



Controllers Breakout Command Reference

This chapter describes the commands to configure controllers breakout.

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controller breakout (otn mode)

To configure breakout controller in otn mode, use the **controller optics breakout-mode otn** command in the config mode.

controller optics *R/S/I/P* { **breakout-mode** *lane id* } { **otn** } { **framing** *framing type* }

| Syntax Description | Parameter | Description |
|--------------------|--------------------------|---|
| | controller optics | Name of the controller |
| | <i>R/S/I/P</i> | Displays the Rack/Slot/Instance/Port of the controller. |
| | breakout-mode | Breakout mode. |
| | otn | Type of the controller. |
| | framing | Framing for the breakout-mode. |

Command Default None

Command Modes Config mode

| Command History | Release | Modification |
|-----------------|---------------|------------------------------|
| | Release 5.2.4 | This command was introduced. |

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command contact your AAA administrator for assistance.

| Task ID | Task ID | Operation |
|---------|----------|-----------|
| | Breakout | write |

Example

The following example shows how to configure a breakout controller:

```
RP/0/RP0:hostname(config)# controller optics 0/15/0/0 breakout-mode 3 otn framing opu2
RP/0/RP0:hostname(config-optics)# commit
```

controller breakout (ethernet mode)

To configure breakout controller in ethernet mode, use the **controller optics breakout-mode ethernet** command in the config mode.

controller optics *R/S/I/P* { **breakout-mode** *lane id* } { **ethernet** } { **framing** *framing type* **mapping** *mapping type* }

| Syntax Description | | |
|--------------------------|---|--|
| controller optics | Name of the controller | |
| <i>R/S/I/P</i> | Displays the Rack/Slot/Instance/Port of the controller. | |
| breakout-mode | Breakout mode. | |
| ethernet | Type of the controller. | |
| framing | Framing for the breakout-mode. | |
| mapping | Mapping for the breakout-mode. | |

Command Default None

Command Modes Config mode

| Command History | Release | Modification |
|-----------------|---------------|------------------------------|
| | Release 5.2.4 | This command was introduced. |

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command contact your AAA administrator for assistance.

| Task ID | Task ID | Operation |
|---------|----------|-----------|
| | Breakout | write |

Example

The following example shows how to configure a breakout controller:

```
RP/0/RP0:hostname(config)# controller optics 0/15/0/0 breakout-mode 3 ethernet framing odu2
mapping gfpf
RP/0/RP0:hostname(config-optics)# commit
```

controller breakout (sonet mode)

To configure breakout controller in sonet mode, use the **controller optics breakout-mode sonet** command in the config mode.

```
controller optics R/S/I/P { breakout-mode lane id } { sonet } { framing framing type mapping mapping type }
```

| Syntax Description | Parameter | Description |
|--------------------|--------------------------|---|
| | controller optics | Name of the controller |
| | <i>R/S/I/P</i> | Displays the Rack/Slot/Instance/Port of the controller. |
| | breakout-mode | Breakout mode. |
| | sonet | Type of the controller. |
| | framing | Framing for the breakout-mode. |
| | mapping | Mapping for the breakout-mode. |

Command Default None

Command Modes Config mode

| Command History | Release | Modification |
|-----------------|-----------------|------------------------------|
| | Release 6.1.2.2 | This command was introduced. |

| Task ID | Task ID | Operation |
|---------|----------|-----------|
| | Breakout | write |

Example

The following example shows how to configure a breakout controller:

```
RP/0/RP0:hostname(config)# controller optics 0/11/0/3 breakout-mode 1 sonet framing opu2
mapping bmp
RP/0/RP0:hostname(config-optics)# commit
```

controller breakout (sdh mode)

To configure breakout controller in sdh mode, use the **controller optics breakout-mode sdh** command in the config mode.

controller optics *R/S/I/P* { **breakout-mode** *lane id* } { **sdh** } { **framing** *framing type* **mapping** *mapping type* }

| Syntax Description | |
|--------------------------|---|
| controller optics | Name of the controller |
| <i>R/S/I/P</i> | Displays the Rack/Slot/Instance/Port of the controller. |
| breakout-mode | Breakout mode. |
| sdh | Type of the controller. |
| framing | Framing for the breakout-mode. |
| mapping | Mapping for the breakout-mode. |

Command Default None

Command Modes Config mode

| Command History | Release | Modification |
|-----------------|-----------------|------------------------------|
| | Release 6.1.2.2 | This command was introduced. |

| Task ID | Task ID | Operation |
|---------|----------|-----------|
| | Breakout | write |

Example

The following example shows how to configure a breakout controller:

```
RP/0/RP0:hostname(config)# controller optics 0/11/0/3 breakout-mode 1 sdh framing opu2
mapping bmp
RP/0/RP0:hostname(config-optics)# commit
```

controller breakout (LAN PHY mode)

To configure breakout controller in LAN PHY mode, use the **controller optics breakout-mode ethernet framing packet** command in the config mode.

controller optics *R/S/I/P* **breakout-mode** *lane id* **ethernet framing** *packet*

| Syntax Description | Parameter | Description |
|--------------------|------------------------------|---|
| | controller optics | Name of the controller |
| | <i>R/S/I/P</i> | Enter the Rack/Slot/Instance/Port of the breakout controller. |
| | breakout-mode | Breakout mode. |
| | ethernet | Type of the controller. |
| | framing <i>packet</i> | Set framing type as packet. |

Command Default None

Command Modes Config mode

| Command History | Release | Modification |
|-----------------|----------------|------------------------------|
| | Release 6.1.36 | This command was introduced. |

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command contact your AAA administrator for assistance.

| Task ID | Task ID | Operation |
|---------|----------|-----------|
| | Breakout | write |

Example:

The following example shows how to configure a HundredGigE 0/15/0/0/3 breakout controller in LAN PHY mode:

```
RP/0/RP0:hostname(config)# controller optics 0/15/0/0 breakout-mode 3 ethernet framing
packet
RP/0/RP0:hostname(config-optics)# commit
```

show breakout-mode

To display details of breakout mode, use the **show breakout-mode** command in the exec mode.

show controller optics *R/S/IP* { **breakout-mode lane** *lane number* } { **capability** }

| Syntax Description | optics | Name of the port. |
|--------------------|----------------------|---|
| | <i>lane number</i> | Displays the Rack/Slot/Instance/Port of the controller. |
| | breakout-mode | Breakout mode. |
| | lane | Displays the lane number. |

Command Default None

Command Modes Exec mode

| Command History | Release | Modification |
|-----------------|-----------------|------------------------------|
| | Release 5.2.4.6 | This command was introduced. |

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command contact your AAA administrator for assistance.

| Task ID | Task ID | Operation |
|---------|----------|-----------|
| | Breakout | write |

Example

The following example shows how to configure a breakout controller.

```
RP/0/RP0:hostname# show controller optics 0/0/0/1 breakout-mode lane 1 capabilities
```

```
BreakOut Information
-----
```

| Port_no | Breakout Type | Framing | Rate | Mapping |
|----------------------------|----------------------------|-----------------------|------|------------------------|
| PT type | | | | |
| 0 | Ethernet | OPU2 framing type | None | GFP-F mapping type |
| 05 (GFP mapping) | | | | |
| 0 | Ethernet | OPU2 framing type | | GFP-F-Extended mapping |
| type | 09 (GFP mapping into OPU2) | | | None |
| 0 | Ethernet | OPU Flex framing type | 10GE | GFP-F mapping type |
| 09 (GFP mapping into OPU2) | | | | |
| 0 | Ethernet | OPU Flex framing type | None | GFP-F mapping type |
| 09 (GFP mapping into OPU2) | | | | |
| 0 | OTN | OPU2 framing type | | None mapping type |
| Traffic Dependent | | | None | |
| 0 | OTN | OPU2e framing type | | None mapping type |


```
Traffic Dependent                               None
0          OTN          OPU1f framing type      None mapping type
Traffic Dependent                               None
0          OTN          OPU2f framing type      None mapping type
Traffic Dependent                               None
0          Ethernet    Packet framing type     None mapping type
NA                                               10GE
RP/0/RP0:SIT06#
```

RP/0/RP0:hostname# **show controller optics 0/0/0/1 breakout-mode lane 1 configured**

```
BreakOut Information
-----
Breakout type  Lane  Framing          Rate      Mapping          PT type
Ethernet      1      OPU2 framing type  None      GFP-F mapping type  05 (GFP
mapping)
RP/0/RP0:SIT06#
```

■ show breakout-mode