



iRiser™ Family Quick Start Guide



The iRiser family of NVMe test tools from SANBlaze – consisting of iRiser5, iRiser5+ iRiser6 and iRiser6SE – provide precision control of PCIe/NVMe power and control signals while continuously monitoring the power of each device under test (DUT):

iRiser Type	Description	SANBlaze System HW Compatibility	SANBlaze Minimum SW Support
iRiser5	• First iRiser for SBExpress-DT5 and RM5 systems • PCIe Gen5 lane control and glitching capability	DT5, RM5	10.8
iRiser5+	• Adds support for SANBlaze 660 M.2 Adapter for DMA power reading and 3.3V margin capability	DT5, RM5	11.0-Build2
iRiser6	• PCIe Gen6 iRiser with PCI lane control and glitching capability • Also supports SANBlaze 660 M.2 Adapter	RM5+ only	11.0-Build3
iRiser6SE	• Standard Edition PCIe Gen6 iRiser without PCI lane control or glitching capability • Also supports SANBlaze 660 M.2 Adapter	RM5+ only	11.0-Build7

The software upgrade requires the following items to proceed in the following order:

1. Update the system software to one of the minimum versions as indicated above.
 - Contact sales@sanblaze.com for the latest software
2. Verify that the Serial Boot Records (SBR) bridge firmware is upgraded to the latest, as shown in the **Verifying the SBR Images** section of the iRiser Family User Guide.

3. Power on the machine and verify the Software and SBR versions, using the following commands:
 - **grep Version= /proc/vlun/config** - to check the software version
 - **sb_flash show** - to check the SBR version
4. Power off the machine using the `poweroff` command.
5. Prepare to install the iRiser hardware into the RM5, DT5 or RM5+ chassis, noting the following:
 - For SBExpress-RM5:
 - Only iRiser5 and iRiser5+ devices can be installed in RM5
 - A maximum of four iRiser devices are supported and can be installed in slots 6, 7, 8 or 9
 - For SBExpress-DT5:
 - Only iRiser5 and iRiser5+ devices can be installed DT5
 - A maximum of three iRiser devices are supported and can be installed in slots 0, 1, or 2
 - For SBExpress-RM5+:
 - Only iRiser6 and iRiser6SE devices can be installed in RM5+
 - Up to 16 iRiser devices are supported
6. Install the iRiser into the appropriate RM5, DT5 or RM5+ chassis. Refer to the SB-Express Installation Guides for details.
7. Power on the RM5, DT5 or RM5+.
8. Verify the correct operation of the iRiser hardware, using the following command:
 - **lspci |grep SANBlaze**

In RM5 or DT5 only

- iRiser5 is Device 2015, revision d1 or higher
- iRiser5+ is Device 2035, revision fe or higher
- DT5 Motherboard is Device 2004
- RM5 Motherboard is Device 2005

For example:

lspci |grep SANBlaze

```
20:00.0 Signal processing management: SANBlaze Technology, Inc. Device 2004 (rev af)
                                         ^ DT5
22:00.0 Signal processing management: SANBlaze Technology, Inc. Device 2015 (rev d1)
                                         ^ iRiser5
23:00.0 Signal processing management: SANBlaze Technology, Inc. Device 2035 (rev fe)
                                         ^ iRiser5+
```

In RM5+ only

- iRiser6 is Device 2016, revision b2 or higher
- iRiser6SE is Device 2026, revision e2 or higher
- RM5+ Motherboard (MI5) is Device 2045
- RM6 Motherboard (MI6) is Device 2046

For example:

lspci |grep SANBlaze

```
31:00.0 Signal processing management: SANBlaze Technology, Inc. Device 2016 (rev b2)
                                         ^ iRiser6
4b:00.0 Signal processing management: SANBlaze Technology, Inc. Device 2045 (rev 6e)
                                         ^ RM5+
```

9. **Note:** If a 660 M.2 Adapter is installed within any iRiser5+ / iRiser6 / iRiser6SE device being configured, the user must enable the adapter using the following command:

- **sb_i2c2 -d <slot> -f 3V3M2 -w 1**

where: <slot> is the slot number of the iRiser5+ / iRiser6 / iRiser6SE device installed

10. This completes the iRiser installation.

11. If it becomes necessary to reset an iRiser device back to the factory default state, use the init command:

- **iriser -d <slot> init**

After the init command is used, the drive under test should re-link on PCIe and power up ready.