RAZER CHROMA HARDWARE DEVELOPMENT KIT (HDK)

MASTER GUIDE

The **Razer Chroma Hardware Development Kit (HDK)** is designed to give you the ultimate immersive gaming experience with highly versatile LED strips anywhere in and around your gaming setup. With individually controllable LEDs that can be customized with 16.8 million colors, the Razer Chroma HDK fits perfectly inside your PC case and anywhere beyond. With Razer Synapse, choose to synchronize preset lighting effects across all your Razer Chroma enabled devices or create your own unique light show with the power of the Razer Chroma SDK.

CONTENTS

1. PACKAGE CONTENTS / SYSTEM REQUIREMENTS

PACKAGE CONTENTS

- Razer Chroma HDK module

- 2x 16-LED strips

- 2x LED extension cables

- Molex to DC Cable

- USB to Micro-USB cable

- USB to DC cable

- Power adapter*

- Important Product Information Guide

May include interchangeable adapter plugs for specific regions.

SYSTEM REQUIREMENTS

PRODUCT REQUIREMENTS

- Power outlet / Power Supply Unit (PSU) with a free Molex socket

- PC with a free USB port

RAZER SYNAPSE REQUIREMENTS

- Windows® 7 (or higher)

- Internet connection

- 500 MB of free hard disk space

2. REGISTRATION / TECHNICAL SUPPORT

REGISTRATION

Register your product online at razerid.razer.com/warranty using your Razer ID to get real-time information on your product's warranty status.

If you haven't registered for a Razer ID yet, register now at razerid.razer.com to get a wide range of Razer benefits.

Your product's serial number can be found here.
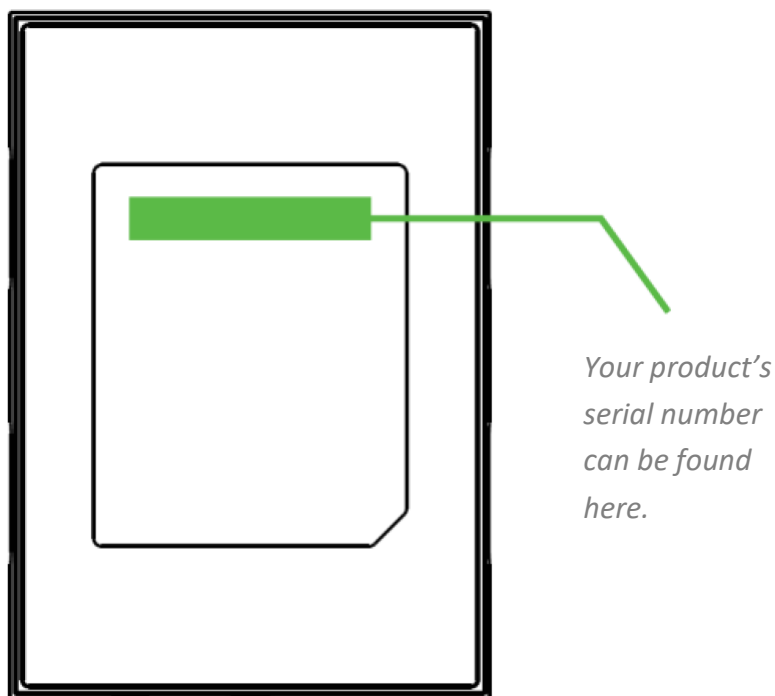
TECHNICAL SUPPORT

What you'll get:

- 1 year limited manufacturer's warranty for the Razer Chroma HDK Module.
- 6 months limited manufacturer's warranty for the LED strips.
- Free online technical support at support.razer.com

3. TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

- Razer Chroma HDK with 4 channel lighting output
- USB connection for data and power
- DC output for additional power and brightness
- Included Molex to DC power adapter for internal case lighting
- Double sided adhesive tape for mounting
- Razer Synapse enabled
- Razer Chroma SDK enabled

APPROXIMATE SIZE & WEIGHT

Razer Chroma HDK module

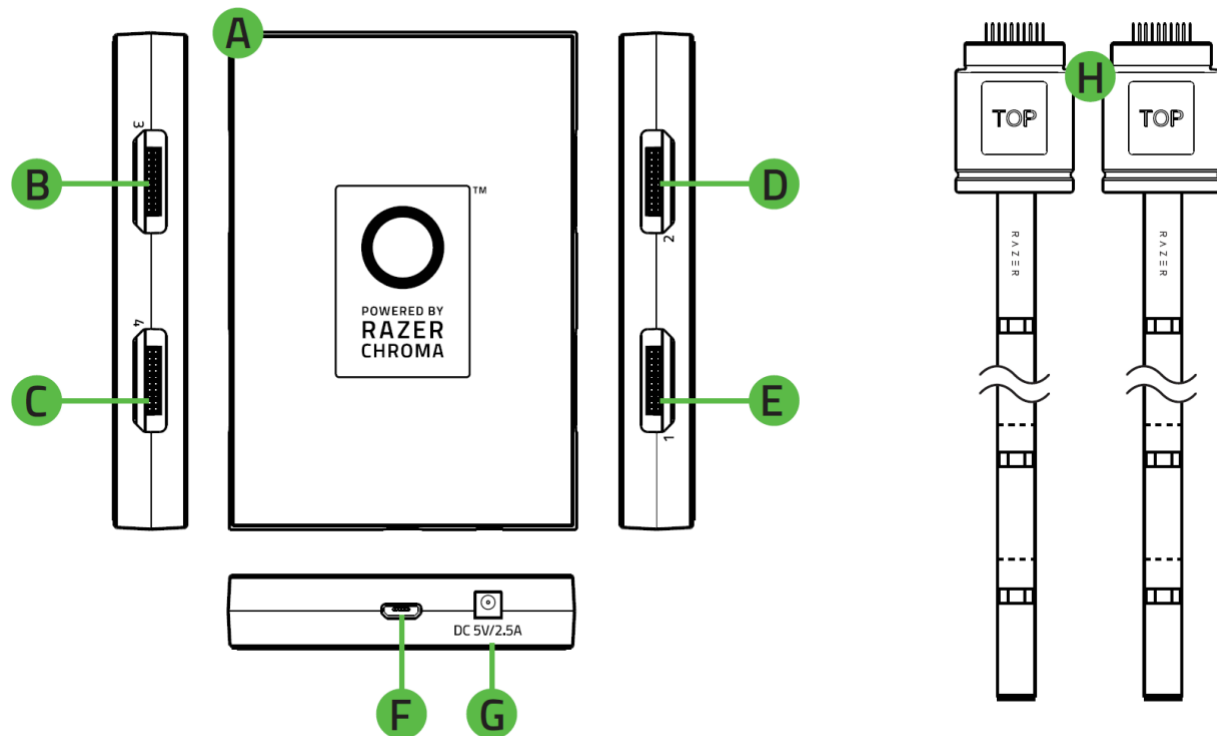- Length: 10 cm / 3.9 in
- Width: 7 cm / 2.7 in
- Height: 1.5 cm / 0.6 in
- Weight: 75 g / 0.17 lbs
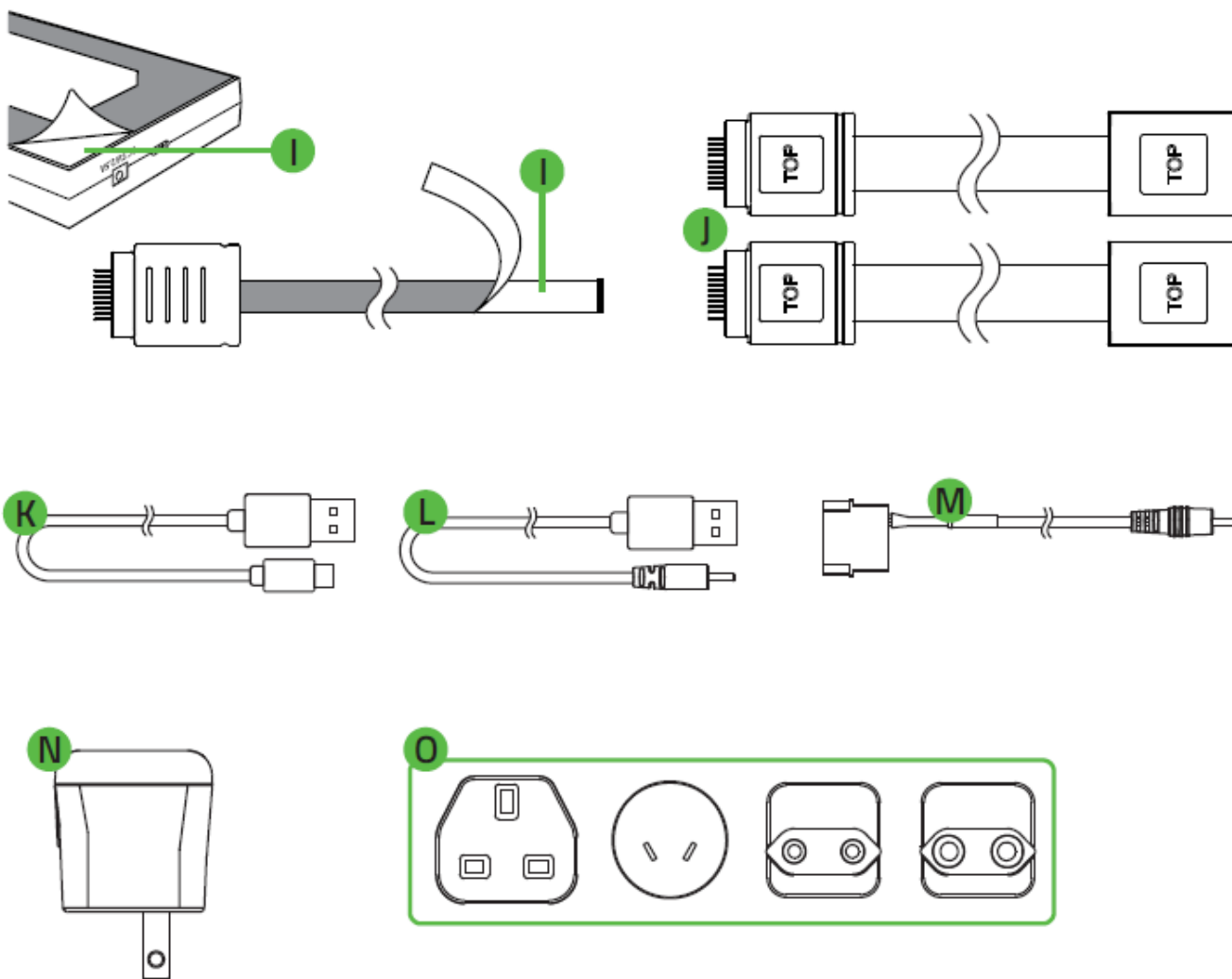
Cable lengths

- 16-LED strip: 50 cm / 19.6 in
- LED extension cable: 50 cm / 19.69 in
- Molex to DC Cable: 30 cm / 11.81 in
- USB to Micro-USB cable: 100 cm / 39 in
- USB to DC cable: 150 cm / 59 in

4. DEVICE LAYOUT

A. Razer Chroma HDK module

B. LED channel 3 port

C. LED channel 4 port

D. LED channel 2 port

E. LED channel 1 port

F. Micro-USB port

G. Power port

H. 2x 16-LED strips

I. Adhesive tapes

J. 2x LED extension cables

K. USB to Micro-USB cable

L. USB to DC cable

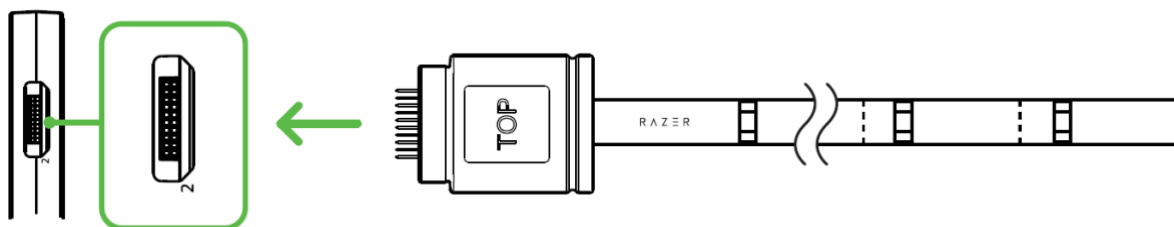M. Molex to DC cable

N. Power adapter

O. Interchangeable plugs

5. SETTING UP YOUR RAZER CHROMA HDK

To set up your Razer Chroma HDK, simply do the following:

1. Connect an LED strip's connector to any of the Razer Chroma HDK module's LED channel ports.

> 🛈 *Align the connector to the desired port first before plugging it in, to avoid damaging the connector's pins.*

2. You may customize the length of an LED strip by using the included LED extension cables and/or by trimming an LED strip on any of its designated cutting areas.
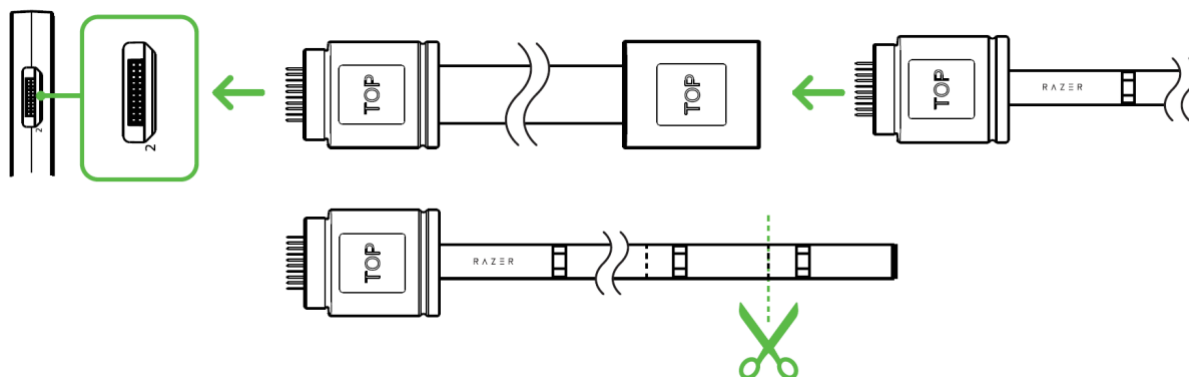
Only use the designated cutting areas of an LED strip. Once removed, the trimmings of an LED strip can neither be reattached nor reused.

3. You may use the adhesive layers on both the Razer Chroma HDK module and the LED strips to fasten each component to a clean, dry, and flat surface.
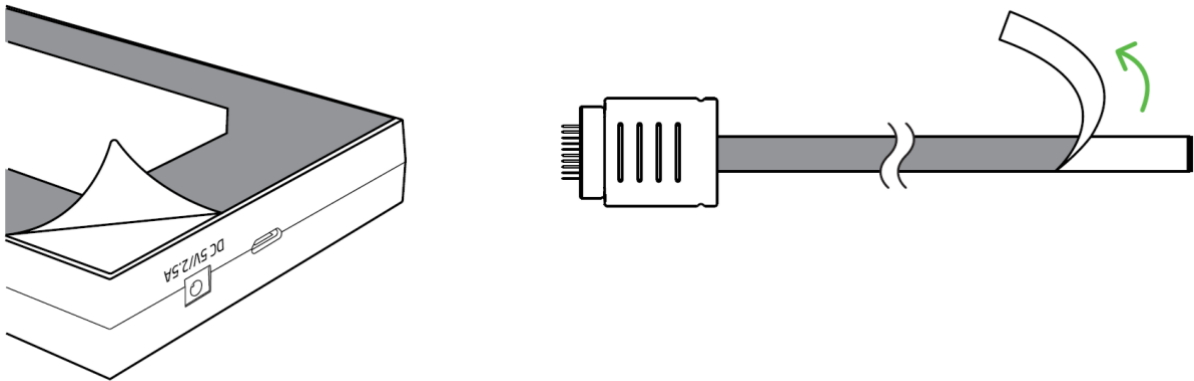
4. Power your Razer Chroma HDK using any of the methods below that best fits your setup:

METHOD 1: VIA POWER OUTLET

Select the appropriate power plug for your region and attach it to the power adapter. You may then connect the power adapter to the Razer Chroma HDK module using the included USB to DC cable, and plug it to a power outlet.


USB to DC cable
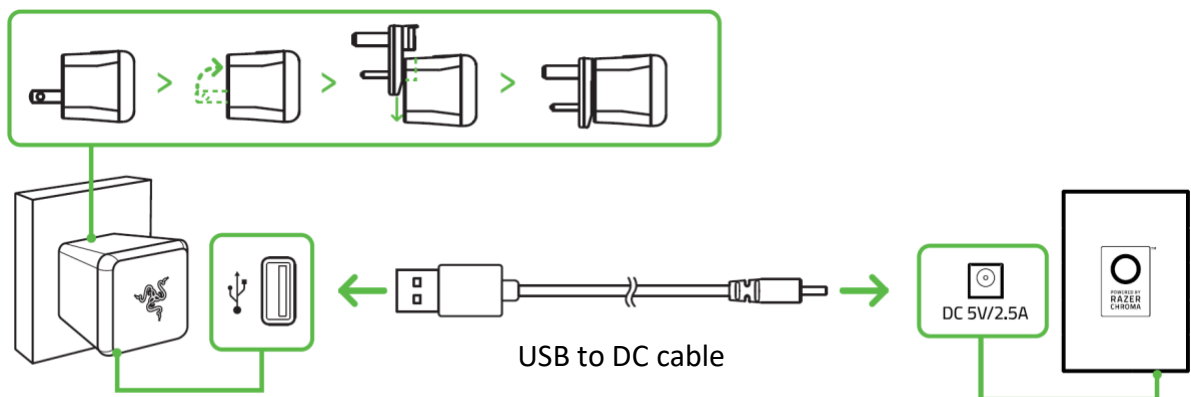
METHOD 2: VIA INTERNAL PC POWER SUPPLY

Warning: Please turn off your PC before proceeding with this method to avoid electric shocks.

This method is recommended if you plan to situate the LED strips inside your PC's chassis. Connect the Razer Chroma HDK module to the Molex socket of your PC's power supply unit using the included Molex to DC cable.

Molex to DC cable
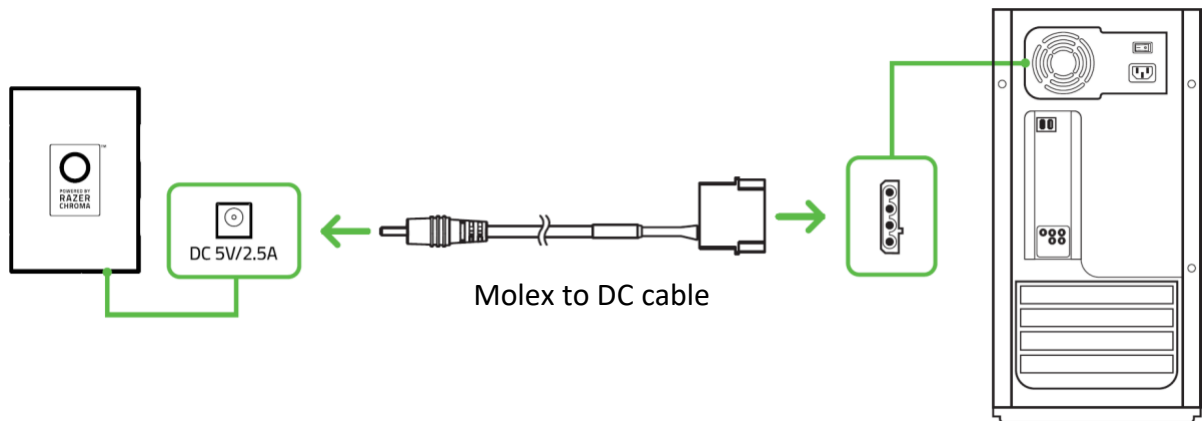
5. Connect the Razer Chroma HDK module to your PC using the included USB to Micro-USB cable.
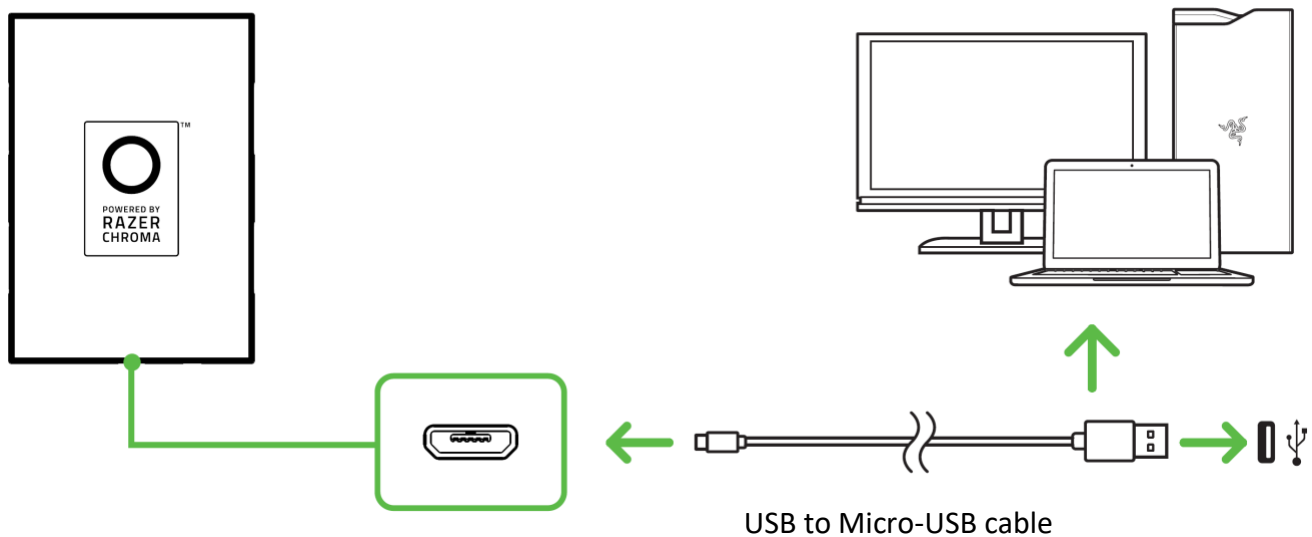

USB to Micro-USB cable
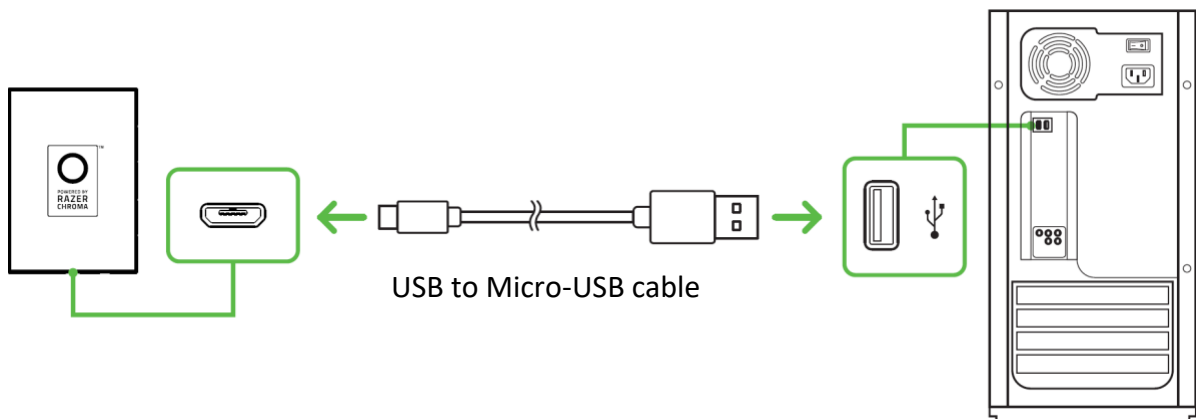
ⓘ *In the event that none of the powering methods are present, this connection can be used as an optional power source for your Razer Chroma HDK. However, it is recommended to*

use this connection together with the power port to maximize the brightness levels of all connected LED strips.

6. INSTALLING RAZER SYNAPSE FOR YOUR RAZER CHROMA HDK

USB to Micro-USB cable

Step 1: Make sure that the Razer Chroma HDK is connected to your PC using the included USB to Micro-USB cable.

Step 2: Install Razer Synapse when prompted* or download the installer from razer.com/synapse.

Step 3: Register for a Razer ID or log in with an existing Razer ID.

*Applicable for Windows 8 or later.*

7. CONFIGURING YOUR RAZER CHROMA HDK

ⓘ *Internet connection is required for installation, updates and cloud-based features. Registering for a Razer ID account is recommended, but optional. All listed features are subject to change based on the current software version, connected device(s), and supported apps and software.*

SYNAPSE TAB

The Synapse tab is your default tab when you first launch Razer Synapse. This tab allows you to navigate the Dashboard subtab.
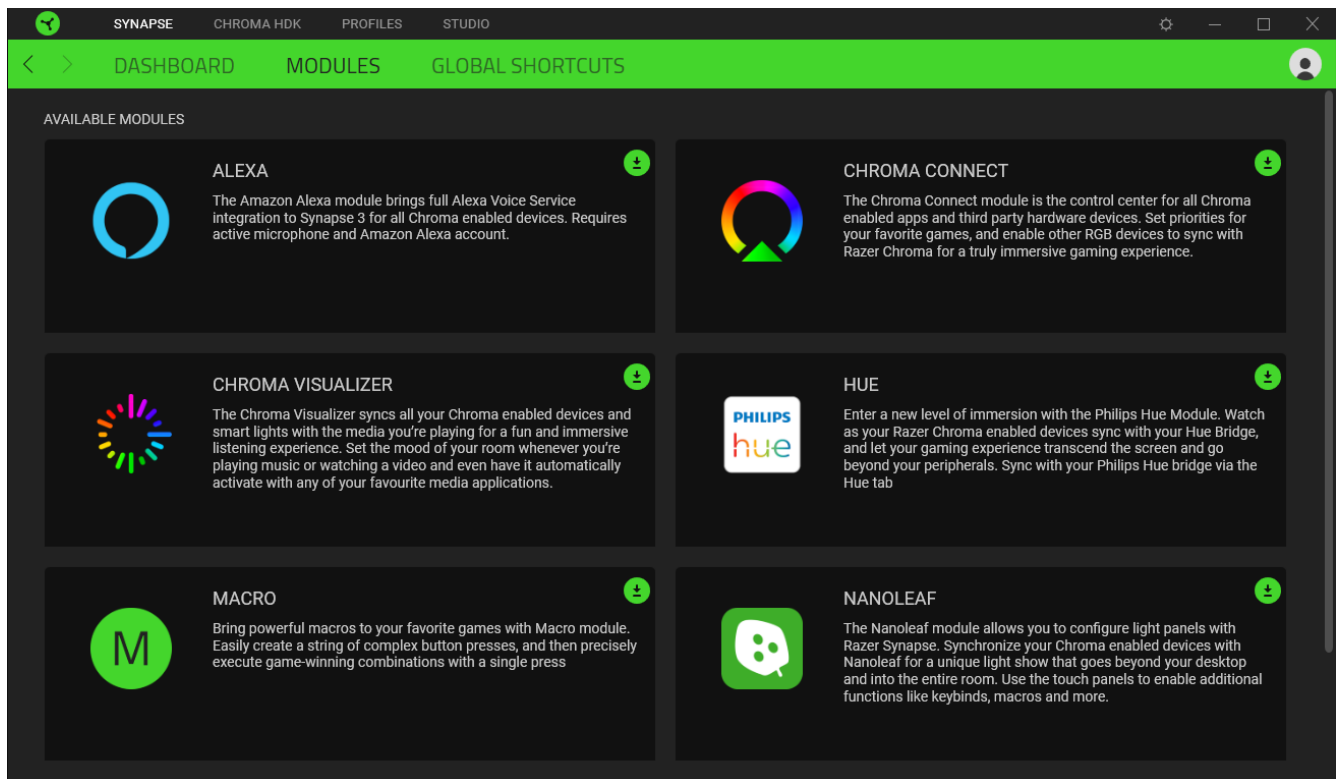
Dashboard

The Dashboard subtab is an overview of your Razer Synapse where you can access all your Razer devices, modules, and online services.
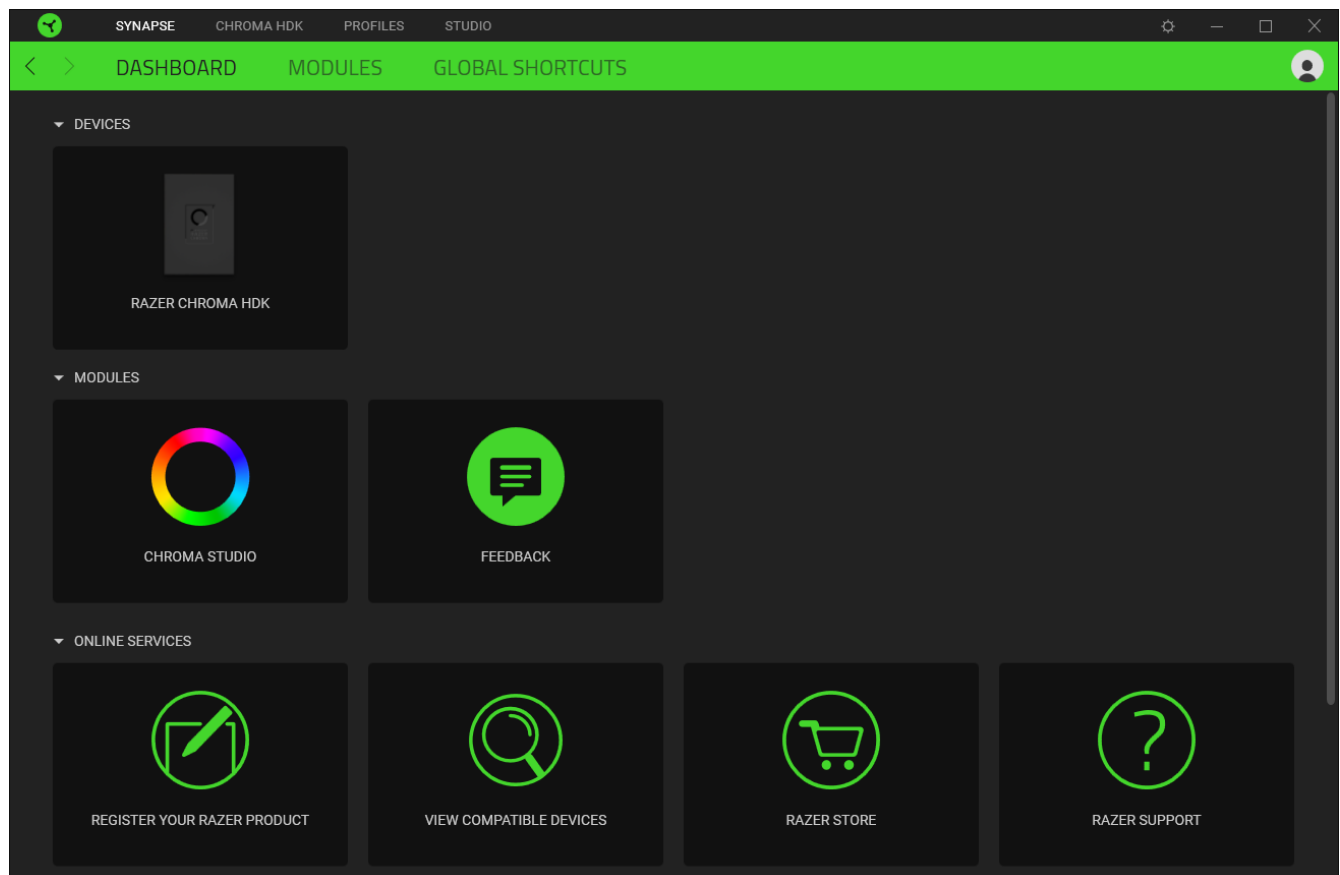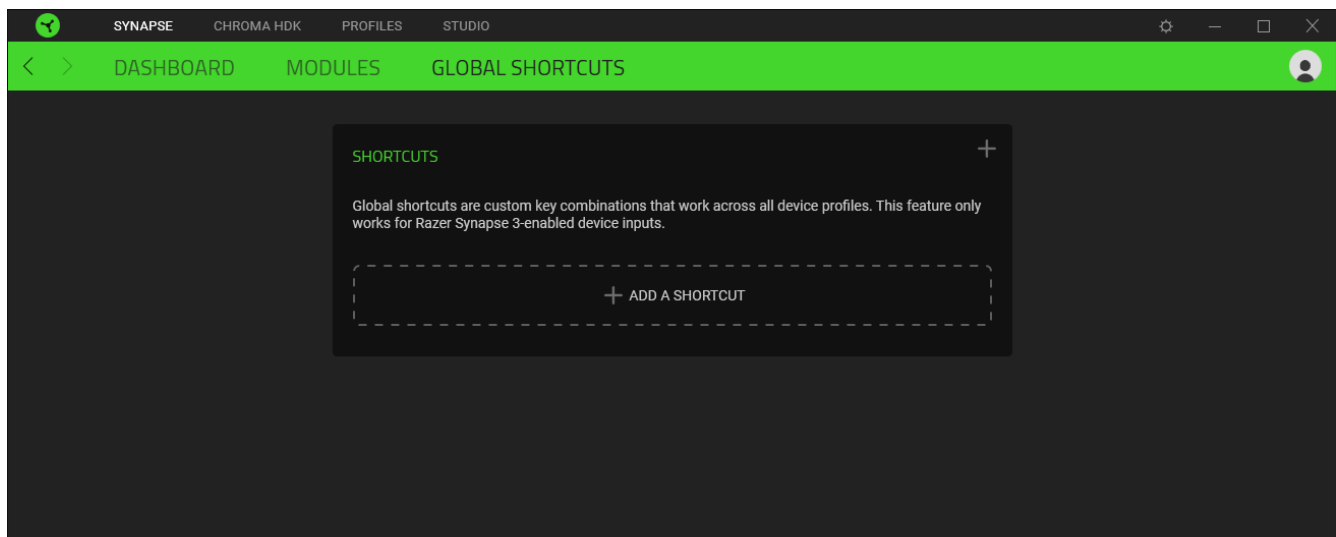
Modules

The Modules subtab displays all installed and available modules for installation.

Global Shortcuts

Bind operations or Razer Synapse functions to custom key-combinations from any Razer Synapse-enabled device inputs which apply across all device profiles. Learn more about Profiles

🛈 *Only Razer Synapse-enabled device inputs will be recognized.*

CHROMA HDK

The Chroma HDK tab is the main tab for your Razer Chroma HDK. From here, you can customize the LED strips' lighting properties such as its brightness, lighting behavior and effects. Changes made under this tab are automatically saved to your system and cloud storage.

Lighting

The Lighting subtab enables you to modify your Razer device's light settings.
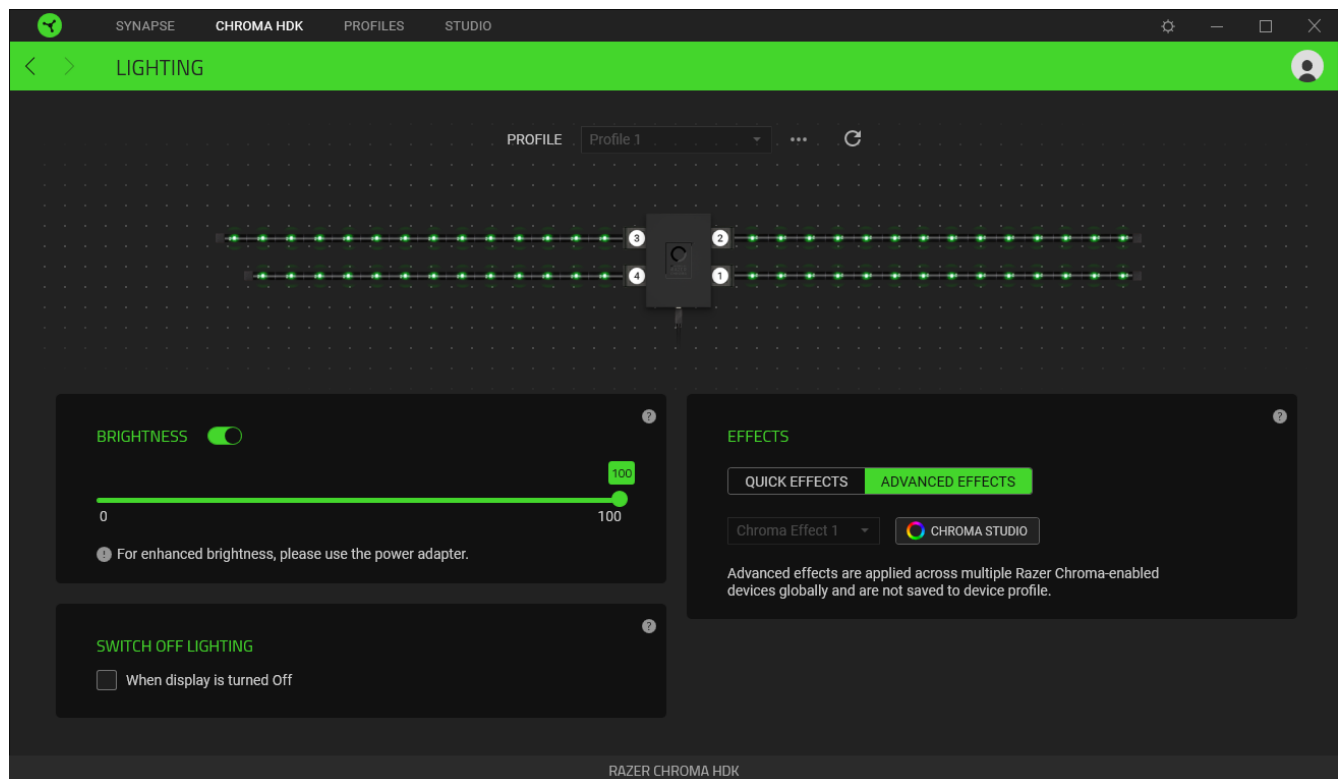
ℹ️ *The lighting effect will revert to the default setting (spectrum cycling), whenever the Razer Chroma HDK module's USB connection to your computer is removed.*

Profile

A Profile is a data storage for keeping all your Razer devices' settings. By default, the profile name is based on your system's name. To add, import, rename, duplicate, export, or delete a profile, simply press the profile's corresponding Miscellaneous button (●●●).

Refresh Trigger Strips

If you have connected an LED strip to the Razer Chroma HDK module, pressing the Refresh button (🔄) will update the reflected number of LED strips connected to the Razer Chroma HDK module. Alternatively, you may also press F5 to refresh the displayed LED strips.

Brightness

You can turn off your Razer device's lighting by toggling the Brightness option or increase/decrease the luminance using the slider.

🛈 *To maximize the brightness levels of the LED strips, we suggest using the USB to Micro-USB connection with other powering methods.*

Effects

A number of effects can be selected and applied to the LED strips, as listed here:

	Name	Description	How to set up
	Spectrum cycling	The LEDs will cycle between 16.8 million colors indefinitely	No further customization required
	Wave	The lighting will scroll using the direction selected	Select a wave direction
	Static	The LEDs will remain lit in the selected color	Select a color
	Breathing	The lighting will fade in and out of the selected color(s)	Select up to 2 colors or randomize colors
	Starlight	The LEDs will have a chance of fading in and out at a random time and duration	Select up to 2 colors or randomize colors and select a duration

If you have other supported Razer Chroma-enabled devices, you can synchronize their quick effects with your Razer device by clicking the Chroma Sync button (🔵).

🛈 *Only devices that support the selected lighting effect will synchronize.*

Advanced Effects

The Advanced Effects option allows you to choose a Chroma Effect you want to use on your Razer Chroma-enabled device. To start making your own Chroma Effect, simply press the Chroma Studio button (⬤ CHROMA STUDIO).

Switch Off Lighting

This is a power saving tool which allows you to disable all lighting in response to your system's display turning off.

PROFILES TAB

The Profiles tab is a convenient way of managing all your profiles and linking them to your games and applications.

Devices

View which games are linked to each device's profiles or which Chroma Effect is linked to specific games using the Devices subtab.
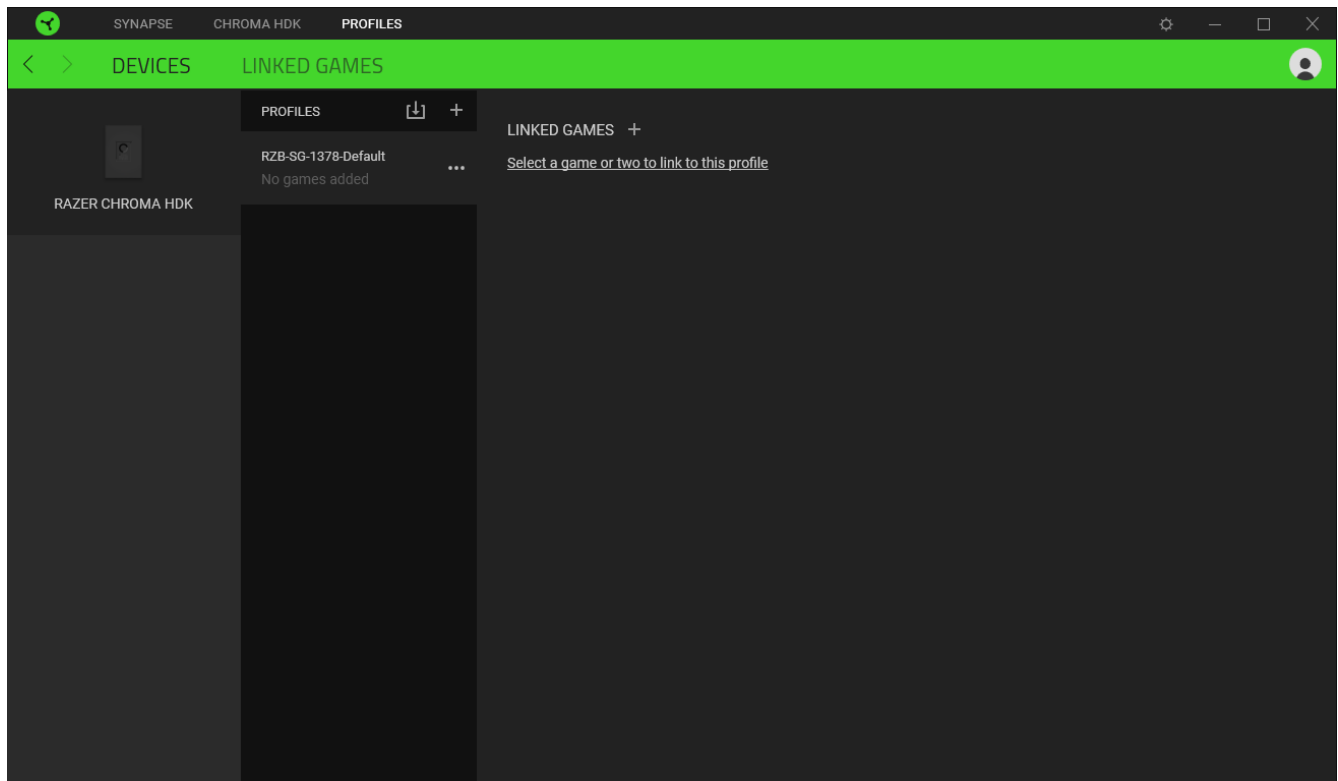
You can import Profiles from your computer or from the cloud through the import button (⬆) or create new profiles within the selected device using the add button (＋). To rename, duplicate, export, or delete a profile, simply press the Miscellaneous button (•••). Each profile can be set to automatically activate when you run an application using the Linked Games option.

Linked Games

The Linked Games subtab gives you the flexibility to add games, view devices that are linked to games, or search for added games. You can also sort games based on alphabetical order, last played, or most played. Added games will still be listed here even if it is not linked to a Razer device.
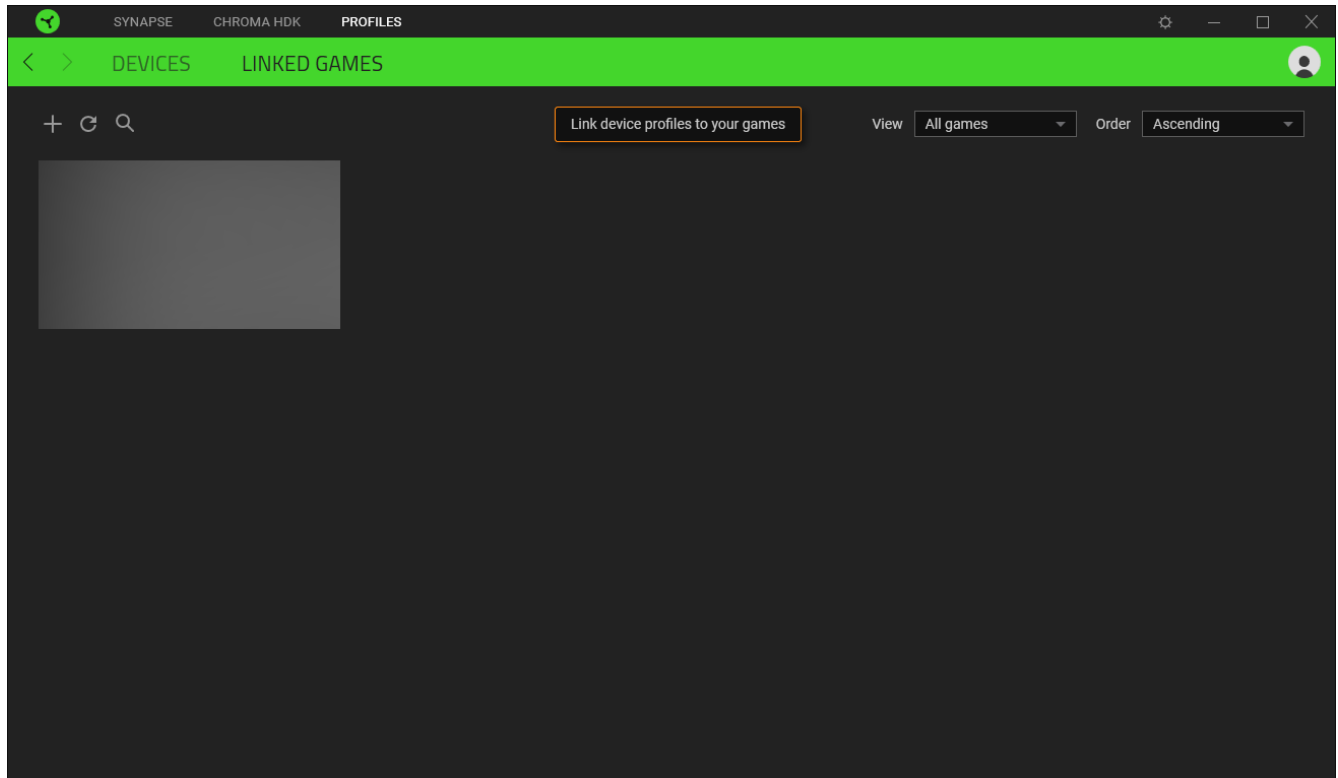
To link games to connected Razer devices or Chroma Effects, simply click on any game from the list, and then click **Select a device and its profile to launch automatically during gameplay** to select the Razer device or Chroma Effect it will link with. Once linked, you may click on the Miscellaneous button (●●●) of the corresponding Chroma Effect or device to select a specific Chroma Effect or profile.

SETTINGS WINDOW

The Settings window, accessible by clicking the (☼) button on Razer Synapse, enables you to configure the startup behavior and display language of Razer Synapse, view the master guides of each connected Razer device, or perform factory reset on any connected Razer device.
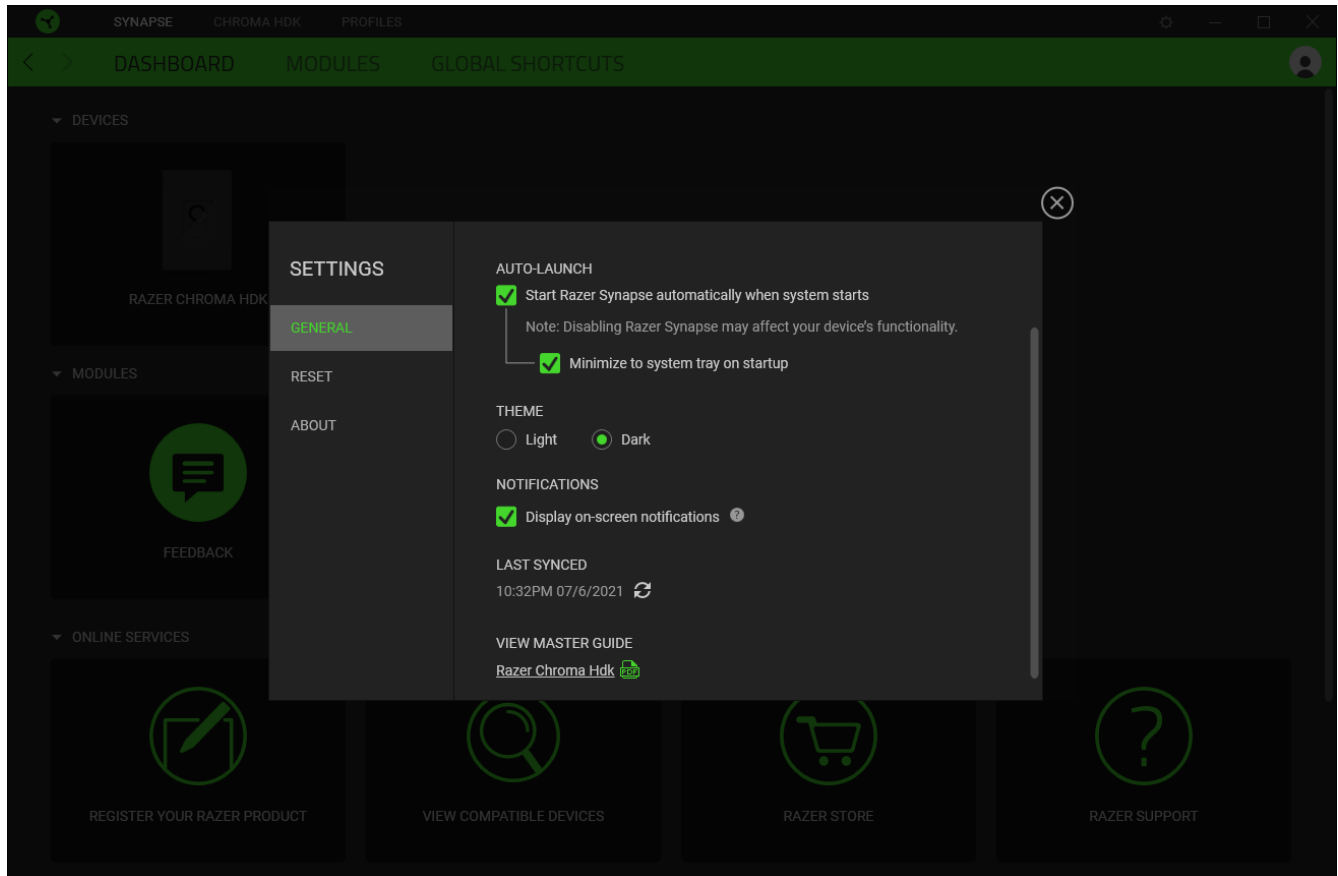
General tab

The default tab of the Settings window. The General tab enables you to change the software's display language, start-up behavior, display theme, and on-screen notifications display. You may also manually sync your profiles to the cloud (⟳) or view the master guide of all connected Razer devices and installed modules.

Reset tab

The Reset tab allows you to perform a factory reset on all connected Razer devices with on-board memory and/or reset Razer Synapse tutorials to acquaint yourself again with Razer Synapse's new features on its next launch.

🛈 *By resetting a Razer device, all profiles stored on the selected device's on-board memory will be erased.*

About tab

The About tab displays brief software information, copyright statement and provides relevant links for its terms of use. You may also use this tab to check for software updates, or as a quick access to Razer's social communities.

8. SAFETY AND MAINTENANCE

SAFETY GUIDELINES

In order to achieve maximum safety while using your Razer Chroma Hardware Development Kit (HDK), we suggest that you adopt the following guidelines:

- Should you have trouble operating the device properly and troubleshooting does not work, unplug the device and contact the Razer hotline or go to support.razer.com for support. Don't attempt to service or fix the device yourself at any time.

- Don't take apart the device and don't attempt to operate it under abnormal current loads. Doing so may void your warranty.

- Only use accessories provided with the device and only purchase accessories made and/or approved by Razer.

- Power off the device before making any relocation, modifications, and/or connecting/disconnecting any component.

- Always handle all included accessories with care. When plugging or unplugging any accessory, always grip its plug/connector.

- When connecting the device to your PC's power supply unit and/or connecting LED strips to the device powered by this method, please turn off your PC first to avoid electric shocks.

- Don't use or install the device and its components near water, moisture, solvents, or other wet surfaces, nor expose these components to high temperatures or direct sunlight.

- Keep the device and its components away from liquid, humidity or moisture. Operate the device and its components only within the specific temperature range of 0°C (32°F) to 45°C (113°F). Should the temperature exceed this range, unplug and switch off the device in order to let the temperature stabilize to an optimal level.

MAINTENANCE AND USE

The Razer Chroma HDK requires minimum maintenance to keep it in optimal condition. Once a month we recommend you unplug the Razer Chroma HDK from the USB port and power source, remove all connected LED strips and cables, then clean each component as needed using a soft cloth or cotton swab to prevent dirt buildup. Do not use soap or harsh cleaning agents.

9. LEGALESE

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