RapidIO Subsystem Guide

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Introduction

RapidIO is a high speed switched fabric interconnect with features aimed at the embedded market. RapidIO provides support for memory-mapped I/O as well as message-based transactions over the switched fabric network. RapidIO has a standardized discovery mechanism not unlike the PCI bus standard that allows simple detection of devices in a network.

This documentation is provided for developers intending to support RapidIO on new architectures, write new drivers, or to understand the subsystem internals.

Known Bugs and Limitations

Bugs

None. ;)

Limitations

1. Access/management of RapidIO memory regions is not supported
2. Multiple host enumeration is not supported

RapidIO driver interface

Drivers are provided a set of calls in order to interface with the subsystem to gather info on devices, request/map memory region resources, and manage mailboxes/doorbells.

Functions

> **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, line 45`)**
>
> Unknown directive type "kernel-doc".
>
> ```
> .. kernel-doc:: include/linux/rio_drv.h
>    :internal:
> ```

> **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, line 48`)**
>
> Unknown directive type "kernel-doc".
>
> ```
> .. kernel-doc:: drivers/rapidio/rio-driver.c
>    :export:
> ```

> **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, line 51`)**
>
> Unknown directive type "kernel-doc".
>
> ```
> .. kernel-doc:: drivers/rapidio/rio.c
>    :export:
> ```

Internals

This chapter contains the autogenerated documentation of the RapidIO subsystem.

Structures

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, **line 63)**

Unknown directive type "kernel-doc".

```
.. kernel-doc:: include/linux/rio.h
   :internal:
```

Enumeration and Discovery

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, **line 69)**

Unknown directive type "kernel-doc".

```
.. kernel-doc:: drivers/rapidio/rio-scan.c
   :internal:
```

Driver functionality

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, **line 75)**

Unknown directive type "kernel-doc".

```
.. kernel-doc:: drivers/rapidio/rio.c
   :internal:
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, **line 78)**

Unknown directive type "kernel-doc".

```
.. kernel-doc:: drivers/rapidio/rio-access.c
   :internal:
```

Device model support

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, **line 84)**

Unknown directive type "kernel-doc".

```
.. kernel-doc:: drivers/rapidio/rio-driver.c
   :internal:
```

PPC32 support

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\admin-guide\[linux-master][Documentation][admin-guide]rapidio.rst, **line 90)**

Unknown directive type "kernel-doc".

```
.. kernel-doc:: arch/powerpc/sysdev/fsl_rio.c
   :internal:
```

Credits

The following people have contributed to the RapidIO subsystem directly or indirectly:

1. Matt Porter mporter@kernel.crashing.org
2. Randy Vinson rvinson@mvista.com
3. Dan Malek dan@embeddedalley.com

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