



REPUBLIC OF  
GAMERS

# RAIDR EXPRESS

## PCI Express SSD

### User Guide

**Revised Edition V2**

**May 2013**

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ASUSTeK Computer Inc.  
Legal Compliance Dept.  
15 Li Te Rd.,  
Beitou, Taipei 112  
Taiwan

In your request please provide the name, model number and version, as stated in the About Box of the product for which you wish to obtain the corresponding source code and your contact details so that we can coordinate the terms and cost of shipment with you.

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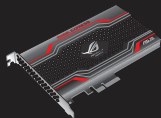
# Welcome!

Thank you for purchasing a RAIDR Express card.

The RAIDR Express card is a PCIE SSD storage card that allows you to maximize the performance of your system using SSD technology and these exclusive ROG features: RAMDisk, SSD TweakIt, ROG HybriDisk, ROG CrystalDiskMark, DuoMode, and Kaspersky® Anti-Virus.

## Package contents

Check if the following items are included with your package. If any of the following items are damaged or missing, contact your retailer.



RAIDR Express card



User guide



Support CD

## Product activation key

Refer to the following product activation key on the support CD to activate your ROG HybriDisk.

### PRODUCT ACTIVATION KEY

SAVE THE KEY - This is official authorization of license

ROG HybriDisk

80212-0001036

XXXXX-XXXXX-XXXXX-XXXXX

## RAIDR Express card specifications summary

<b>Interface</b>	PCIe 2.0 x2
<b>Capacity</b>	240 GB
<b>Controller</b>	Dual LSI® SandForce SF-2281
<b>Flash Memory</b>	TOSHIBA® 19nm 16K Page Size MLC Sync-NAND Flash
<b>Sequential Read Speed*</b>	830 MB/s
<b>Sequential Write Speed*</b>	810 MB/s
<b>4K Read IOPS*</b>	Up to 100,000 IOPS
<b>4K Write IOPS*</b>	Up to 100,000 IOPS
<b>Bootable</b>	Supported
<b>MTBF</b>	620,000 Hours
<b>Data Encryption</b>	128bit AES
<b>Data Reliability</b>	<ul style="list-style-type: none"><li>• Up to 55 bits correctable per 512-byte sector (BCH)</li><li>• Unrecoverable read errors: Less than 1 sector per <math>10^{16}</math> bits read ECC on all internal memory; full end-to-end CRC protection; RAISE</li></ul>
<b>Native Command Queuing</b>	Support up to 32 commands

<b>Dimension (mm)</b>	157(L)*120(W)*20(H)
<b>Weight</b>	243g
<b>Temperature</b>	0° C - 70° C
<b>Compatible OS</b>	Windows® 7 and Windows® 8
<b>TRIM</b>	TRIM command supported
<b>Latency</b>	<0.1ms
<b>UEFI boot compliant</b>	Supported
<b>Windows® 8 Secure Boot</b>	Supported
<b>AHCI Compliant</b>	Driver-less installation
<b>Features</b>	RAMDisk
	SSD TweakIt
	ROG HybriDisk
	ROG CrystalDiskMark
	Secure Erase/Firmware Update
	Kaspersky Anti-Virus 2013

\* (1) Performance may vary depending on system configuration

(2) Testing results were based on ATTO Disk Benchmark and Iometer

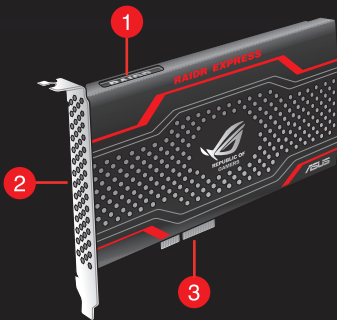
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**NOTE:** Specifications are subject to change without prior notice.

---

# Product Overview

**NOTE:** The following drawings are for reference only. Actual product specifications may vary.



## 1 RAIDR Express card LED indicator - Solid Red

This LED light indicates that the RAIDR Express card is connected to a PCIe slot and your system is turned on.

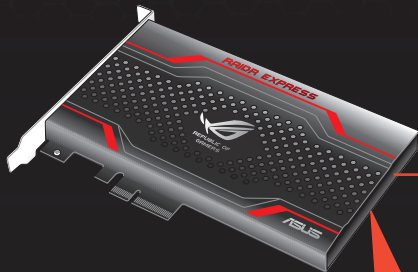
## 2 RAIDR Express card LED indicator - Blinking Orange

This LED light indicates that your system is currently accessing the RAIDR Express card.

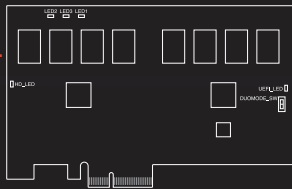
## 3 RAIDR Express card connector

This allows you to connect the RAIDR Express card using an available PCIe x4, PCIe x8, or PCIe x16 slot on your motherboard.

## Inside your RAIDR Express card



### 4 RAIDR Express SSD



#### 4 RAIDR Express SSD (Solid State Drive)

The RAIDR Express card stores data using a SSD made up of integrated circuit assemblies that store data at much faster speed. The SSD allows you to boot up and launch applications almost instantaneously with lesser power consumption.

#### 5 DuoMode switch

Move the switch to the right to enable the UEFI mode while using your RAIDR Express card.

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**WARNING!** Turn off your system before moving the DuoMode switch.

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**NOTE:** For more details on the DuoMode feature, refer to the ROG Exclusive Features section of this manual.

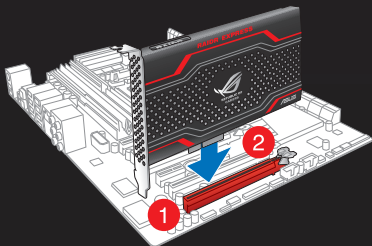
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#### 6 DuoMode LED indicator - Solid Orange

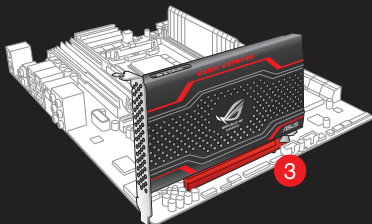
This DuoMode LED light indicates that the UEFI mode is currently enabled.

# Hardware installation

**NOTE:** The following illustrations are for reference only. The motherboard layout may vary with models, but the installation steps of the RAIDR Express card remain the same.



1. Locate an available PCIe x4, PCIe x8, or PCIe x16 slot on your motherboard.
2. Align and insert the RAIDR Express card into this slot.



3. Ensure that the RAIDR Express card is completely seated on the PCIe slot.

## ROG Exclusive Features

Install the following software features using the support CD that comes with your package.

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**NOTE:** For more details on how to install these features, refer to the Software Installation section in this user guide.

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### Republic of Gamers

The Republic of Gamers offers you the best of the best. We offer the best hardware engineering, the fastest performance, the most innovative ideas, and we welcome the best gamers to join in. In the Republic of Gamers, mercy rules are only for the weak, and bragging rights mean everything. We believe in making statements and we excel in competitions. If your character matches our trait, then join the elite Republic of Gamers and make your presence felt.



### RAMDisk

RAMDisk is an innovative program that reserves a part of your system's memory and turns it into a high-speed virtual drive where you can store cache files and game apps for instant access. By optimizing your RAIDR Express card's SSD, RAMDisk allows you to automatically backup, update, and restore files.

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**NOTE:** RAMDisk only supports 64-bit operating systems.

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## DuoMode

Your RAIDR Express card comes with a DuoMode switch that allows you to choose between using the legacy and UEFI modes of your system. Through DuoMode, you can ensure better compatibility and support for new Windows® 8 features.



## SSD TweakIt

Protect your RAIDR Express card's SSD and maintain an organized system that runs smoothly using SSD TweakIt. This program includes data-writing options that allow you to accelerate your computer's performance while protecting the life span of your RAIDR Express card's SSD.

## Secure Erase

Restore your RAIDR Express card to its factory settings using Secure Erase. This feature allows you to securely remove all of the data stored in your RAIDR Express card, helping fix performance issues caused by accumulated files and frequent data-writing.

## Firmware Updater

Keep your RAIDR Express card up-to-date using the Firmware Updater. Using this feature, you can download the latest firmware versions, fixes, and improvements that can help maximize and further enhance the performance of your RAIDR Express card.



## **ROG HybriDisk**

Get the most out of your HDD (Hard Disk Drive) and SSD when it comes to maximizing storage space using ROG HybriDisk. This feature optimizes your SSD by turning it into a disk cache for all frequently-used tasks and applications so you can reserve your hard disk drive for other important storage needs.



## **ROG CrystalDiskMark**

The Republic of Gamers brings you CrystalDiskMark as a SSD benchmark software that allows you to test a specific drive's performance. It uses several components, such as file size, file position, and fragmentation, to inform you how fast specific drives currently read or write data.

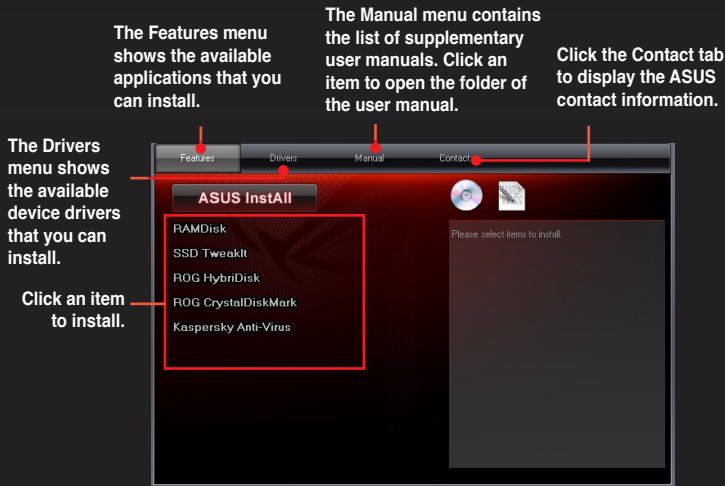


## **Kaspersky® Anti-Virus**

Kaspersky® Anti-Virus Personal offers premium antivirus protection for individual users and home offices. It is based on advanced antivirus technologies. The product incorporates the Kaspersky® Anti-Virus engine, which is renowned for malicious program detection rates that are among the industry's highest.

## Software installation

Place the support CD into the optical drive. The CD automatically displays the Drivers menu if Autorun is enabled in your computer. Click each menu tab and select the items you want to install.



**NOTE:** If Autorun is NOT enabled in your computer, browse the contents of the support CD to locate the file ASSETUP.EXE from the BIN folder. Double-click the ASSETUP.EXE to run the CD.

## Driver installation

The RAIDR Express card works even without the driver. However, you may refer to the following procedures if you opt to install the device driver for your RAIDR Express card.

1. Connect the RAIDR Express card to the motherboard. Refer to the Hardware Installation for details.
2. Insert the support CD into the optical drive.
3. Install the **Marvell Magni driver** application.
4. Follow the onscreen instructions to complete the installation process.

# Notices

## Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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**WARNING!** The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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## IC: Canadian Compliance Statement

Complies with the Canadian ICES-003 Class B specifications. This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada. Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Cet appareil est conforme aux normes CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes :

- (1) cet appareil ne doit pas provoquer d'interférences et
- (2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

## Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

## VCCI: Japan Compliance Statement

### VCCI Class B Statement

警告 VCCI準拠クラスB機器 (日本)

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

## KC: Korea Warning Statement

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대한민국 규정 및 준수

방통위고시에 따른 고지사항

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이 기기는 인명안전과 관련된 서비스에 사용할 수 없습니다.



## REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at <http://csr.asus.com/english/REACH.htm>.



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DO NOT throw the device in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

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## ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials. Please go to <http://csr.asus.com/english/Takeback.htm> for detailed recycling information in different regions.

## **ASUS contact information**

### **ASUSTeK COMPUTER INC.**

Address	15 Li-Te Road, Peitou, Taipei, Taiwan 11259
Telephone	+886-2-2894-3447
Fax	+886-2-2890-7798

#### ***Technical Support***

Telephone	+86-21-38429911
Online support	support.asus.com

### **ASUS COMPUTER INTERNATIONAL (America)**

Address	800 Corporate Way, Fremont, CA 94539, USA
Telephone	+1-510-739-3777
Fax	+1-510-608-4555

#### ***Technical Support***

Telephone	+1-812-282-2787
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### **ASUS COMPUTER GmbH (Germany and Austria)**

Address	Harkort Str. 21-23, D-40880 Ratingen, Germany
Fax	+49-2102-959911
Web site	www.asus.de
Online contact	www.asus.de/sales

#### ***Technical Support***

Telephone	+49-1805-010923
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**Global website:** <http://www.asus.com>

# EC Declaration of Conformity



We, the undersigned,

Manufacturer:	ASUSTeK COMPUTER INC.
Address, City:	4F, No. 150, Li-Te Rd., Peitou, Taipei 112, TAIWAN
Country:	TAIWAN
Authorized representative in Europe:	ASUS COMPUTER GmbH
Address, City:	HARKORT STR. 21-23, 40880 RATINGSSEN
Country:	GERMANY

declare the following apparatus:

Product name:	SSD Card
Model name:	RAIDR EXPRESS PX2-120GB, RAIDR EXPRESS PX2-240GB

conforms with the essential requirements of the following directives:

## 2004/108/EC EMC Directive

<input checked="" type="checkbox"/> EN 55022:2010	<input checked="" type="checkbox"/> EN 55024:2010
<input checked="" type="checkbox"/> EN 61000-3-2:2006+A2:2009	<input checked="" type="checkbox"/> EN 61000-3-3:2008
<input checked="" type="checkbox"/> EN 55013:2001+A1:2003+A2:2009	<input checked="" type="checkbox"/> EN 55020:2007+A11:2011

## 1999/5/EC R & TTE Directive

<input checked="" type="checkbox"/> EN 300 338 V1.7.1 (2006-05)	<input checked="" type="checkbox"/> EN 301 488-1 V1.8.3 (2011-08)
<input checked="" type="checkbox"/> EN 300 440-1 V1.8.1 (2010-08)	<input checked="" type="checkbox"/> EN 301 488-3 V1.4.1 (2009-08)
<input checked="" type="checkbox"/> EN 300 440-2 V1.4.1 (2010-08)	<input checked="" type="checkbox"/> EN 301 488-4 V1.4.1 (2009-05)
<input checked="" type="checkbox"/> EN 301 511 V9.0.2 (2003-03)	<input checked="" type="checkbox"/> EN 301 488-7 V1.3.1 (2005-11)
<input checked="" type="checkbox"/> EN 301 598-1 V5.2.1 (2011-05)	<input checked="" type="checkbox"/> EN 301 489-1 V1.4.1 (2007-11)
<input checked="" type="checkbox"/> EN 301 598-2 V5.2.1 (2011-07)	<input checked="" type="checkbox"/> EN 301 489-17 V2.1.1 (2009-03)
<input checked="" type="checkbox"/> EN 301 893 V1.5.1 (2011-11)	<input checked="" type="checkbox"/> EN 301 489-3 V1.3.1 (2010-08)
<input checked="" type="checkbox"/> EN 302 544-2 V1.1.1 (2009-01)	<input checked="" type="checkbox"/> EN 302 308-2 V1.2.1 (2007-06)
<input checked="" type="checkbox"/> EN 302 623 V1.1.1 (2009-01)	<input checked="" type="checkbox"/> EN 302 308-3 V1.3.1 (2007-06)
<input checked="" type="checkbox"/> EN 50360:2001	<input checked="" type="checkbox"/> EN 301 357-2 V1.4.1 (2008-11)
<input checked="" type="checkbox"/> EN 60479:2010	<input checked="" type="checkbox"/> EN 302 291-1 V1.1.1 (2005-07)
<input checked="" type="checkbox"/> EN 50365:2002	<input checked="" type="checkbox"/> EN 302 291-2 V1.1.1 (2005-07)
<input checked="" type="checkbox"/> EN 62311:2008	

## 2006/95/EC LVD Directive

<input checked="" type="checkbox"/> EN 60950-1 / A12:2011	<input checked="" type="checkbox"/> EN 60950:2002 / A12:2011
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## 2006/12/EC RoP Directive

<input type="checkbox"/> Regulation (EC) No. 1275/2008	<input type="checkbox"/> Regulation (EC) No. 2782/2009
<input type="checkbox"/> Regulation (EC) No. 642/2009	

## 2011/65/EU RoHS Directive

RoHS marking



(EC conformity marking)

Position: CEO

Name: Jerry Shen

Signature: \_\_\_\_\_

Declaration Date: 26/04/2013

Year to begin affixing CE marking: 2013

Ver: 13020

# DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.107(a)



Responsible Party Name: Asus Computer International

Address: 800 Corporate Way, Fremont, CA 94539.

Phone/Fax No: (510)739-3777/(510)608-4555

hereby declares that the product

Product Name: SSD Card

Model Number: RAIDR EXPRESS PX2-120GB,  
RAIDR EXPRESS PX2-240GB

Conforms to the following specifications:

☒ FCC Part 15, Subpart B, Unintentional Radiators

## Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name: Steve Chang / President

Signature: \_\_\_\_\_

Date: Apr. 26, 2013

Ver: 120501



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<http://ROG.ASUS.com>