



# Controllers Breakout Command Reference

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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
	<b>controller optics</b>	Name of the controller
	<i>R/S/I/P</i>	Displays the Rack/Slot/Instance/Port of the controller.
	<b>breakout-mode</b>	Breakout mode.
	<b>otn</b>	Type of the controller.
	<b>framing</b>	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		
<b>controller optics</b>	Name of the controller	
<i>R/S/I/P</i>	Displays the Rack/Slot/Instance/Port of the controller.	
<b>breakout-mode</b>	Breakout mode.	
<b>ethernet</b>	Type of the controller.	
<b>framing</b>	Framing for the breakout-mode.	
<b>mapping</b>	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
	<b>controller optics</b>	Name of the controller
	<i>R/S/I/P</i>	Displays the Rack/Slot/Instance/Port of the controller.
	<b>breakout-mode</b>	Breakout mode.
	<b>sonet</b>	Type of the controller.
	<b>framing</b>	Framing for the breakout-mode.
	<b>mapping</b>	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	
<b>controller optics</b>	Name of the controller
<i>R/S/I/P</i>	Displays the Rack/Slot/Instance/Port of the controller.
<b>breakout-mode</b>	Breakout mode.
<b>sdh</b>	Type of the controller.
<b>framing</b>	Framing for the breakout-mode.
<b>mapping</b>	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
	<b>controller optics</b>	Name of the controller
	<i>R/S/I/P</i>	Enter the Rack/Slot/Instance/Port of the breakout controller.
	<b>breakout-mode</b>	Breakout mode.
	<b>ethernet</b>	Type of the controller.
	<b>framing</b> <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.
	<b>breakout-mode</b>	Breakout mode.
	<b>lane</b>	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