

# System Training 10-Color GeneXpert® Modules & Daisy kit



# Training Agenda

- **10-Color Module**
  - Description
  - I-CORE®
  - Module Calibration & Comparison
  - 10 color module requirements & Compatibility
- **Daisy Kit Installation**



# Training Objective

- **At the end of the training, you will be able to:**
  - Discover the 10 color module
  - Identify the I-core basics
  - Differentiate between a 6 color and 10 color
  - Summarize the 10 color module requirements & Compatibility
  - Outline Daisy kit installation procedure and requirements

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**“This is the first PCR system with integrated 10-Color capability for your hospital, your lab and point of care settings.”**

*David H. Persing, MD, PhD  
Executive Vice President  
Chief Medical and Technology Officer  
Cepheid*



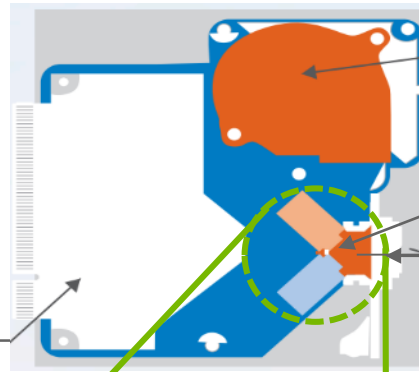
# The Cepheid® Solution



- Automated sample preparation, nucleic acid amplification and detection of targeted sequences
- Uses real- time Polymerase Chain Reaction technique
- Enables higher degree of multiplexing targeting more than 6 genes
- Required for **10-Color Xpert tests**
- On-demand results
- Random access

# The I-CORE<sup>®</sup> Module

Building Block of  
the GeneXpert<sup>®</sup>  
System



Fan  
Heater

Rapid, precise temperature control

Inserts into the I-CORE



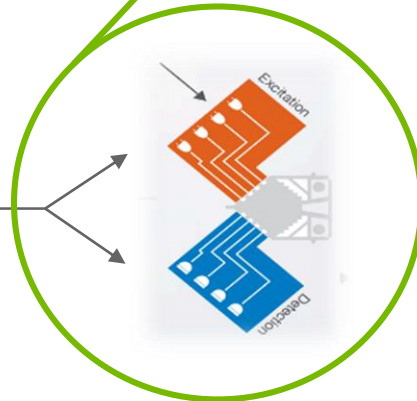
Cartridge  
Sample preparation

Circuitry

Passes optical  
information to the  
computer for analysis  
and display

Optical Blocks

Optical analysis, detect  
and quantify up to **ten**  
different DNA targets  
simultaneously



# 10-Color matrix: 4 additional New Dyes to existing 6-Color Modules

		iCore Detection			
iCore Optical Channels		Blue + IR (420-477 nm + > 700 nm)	Green + Deep Red (510-535 nm + 660-680 nm)	Yellow (565-585 nm)	Red (620-645 nm)
iCore Excitation	UV (400 nm)	CF1			
	Blue (470 nm)		FAM	CF7 (FAM-CF3)	CF9
	Green (520 nm)	CF10 (CF3-CF6)		A532 (CF3)	CF8 (CF3-CF4)
	Yellow (574-584 nm)				TxR (CF4)
	Red (635 nm)	CF6	A647 (CF5)		

# 10-Color GeneXpert Instrument

**Blue Lip**  
To distinguish 10-color  
Modules from 6-Color  
Modules





# Comparison

## 6 color Module

- **CF1, FAM, A532 (CF3), TxR (CF4), A647 (CF5), and CF6**

## 10 color Module

No hardware change, same as 6 color Module

- **CF1, FAM, A532 (CF3), TxR (CF4), A647 (CF5), and CF6**
- Additional 4 colors calibrated = **CF7, CF8, CF9, and CF10**

# 10-Color module requirements

## GeneXpert Systems

- GeneXpert Dx Software v4.7b or higher
- Supported on **GeneXpert® R2 Systems**: GX-I, GX-II, GX-4, GX-16
- 10-Color Modules can run **any Xpert assay**
- 10 color maintenance is equivalent to current 6-Color instrument
- Windows version is dependent on GeneXpert Software

## Optional

- Uninterruptible Power Supply /Surge Protector highly recommended
  - 120V North America p/n: 850-0386
  - 230V International p/n: 850-0387
- Daisy Kit to connect multiple instruments to one computer p/n: daisykit

# Daisy-kit Installation



# Why connect multiple GeneXpert<sup>®</sup> instruments together with the daisy chain kit?



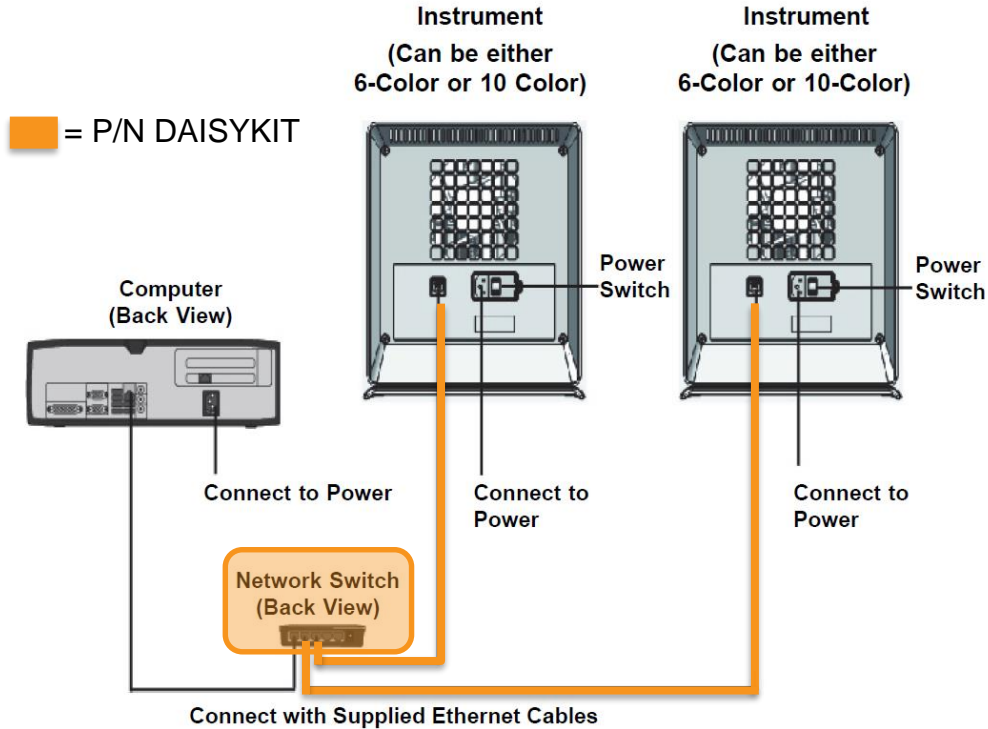
- Add 10-Color capability

- Support test demand increase

# Daisy kit software

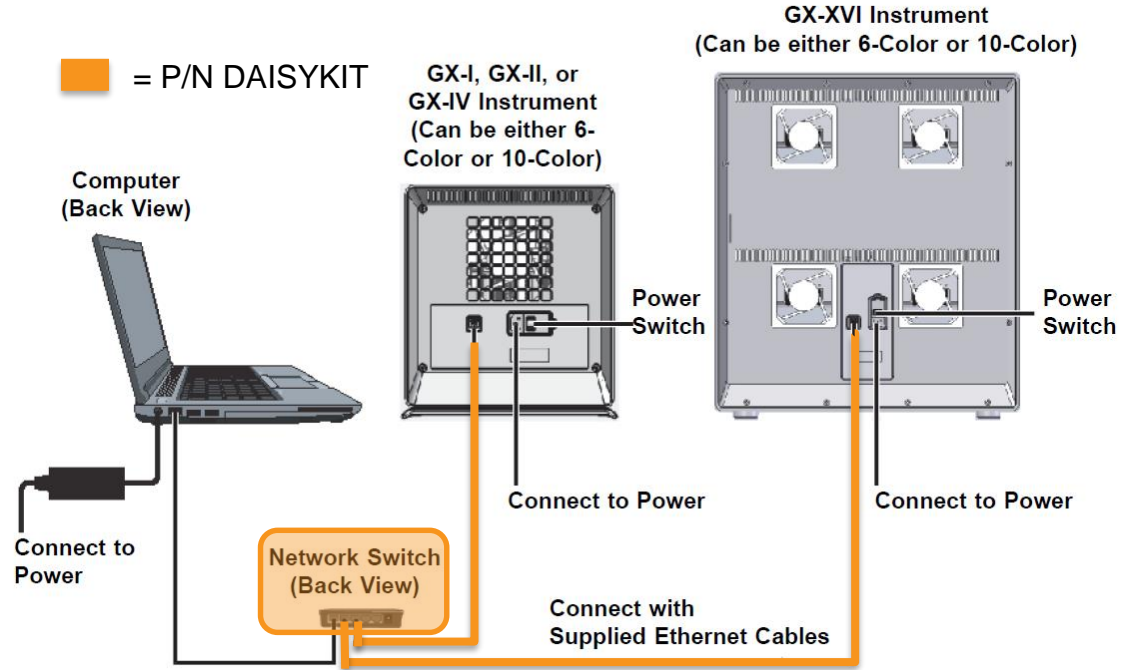
- Max # of Module is dependent on GX DX Software :
  - GeneXpert Dx Software Version 4.7b to 6.1 support up to 4 GeneXpert GX-I, GeneXpert GX-II, or GeneXpert GX-IV (**16 modules in total**)
  - The GX-XVI cannot be daisy chained with SW 4.7 or older software
- GeneXpert Dx Software Version 6.2 and higher Up to **22 GeneXpert modules** (10- or 6-color) in any combination of GeneXpert GX-I, GeneXpert GX-II, or GeneXpert GX-IV or GeneXpert XV1 instruments can be connected to a single computer.

# DAISY NETWORK CONNECTIONS



Reference: Operator manual 302-0670 rev D Section 2.5

# DAISY KIT NETWORK CONNECTIONS





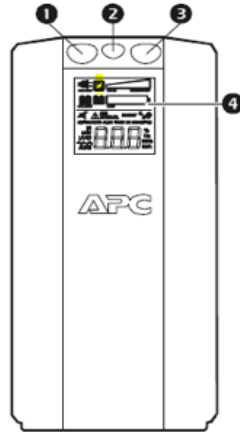
Reference: Operator manual 302-0670 rev D Section 2.5

# Disable power saving feature for UPS with DAISYKIT



1. If the power-saving mode is ON, a 'leaf'  will appear in the Display Interface panel.

## Front panel

- 1 Mute button 
- 2 Power On/Off button
- 3 Display button 
- 4 Display interface



**Power-Saving**—Master and Controlled outlets are enabled, saving power when the master device goes into sleep or standby mode

2. Press **MUTE**  and **DISPLAY**  buttons at the same time for **2 seconds** to disable the power-saving feature. The leaf icon will darken (it will not be visible) and the UPS will beep once. Note: if the leaf icon is illuminated, the power-saving feature is still enabled.

UPS Model: APC Back-UPS Pro BR1500

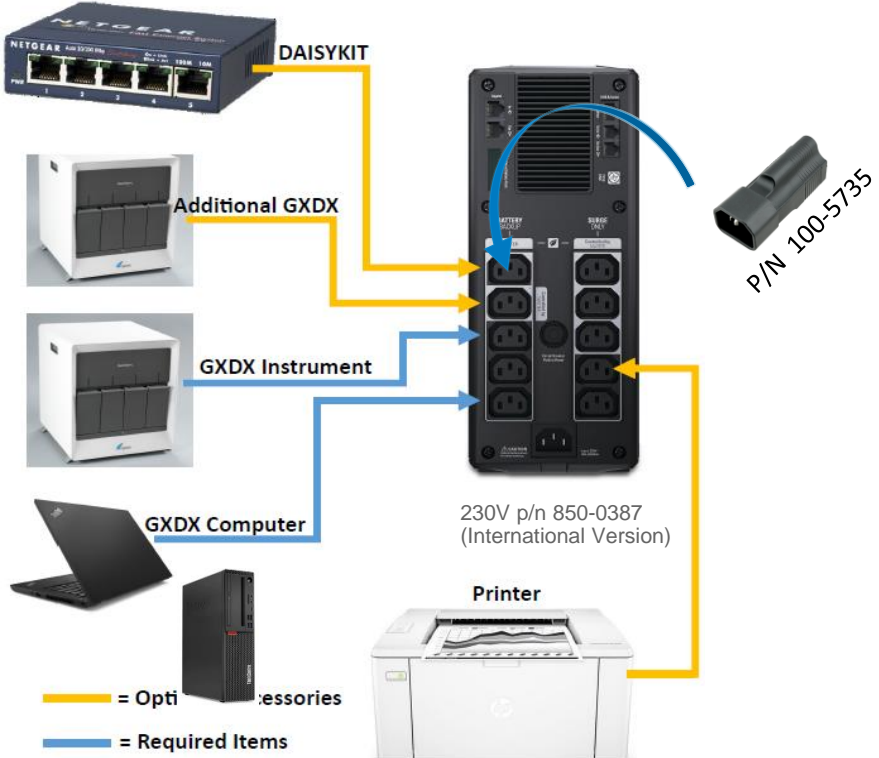
Cepheid P/N 850-0386 (North America)


Cepheid P/N 850-0387 (International)

UPS Install Instructions: 302-0697 Rev C

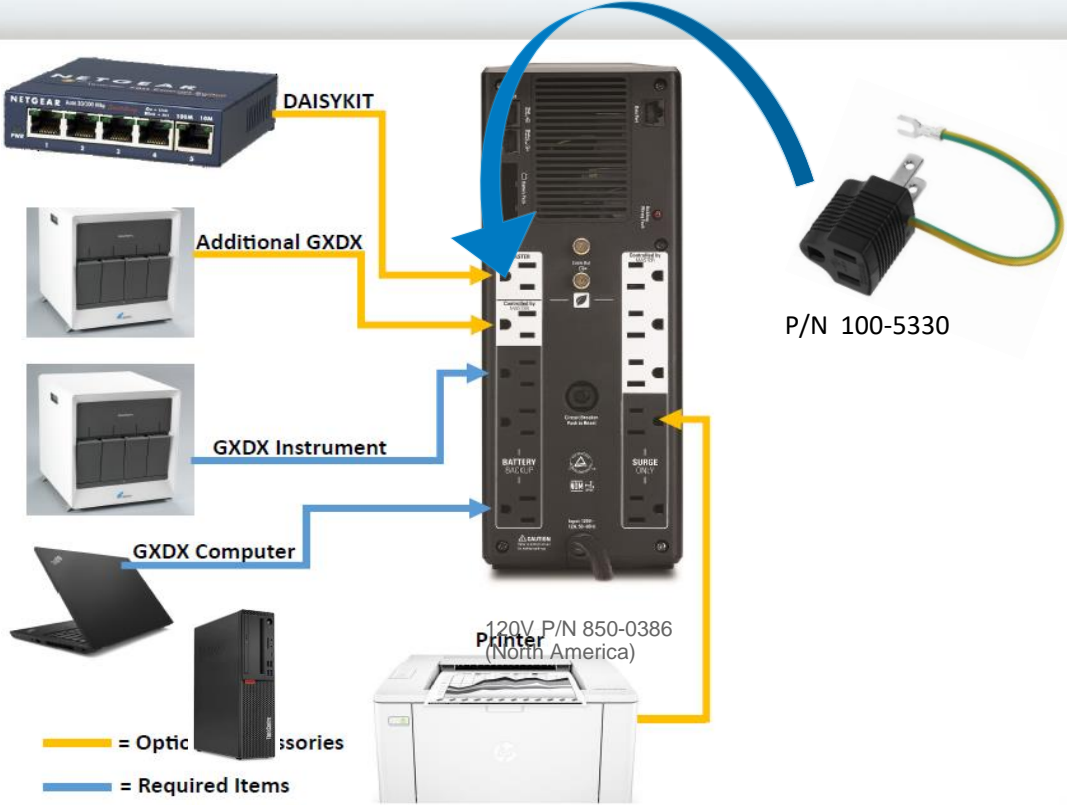



# International UPS Power connections (P/N 850-0387)



 Note: The UPS only supports up to 16 total modules, additional modules will require a separate UPS

# North America UPS Power connections (P/N 850-0386)



 Note: The UPS only supports up to 16 total modules, additional modules will require a separate UPS

# Technical Assistance

- Before contacting Cepheid Technical Support, collect the following information:
  - Product name
  - Lot number
  - Serial number of the System
  - Error messages (if any)
  - Software version and, if applicable, Computer Service Tag number
- Log your complaint online using the following link: <https://www.cepheid.com/support>



Thank You.



[www.Cepheid.com](http://www.Cepheid.com)

