

GC-TITAN RIDGE

Installation Guide/安装指南/安装指南

12WE6-TITANR-00AR



For more product details, please visit GIGABYTE's website.

Product Specification

Chip	◆ Intel® DSL7540 Thunderbolt™ 3 Controller
Back Panel Connectors	◆ 1 x DisplayPort In port, supporting a maximum resolution of 8K (7680x3840)@60 Hz <small>(Note 1) (Note 2)</small> * Support for DisplayPort 1.4 version, HDCP 2.2, and HDR. ◆ 2 x Thunderbolt™ 3 out ports (Thunderbolt™ 3 Port 1/Thunderbolt™ 3 Port 2), supporting up to 40 Gbps bandwidth and a maximum display resolution of 8K (7680x3840)@60 Hz <small>(Note 1) (Note 2)</small> ◆ 2 x Mini-DisplayPort In ports (DP_IN1/DP_IN2)
Internal Connectors	◆ 2 x 6-pin PCIe power connectors ◆ 1 x USB 2.0/1.1 header ◆ 1 x 5-pin J1 header, connecting to the motherboard THB_C header by the included THB_C header cable
Interface	◆ PCIe 3.0 interface (PCIe x4)
Data Transfer Rate	◆ 40 Gbps Bi-directional per port
Supported Operating Systems	◆ Support for Windows 10 (64-bit) with RS3 or later
Compatible Motherboards	◆ Go to GIGABYTE's website for the latest motherboard support list.

(Note 1) Actual resolutions supported are dependent on the graphics card being used.

(Note 2) Due to hardware limitations, the DisplayPort connector, Thunderbolt™ 3 connector 1, and Thunderbolt™ 3 connector 2 require signal input from external devices and support up to two display outputs at a time.

產品規格

晶片	◆ Intel® DSL7540 Thunderbolt™ 3 控制器
後方面板裝置 連接插座	◆ 1個DisplayPort輸出插座，可支援至最高8K(7680 x 3840)@60 Hz 的解析度 ^(註一) (註二) * 支援DisplayPort 1.4版本、HDCP 2.2及HDR。 ◆ 2個Thunderbolt™ 3輸出插座(Thunderbolt™ 3插座1/Thunder- bolt™ 3插座2)，最高可支援40 Gbps傳輸速度，螢幕可支援 至最高8K(7680 x 3840)@60 Hz的解析度 ^(註一) (註二) ◆ 2個Mini-DisplayPort輸入插座(DP_IN1/DP_IN2)
內接插座	◆ 2個6-pin PCIe電源插座 ◆ 1個USB 2.0/1.1插座 ◆ 1個5-pin J1插座，可經由附件的THB_C插座連接線與主機 板的THB_C插座連接
介面	◆ PCIe 3.0 介面(Pcie x4)
資料傳輸速度	◆ 每埠可支援至最高40 Gbps雙向傳輸速度
支援作業系統	◆ 支援Windows 10 (64-bit) RS3(含)以上版本
可相容主機板	◆ 請至技嘉網站查詢有關支援的主機板列表

(註一) 實際所支援的解析度會依您所使用的顯示卡而有不同。

(註二) 由於硬體限制，DisplayPort插座、Thunderbolt™ 3插座1和Thunderbolt™ 3插座2 需要外部輸入訊號，並且同時只支援兩個顯示輸出。

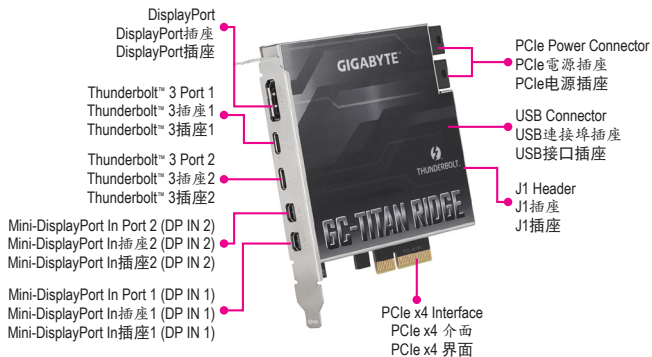
产品规格

芯片	<ul style="list-style-type: none">◆ Intel® DSL7540 Thunderbolt™ 3 控制器
后面板设备连接插座	<ul style="list-style-type: none">◆ 1个DisplayPort输出插座, 可支持至最高8K(7680 x 3840)@60 Hz的分辨率^(注一)(注二)<ul style="list-style-type: none">* 支持DisplayPort 1.4版本、HDCP 2.2及HDR。◆ 2个Thunderbolt™ 3输出插座(Thunderbolt™ 3插座1/Thunderbolt™ 3插座2), 最高可支持40 Gbps传输速度, 屏幕可支持至最高8K(7680 x 3840)@60 Hz的分辨率^(注一)(注二)◆ 2个Mini-DisplayPort输入插座(DP_IN1/DP_IN2)
内接插座	<ul style="list-style-type: none">◆ 2个6-pin PCIe电源插座◆ 1个USB 2.0插座◆ 1个5-pin J1插座, 可经由附件的THB_C插座连接线与主板上的THB_C插座连接
界面	<ul style="list-style-type: none">◆ PCIe 3.0 界面(Pcie x4)
数据传输速度	<ul style="list-style-type: none">◆ 每个接口可支持至最高40 Gbps双向传输速度
支持操作系统	<ul style="list-style-type: none">◆ 支持Windows 10 (64-bit) RS3(含)以上版本
可兼容主板	<ul style="list-style-type: none">◆ 请至技嘉网站查询有关支持的主板列表

(注一) 实际所支持的分辨率会依您所使用的显卡而有不同。

(注二) 由于硬件限制, DisplayPort插座、Thunderbolt™ 3插座1和Thunderbolt™ 3插座2 需要外部输入信号, 并且同时只支持两个显示输出。

Installing the GC-TITAN RIDGE Add-in Card • 安裝GC-TITAN RIDGE卡



Mini-DisplayPort Cable x 2
Mini-DisplayPort連接線-2條
Mini-DisplayPort連接線-2條



THB_C Header Cable x 1
THB_C插座連接線-1條
THB_C插座連接線-1條



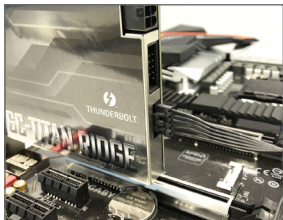
USB 2.0/1.1 Header Cable x 1
USB 2.0/1.1插座連接線-1條
USB 2.0插座連接線-1條



Step 1:
Install the GC-TITAN RIDGE add-in card in the PCIEX4 slot.

步驟1：
將GC-TITAN RIDGE卡安裝至PCIEX4插槽。

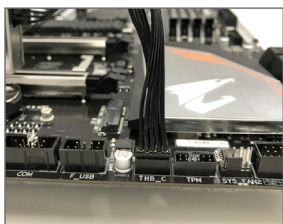
步骤1：
將GC-TITAN RIDGE卡安裝至PCIEX4插槽。



Step 2:
Connect one end of the THB_C header cable to the J1 header on the GC-TITAN RIDGE add-in card.

步驟2：
將THB_C插座連接線的一端連接至GC-TITAN RIDGE卡上的J1插座。

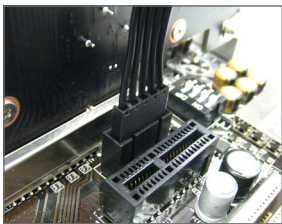
步骤2：
將THB_C插座連接線的一端連接至GC-TITAN RIDGE卡上的J1插座。



Step 3:
Connect the other end of the cable to the THB_C(Notch) header on the motherboard.

步驟3：
將THB_C插座連接線的另一端^(註1)連接至主機板上的THB_C插座。

步骤3：
將THB_C插座連接線的另一端^(註2)連接至主板上的THB_C插座。



(Note) The THB_C header cable provided has two connectors. Choose the correct connector according to the THB_C header on your motherboard.

(註) 隨貨附贈的THB_C插座連接線提供兩種接頭，請依主機板上的THB_C插座選擇接頭類型。

(注) 随货附赠的THB_C插座连接线提供两种接头，请依主板上的THB_C插座选择接头类型。



Step 4:
Connect one end of the USB cable to the USB connector on the GC-TITAN RIDGE card.

步驟4：
將USB排線的一端接至GC-TITAN RIDGE卡的USB連接埠插座。

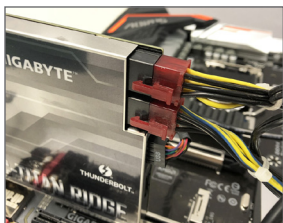
步骤4：
将USB扁平电缆的一端接至GC-TITAN RIDGE卡的USB接口插座。



Step 5:
Connect the other end of the USB cable to the F_USB connector on the motherboard.

步驟5：
再將USB排線的另一端接至主機板的F_USB插座。

步骤5：
再将USB扁平电缆的另一端接至主板的F_USB插座。



Step 6:

Connect the power cables from the power supply to the two PCIe connectors.

步驟6：

將電源供應器上的電源接頭連接至兩組PCIe電源插座。

步驟6：

將電源供應器上的電源接頭連接至兩組PCIe電源插座。

→ 7-2



→ 7-1

Step 7:

Follow the steps below to use the included Mini-DisplayPort cable to connect your graphics card to the GC-TITAN RIDGE add-in card.

7-1: Connect the cable from the DisplayPort In connector on the GC-TITAN RIDGE add-in card to the DisplayPort on your graphics card.

7-2: Connect the Thunderbolt™ device's or DisplayPort monitor's cable to the Thunderbolt™ 3 connector on the GC-TITAN RIDGE add-in card.

步驟7：

請依照下列步驟使用所附的Mini-DisplayPort連接線將您的顯示卡與GC-TITAN RIDGE卡做連結。

7-1：GC-TITAN RIDGE卡上的Mini-DisplayPort In插座需連結至顯示卡的DisplayPort。

7-2：GC-TITAN RIDGE卡上的Thunderbolt™ 3插座則需連結至Thunderbolt™裝置或DisplayPort螢幕。

步骤7:

请依照下列步骤使用所附的Mini-DisplayPort连接线将您的显卡与GC-TITAN RIDGE卡做连接。

7-1: GC-TITAN RIDGE卡上的Mini-DisplayPort In插座需链接至显卡的DisplayPort。

7-2: GC-TITAN RIDGE卡上的Thunderbolt™ 3插座则需链接至Thunderbolt™设备或DisplayPort屏幕。



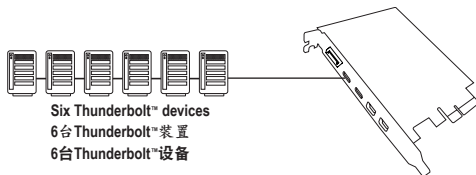
- When connecting DisplayPort monitor, if you connect the Mini-DisplayPort cable to the DP IN 1 connector, you must connect the monitor's cable to the DisplayPort connector or Thunderbolt™ 3 connector 1. If you connect the cable to the DP IN 2 connector, you must connect the monitor's cable to Thunderbolt 3 connector 2.
- 連接DisplayPort螢幕時，如果您將連接線連接至DP IN 1插座，您必須將螢幕連接線接至DisplayPort或Thunderbolt™ 3插座1；若是連接至DP IN 2，就必須將螢幕連接線接至Thunderbolt™ 3插座2。
- 連接DisplayPort顯示器時，如果您將連接線連接至DP IN 1插座，您必須將顯示器連接線接至DisplayPort或Thunderbolt™ 3插座1；若是連接至DP IN 2，就必須將顯示器連接線接至Thunderbolt™ 3插座2。
- Make sure to update the motherboard BIOS to the latest version.
- 請確認您主機板的BIOS為最新版本。
- 請確認您主板的BIOS為最新版本。

Daisy-chaining Thunderbolt™ Enabled Devices • 串接Thunderbolt™ 裝置 • 串接Thunderbolt™

Refer to the following for connecting Thunderbolt™-enabled devices in a daisy-chaining configuration. The following are single-port configurations. (Make sure the Thunderbolt™-enabled devices to be daisy-chained have both Thunderbolt™ in and out ports.)

若要以菊鏈式串接方式串連Thunderbolt™裝置，請參考下列說明。以下為單一連接埠的串接示意圖。(請先確認要串接的裝置皆具備Thunderbolt™輸出及輸入插座。)

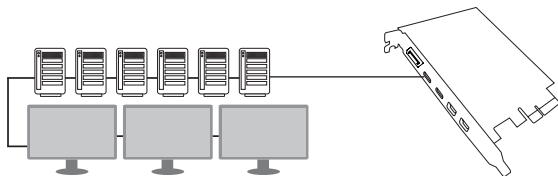
若要以菊鏈式串接方式串連Thunderbolt™設備，請參考下列說明。以下為單一接口的串接示意圖。(請先確認要串接的設備皆具備Thunderbolt™輸出及輸入插座。)



Six Thunderbolt™ devices and one native DisplayPort monitor
(A graphics card with DisplayPort is required)

6台Thunderbolt™裝置及1台原生DisplayPort螢幕
(需搭配支援DisplayPort的顯示卡)

6台Thunderbolt™設備及1台原生DisplayPort螢幕
(需搭配支援DisplayPort的顯卡)



Six Thunderbolt™ devices and three DisplayPort 1.2 monitors
(A graphics card with DisplayPort 1.2 support is required)

6台Thunderbolt™裝置及3台DisplayPort 1.2規格螢幕
(需搭配支援DisplayPort 1.2規格的顯示卡)

6台Thunderbolt™設備及3台DisplayPort 1.2規格螢幕
(需搭配支援DisplayPort 1.2規格的顯卡)

Installing the Driver • 安裝驅動程式 • 安装驱动程序

After the computer starts, install the driver for the GC-TITAN RIDGE add-in card. Insert the included driver disk and follow the on-screen instructions to install the driver.

電腦重新開機後，請安裝GC-TITAN RIDGE的驅動程式。將所附的驅動程式光碟片插入並且依螢幕指示完成驅動程式的安裝。

电脑重新启动后，请安装GC-TITAN RIDGE的驱动程序。将所附的驱动程序光盘插入并且依屏幕指示完成驱动程序的安装。

Please visit GIGABYTE's global website (<http://www.gigabyte.com>) and click on **Support & Downloads** for the latest software driver.

請至技嘉網站(<http://www.gigabyte.tw>)點選「支援與下載」查詢最新版的驅動程式。

請至技嘉網站(<http://www.gigabyte.com>)點選「支持与下载」查詢最新版的驱动程序。

FCC Notice (U.S.A. Only)

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 the 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 into an outlet on a circuit different from that to which the receiver is connected.
- ◆ Consult a dealer or experienced TV/radio technician for help.

Canada, Industry Canada (IC) Notices / Canada, avis d'Industry Canada (IC)

- ◆ This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.
- ◆ 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 classe B est conforme aux normes canadiennes ICES-003 et RSS-210.
- ◆ Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

BSMI CNS15663 限用物質含有情況標示聲明書

Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱： Equipment name	型號 (型式)： Type designation (Type)					
單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr+6)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
PCB板 PCB	○	○	○	○	○	○
結構件及風扇 Mechanical parts and Fan	-	○	○	○	○	○
晶片及其他主動零件 Chip and other Active components	-	○	○	○	○	○
連接器 Connectors	-	○	○	○	○	○
被動電子元件 Passive Components	-	○	○	○	○	○
焊接金屬 Soldering metal	○	○	○	○	○	○
助焊劑、散熱膏、標籤及其他耗材 Flux, Solder Paste, Label and other Consumable Materials	○	○	○	○	○	○
<p>備考1. "超出0.1 wt %" 及 "超出0.01 wt %" 係指限用物質之百分比含量超出百分比含量基準值。 Note 1: "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.</p> <p>備考2. "○" 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: "○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.</p> <p>備考3. "-" 係指該項限用物質為排除項目。 Note 3: The "-" indicates that the restricted substance corresponds to the exemption.</p>						

最后，我们建议您通过认识和使用此产品的节能特点(适用的话)，来实践其他环境友善的行动。回收再利用此产品所交付的内部与外部包装材(包含运输货柜)，并且正确地处理或回收再利用所使用的电池。有您的帮助，我们才能减少生产电器及电子设备所需自然资源的数量，尽可能减少最终产品的垃圾掩埋处置耗用。所以一般通过确保潜在的有害物质不会释放到环境，以及与正确的处理来增进我们的生活品质。

中华人民共和国电子信息产品中有毒有害物质或元素的名称及含量标识格式

依照中华人民共和国的有毒有害物质的限制要求(China RoHS)提供以下的表格：



关于符合中国《电子信息产品污染控制管理办法》的声明
Management Methods on Control of Pollution from Electronic Information Products
(China RoHS Declaration)

产品中有毒物质的名称及含量
Hazardous Substances Table

部件名称(Parts)	有毒物质(Hazardous Substances)					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
PCB板 PCB	○	○	○	○	○	○
结构件及风扇 Mechanical parts and Fan	x	○	○	○	○	○
芯片及其他主动零件 Chip and other Active components	x	○	○	○	○	○
连接器 Connectors	x	○	○	○	○	○
被动电子元件 Passive Components	x	○	○	○	○	○
线材 Cables	○	○	○	○	○	○
焊接金属 Soldering metal	○	○	○	○	○	○
黏焊剂、黏合剂、标签及其他耗材 Flux/Solder/Paste/Label and other Consumable Materials	○	○	○	○	○	○

These tables are prepared in accordance with the provisions of SJ/T 11364
 本表格依据SJ/T 11364的规定编制。

○ : The content of such hazardous substance in all homogeneous materials of such component is below the limit required by GB/T 26572.
 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。

x : The content of such hazardous substance in a certain homogeneous material of such component is beyond the limit required by GB/T 26572.
 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。

Declaration of Conformity

We, Manufacturer/Importer,

G.B.T. Technology Trading GmbH

Address: **Bu**Benkoppel 16, 22047 Hamburg, Germany

Declare that the product

Product Type: **PCIe add in card**

Product Name: **GC-TITAN RIDGE**

conforms with the essential requirements of the following directives:

EMC Directive 2014/53/EU:

<input checked="" type="checkbox"/> Conduction & Radiated Emissions:	EN 55032:2012+AC:2013
<input checked="" type="checkbox"/> Immunity:	EN 55024:2010+A1:2015
<input checked="" type="checkbox"/> Power-line harmonics:	EN 61000-3-2:2014
<input checked="" type="checkbox"/> Power-line flicker:	EN 61000-3-3:2013

Low Voltage Directive 2014/35/EU:

<input checked="" type="checkbox"/> Safety:	EN60950-1:2006+A11:2009+A12:2011+A2:2013
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RoHS Directive 2011/65/EU

<input checked="" type="checkbox"/> Restriction of use of certain substances in electronic equipment:	This product does not contain any of the restricted substances listed in Annex II, in concentrations and applications banned by the directive.
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CE marking



Signature: Timmy Huang

(date)

Date: Jun. 6, 2018

Name: Timmy Huang

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



Responsible Party Name: G.B.T. INC. (U.S.A.)

Address: 17358 Railroad Street

City of Industry, CA 91748

Phone/Fax No: (626) 854-9338/ (626) 854-9326

hereby declares that the product

Product Name: PCIe add-in card

Model Number: GC-TITAN RIDGE

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109 (a), Class B Digital Device

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 and (2) this device must accept any interference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: Eric Lu

Date: Jun. 6, 2018

