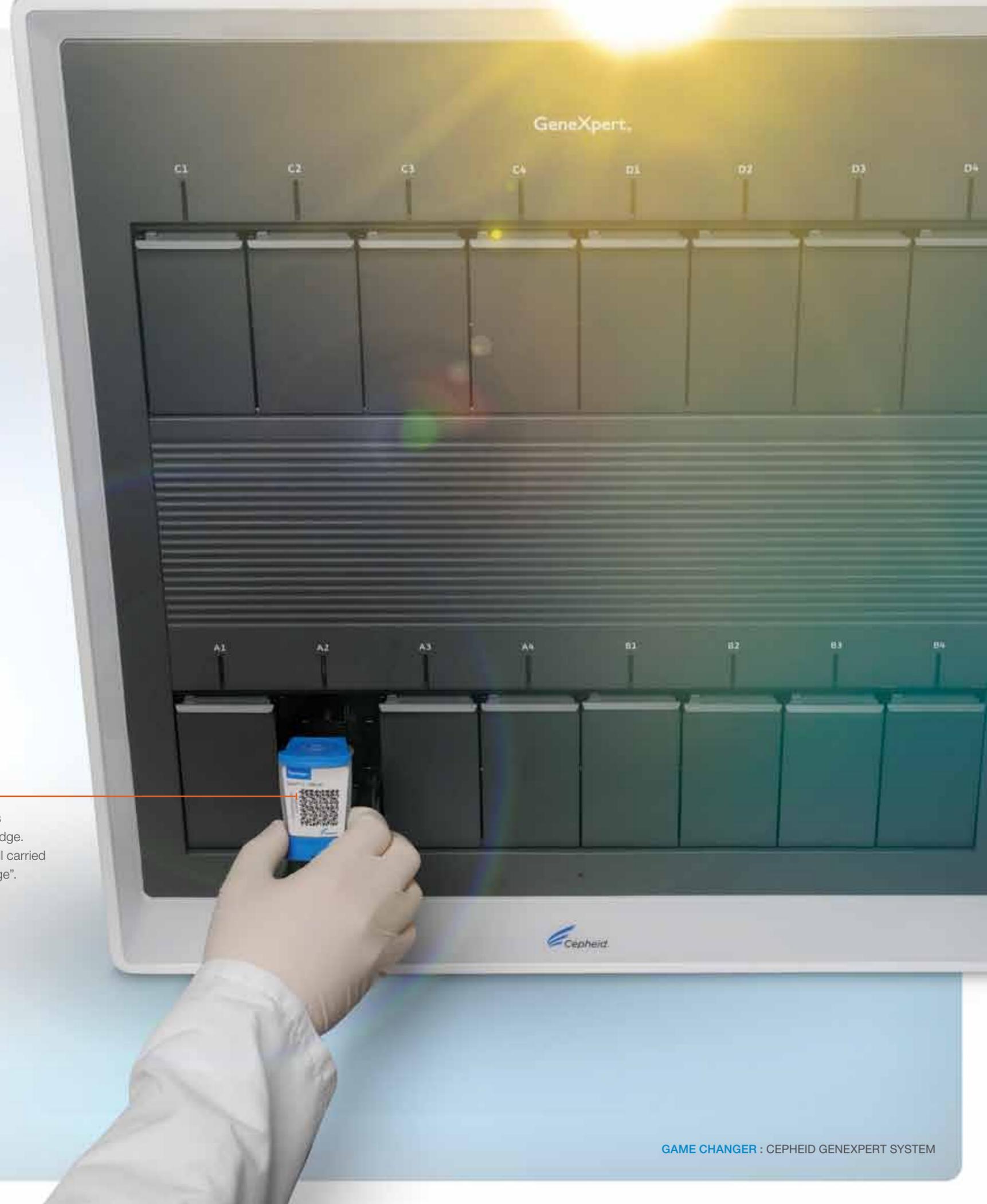
The GeneXpert® System returns most test results in about an hour, including sample preparation! Our systems deliver results even faster than many alternative technologies, such as EIA or Immunoassay.

With the GeneXpert System, labs no longer need rows of equipment and extensively trained staff to deliver molecular results. No matter which GeneXpert System you choose, Cepheid's technology makes on-demand molecular testing available to everyone with unprecedented speed and ease-of-use.

Our patented cartridges also deliver unsurpassed accuracy across the broadest possible menu, and are virtually unlimited in the sample types they can process.

### GeneXpert Cartridge

The cornerstone of the GeneXpert testing process is Cepheid's patented, self-contained, single use cartridge. Sample extraction, amplification and detection are all carried out within this self-contained "laboratory in a cartridge".





## GAME CHANGER : SIZE

With its compact design, the GeneXpert® System allows for portability in the field and can run tests just about anywhere.

In fact, due to the recent World Health Organization (WHO) endorsement of our systems, Cepheid is now making molecular diagnostics a reality, even in the most remote places on earth.

The decreased system footprint and consolidated testing design creates space-saving efficiency, reducing the need

for multiple testing platforms. These new systems are also designed to be stackable, for those labs where space is a particular issue.

And we've now introduced a new configuration, the two-module GeneXpert System, to provide even more options for smaller institutions.



TB Detection Going Mobile

*Photographs courtesy of Michael Hoelscher, University Munich/Mbeya Medical Research Programme*



### Processing Unit

A four-site GeneXpert System can be configured with 1, 2, 3 or 4 modules. A 16-site system can be configured with 4, 8, 12, or 16 modules. For the highest throughput applications, a GeneXpert Infinity System can scale to 80 modules. All systems can be easily upgraded with additional modules.





## GAME CHANGER : IMPACT

The GeneXpert® System fully integrates and automates sample extraction, amplification, and detection — all in one cartridge. **On-demand.** Just load a biological sample and the system does the rest.



While implementing rapid MRSA surveillance testing with the GeneXpert® System, there were 138 patient care days saved and 230 more admissions, generating additional revenue of \$1,150,000 during the 2007 – 2008 period.

**Denise Uettwiller-Geiger, Ph.D., DLM (ASCP)**  
*Director of Laboratory Services and Clinical Trials*  
*John T. Mather Memorial Hospital*





## **GAME CHANGER : MENU**

The simplicity of the GeneXpert® System is often compared to a chemistry or hematology analyzer. Simply load the cartridge and the system does the rest.

The unparalleled efficiency and ease-of-use will add unseen value to your entire institution. However, the “ripple effect” of rapid, real-time, random access results goes well beyond the four walls of the laboratory — everyone in your facility benefits from getting the right result at the right time, including your patients.

And all of Cepheid’s GeneXpert Systems offer complete interfacing compatibility with your data management system, enabling your clinical staff to take full advantage of the speed and accuracy of molecular diagnostics.

Finally, the entire GeneXpert family is designed with LEAN principles in mind, in order to eliminate wasted time, effort, and resources at every opportunity. The systems can easily integrate into any lab to improve workload and workflow optimization.



For more information, please visit [www.cephidinternational.com](http://www.cephidinternational.com)

\* Product availability based on timing of regulatory approvals.

# Specifications

## OPTICS

Dye detection limit < 1 nM

## OPTICAL CHANNEL CHARACTERIZATION

Channel	Excitation	Emission	Calibrated Reporter Dyes
1	375–405	420–480	CF 1
2	450–495	510–535	FAM
3	500–550	565–590	Alexa Fluor® 532
4	555–590	606–650	Texas Red®
5	630–650	665–685	Alexa Fluor® 647
6	630–650	>700	CF 6

## REACTION SITE THERMAL CONTROLS

- Solid state heater and forced-air cooling at each site
- Reaction chamber thermistors calibrated to  $\pm 1.0^{\circ}\text{C}$  using National Institute of Standards and Technology (NIST)-traceable standards
- Up to 16 independently-controlled reaction sites

## CARTRIDGES

Single-use disposable cartridges  
Polypropylene construction

## PERFORMANCE PARAMETERS

Heating ramp rates (max.):  
10°C/sec from 50°C to 95°C

Cooling ramp rates (max.):  
2.5°C/sec from 95°C to 50°C

Temperature duration accuracy:  
 $\pm 1.0$  sec from programmed time

Temperature accuracy:  
 $\pm 1.0^{\circ}\text{C}$  from 60°C to 95°C

Melt curve programmable ramp rates:  
0.01°C/sec to 1.0°C/sec

## PHYSICAL DIMENSIONS

*GX-I Processing Unit:* 10.16 cm W x 30.48 cm H x 29.72 cm D

*GX-II Processing Unit:* 16.13 cm W x 30.48 cm H x 29.72 cm D

*GX-IV Processing Unit:* 27.94 cm W x 30.48 cm H x 29.72 cm D

*GX-XVI Processing Unit:* 57.79 cm W x 65.53 cm H x 33.66 cm D

## POWER REQUIREMENTS

*Rated Voltage:* 100–240 V~, 50–60 Hz

*Rated Current GX-I:* 1.5A @ 100V~, 0.75 A @ 200V~

*Rated Current GX-II:* 1.5A @ 100V~, 0.75 A @ 200V~

*Rated Current GX-IV:* 1.9A @ 100V~, 0.95 A @ 200V~

*Rated Current GX-XVI:* 8.24A @ 100V~, 4.12 A @ 200V~

## GENEXPERT® DIAGNOSTIC SYSTEM

*GeneXpert Model GX-I*

Single module instrument with desktop computer

*GeneXpert Model GX-I*

Single module instrument with laptop

*GeneXpert Model GX-II*

2 module instrument with desktop computer

*GeneXpert Model GX-II*

2 module instrument with laptop

*GeneXpert Model GX-IV*

4 module instrument with desktop computer

*GeneXpert Model GX-IV*

4 module instrument with laptop

*GeneXpert Model GX-XVI*

16 module instrument with desktop computer

*GeneXpert Model GX-XVI*

16 module instrument with laptop

## PART NUMBERS\*

*GXI-1-D*

*GXI-1-L*

*GXII-2-D*

*GXII-2-L*

*GXIV-4-D*

*GXIV-4-L*

*GXXVI-16-D*

*GXXVI-16-L*

\*For a full listing of the instrument configurations available to meet your needs visit [www.cepheidinternational.com](http://www.cepheidinternational.com)

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