

# Driver for PCI Endpoint Test Function

This driver should be used as a host side driver if the root complex is connected to a configurable PCI endpoint running `pci_epf_test` function driver configured according to [1].

The "pci\_endpoint\_test" driver can be used to perform the following tests.

The PCI driver for the test device performs the following tests:

1. verifying addresses programmed in BAR
2. raise legacy IRQ
3. raise MSI IRQ
4. raise MSI-X IRQ
5. read data
6. write data
7. copy data

This misc driver creates `/dev/pci-endpoint-test.<num>` for every `pci_epf_test` function connected to the root complex and "ioctls" should be used to perform the above tests.

## ioctl

`PCITEST_BAR:`

Tests the BAR. The number of the BAR to be tested should be passed as argument.

`PCITEST_LEGACY_IRQ:`

Tests legacy IRQ

`PCITEST_MSI:`

Tests message signalled interrupts. The MSI number to be tested should be passed as argument.

`PCITEST_MSIX:`

Tests message signalled interrupts. The MSI-X number to be tested should be passed as argument.

`PCITEST_SET_IRQTYPE:`

Changes driver IRQ type configuration. The IRQ type should be passed as argument (0: Legacy, 1:MSI, 2:MSI-X).

`PCITEST_GET_IRQTYPE:`

Gets driver IRQ type configuration.

`PCITEST_WRITE:`

Perform write tests. The size of the buffer should be passed as argument.

`PCITEST_READ:`

Perform read tests. The size of the buffer should be passed as argument.

`PCITEST_COPY:`

Perform read tests. The size of the buffer should be passed as argument.

[1] Documentation/PCI/endpoint/function/binding/pci-test.rst