Bay Configuration

Bay Configuration C8500-12X4QC

On C8500-12X4QC there are three built-in EPAs that are configurable.

The following table describes the port details:

Bay Number	EPA	Port Configuration	Interface numbers
Bay 0 8xSFP+	1/10G EPA	Eight 1/10G interfaces - TE0 - TE7 Disabled when 100G port in used in Bay 1	0/0/0 0/0/1 0/0/2 0/0/3 0/0/4 0/0/5 0/0/6 0/0/7 0/0/8

Bay Number	EPA	Port Configuration	Interface numbers
Bay 1 4xSFP+/1xQSFP	1/10/40/100G EPA	Four 1/10G interfaces active - TE0 - TE3 (interfaces 0/1/0 … 0/1/3) The bay can be used in the following modes: • Four 1/10G interfaces • One 40G interface active • One 100G interface. This utilizes the eight 1/10G ports of Bay 0	0/1/0 0/1/1 0/1/2 0/1/3
Bay 2 3xQSFP	40/100G EPA	Three 40G interfaces (0/1/0 to 0/1/2) One 100G interface (0/0/0) (0/0/0)	0/0/0 0/1/0 0/1/1 0/1/2

Note The speed of a 10G interface can be 1G or 10G based on the SFP transceiver plugged into to the port. Even when the speed changes the interface name is still indicated as TenGigabitEthernet.

By default , C8500-12X4QC operates Bay 1 in 10G mode and Bay 2 in 40G mode. The Bay 1 mode can be changed from 10G to 40G to 100G and vice versa. But if Bay 1 is set to 100G, all ports of Bay 0 move to *admin down* state and the ports are no longer functional.

The Bay 2 mode can be changed from 40G to 100G and vice versa. The mode change on Bay 2 does not impact traffic on Bay 1.

Use the **show platform** and **show ip interface** commands to view the bay and interface details:

```
Router#show platform
Chassis type: C8500-12X4QC

Slot      Type               State                Insert time (ago)
--------- ------------------ -------------------- -----------------
0         C8500-12X4QC       ok                   1w3d
 0/0      BUILTIN-8x1/10G    ok                   1w3d
 0/1      BUILTIN-100/40/4x10Gok                  00:04:53
 0/2      BUILTIN-100G/3X40G ok                   00:08:16
R0        C8500-12X4QC       ok                   1w3d
 R0/0                        ok, active           1w3d
 R0/1                        ok, standby          1w3d
F0        C8500-12X4QC       ok, active           1w3d
P0        AIR-AC-750W-R      ok                   1w3d
P1        AIR-AC-750W-R      ps, fail             1w3d
```

```
P2        C8500-FAN-1R      ok                    1w3d

Slot      CPLD Version      Firmware Version
--------- ----------------- --------------------------------------
0         19020715          12.2(20181120:104547) [user-gd_secur...
R0        19020715          12.2(20181120:104547) [user-gd_secur...
F0        19020715          12.2(20181120:104547) [user-gd_secur...
```

Router#show ip interface
```
Te0/0/0                 unassigned      YES NVRAM  down                down
Te0/0/1                 unassigned      YES NVRAM  down                down
Te0/0/2                 unassigned      YES NVRAM  down                down
Te0/0/3                 unassigned      YES NVRAM  down                down
Te0/0/4                 unassigned      YES NVRAM  down                down
Te0/0/5                 unassigned      YES NVRAM  down                down
Te0/0/6                 unassigned      YES NVRAM  down                down
Te0/0/7                 unassigned      YES NVRAM  down                down
Te0/1/0                 unassigned      YES NVRAM  down                down
Te0/1/1                 unassigned      YES NVRAM  down                down
Te0/1/2                 unassigned      YES NVRAM  down                down
Te0/1/3                 unassigned      YES NVRAM  down                down
Fo0/2/0                 unassigned      YES unset  down                down
Fo0/2/4                 unassigned      YES unset  down                down
Fo0/2/8                 unassigned      YES unset  down                down
GigabitEthernet0        10.104.33.213   YES NVRAM  up                  up
Router#
```

Bay Configuration Examples

The following examples show how mode can be changed on C8500-12X4QC to achieve different traffic speeds:

Examples

The following example shows how to change to 40G mode on Bay 1 of C8500-12X4QC:

```
Router(config)# hw-module subslot 0/1 mode 40G
Present configuration of this subslot will be erased and will not be restored.
CLI will not be available until mode change is complete and EPA returns to OK state.
Do you want to proceed? [confirm]

The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
*Oct 29 17:58:10.020 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 0 would be lost
*Oct 29 17:58:10.028 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.028 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.028 IST: BUILTIN-100/40/4x10G[0/1] : TenGigabitEthernet0/1/0 moved to
default config
*Oct 29 17:58:10.028 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 1 would be lost
*Oct 29 17:58:10.035 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.036 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.036 IST: BUILTIN-100/40/4x10G[0/1] : TenGigabitEthernet0/1/1 moved to
default config
*Oct 29 17:58:10.036 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 2 would be lost
```

```
*Oct 29 17:58:10.043 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.043 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.043 IST: BUILTIN-100/40/4x10G[0/1] : TenGigabitEthernet0/1/2 moved to
default config
*Oct 29 17:58:10.043 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 3 would be lost
*Oct 29 17:58:10.050 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.050 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 17:58:10.050 IST: BUILTIN-100/40/4x10G[0/1] : TenGigabitEthernet0/1/3 moved to
default config
*Oct 29 17:58:11.050 IST: BUILTIN-100/40/4x10G[0/1] : Received mode change request from 10G
 to 40G! system_configured TRUE
*Oct 29 17:58:11.057 IST: %IOSXE_OIR-6-SOFT_RELOADSPA: SPA(BUILTIN-100/40/4x10G) reloaded
on subslot 0/1
*Oct 29 17:58:11.057 IST: BUILTIN-100/40/4x10G[0/1] : EPA moving from 10G mode to 40G mode
*Oct 29 17:58:11.057 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 0 would be lost
*Oct 29 17:58:11.058 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 1 would be lost
*Oct 29 17:58:11.059 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 2 would be lost
*Oct 29 17:58:11.059 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 3 would be lost
*Oct 29 17:58:11.060 IST: BUILTIN-100/40/4x10G[0/1] : Old mode cleanup done!
*Oct 29 17:58:11.061 IST: %SPA_OIR-6-OFFLINECARD: SPA (BUILTIN-100/40/4x10G) offline in
subslot 0/1
*Oct 29 17:58:16.297 IST: BUILTIN-100/40/4x10G[0/1] : Number of ports 1
*Oct 29 17:58:16.298 IST: BUILTIN-100/40/4x10G[0/1] : XCVR namestring create: Maximum number
 of XCVR = 1
```

The following example shows how to change to 40G mode to 100G on Bay 1 of C8500-12X4QC:

```
Router(config)# hw-module subslot 0/1 mode 100G
Changing mode of subslot 0/1 to 100G will cause EPA in subslot 0/0 to go offline
Present configuration of this subslot will be erased and will not be restored.
CLI will not be available until mode change is complete and EPA returns to OK state.
Do you want to proceed? [confirm]

*Oct 29 18:09:01.360 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 0 would be lost
*Oct 29 18:09:01.368 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:01.368 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
The "[no] negotiation auto" command will have no effect with this interface
*Oct 29 18:09:01.368 IST: BUILTIN-100/40/4x10G[0/1] : FortyGigabitEthernet0/1/0 moved to
default config
*Oct 29 18:09:02.368 IST: BUILTIN-8x1/10G[0/0] : config for spa port 0 would be lost
*Oct 29 18:09:02.375 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.376 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.376 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/0 moved to default
config
*Oct 29 18:09:02.376 IST: BUILTIN-8x1/10G[0/0] : config for spa port 1 would be lost
*Oct 29 18:09:02.382 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.382 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
```

```
*Oct 29 18:09:02.382 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/1 moved to default
config
*Oct 29 18:09:02.382 IST: BUILTIN-8x1/10G[0/0] : config for spa port 2 would be lost
*Oct 29 18:09:02.389 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.389 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.389 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/2 moved to default
config
*Oct 29 18:09:02.389 IST: BUILTIN-8x1/10G[0/0] : config for spa port 3 would be lost
*Oct 29 18:09:02.395 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.395 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.395 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/3 moved to default
config
*Oct 29 18:09:02.395 IST: BUILTIN-8x1/10G[0/0] : config for spa port 4 would be lost
*Oct 29 18:09:02.402 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.402 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.402 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/4 moved to default
config
*Oct 29 18:09:02.402 IST: BUILTIN-8x1/10G[0/0] : config for spa port 5 would be lost
*Oct 29 18:09:02.409 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.409 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.409 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/5 moved to default
config
*Oct 29 18:09:02.409 IST: BUILTIN-8x1/10G[0/0] : config for spa port 6 would be lost
*Oct 29 18:09:02.415 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.415 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.415 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/6 moved to default
config
*Oct 29 18:09:02.415 IST: BUILTIN-8x1/10G[0/0] : config for spa port 7 would be lost
*Oct 29 18:09:02.422 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.422 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:09:02.422 IST: BUILTIN-8x1/10G[0/0] : TenGigabitEthernet0/0/7 moved to default
config
*Oct 29 18:09:03.423 IST: BUILTIN-100/40/4x10G[0/1] : Received mode change request from 40G
 to 100G! system_configured TRUE
*Oct 29 18:09:03.433 IST: BUILTIN-8x1/10G[0/0] : config for spa port 0 would be lost
*Oct 29 18:09:03.434 IST: BUILTIN-8x1/10G[0/0] : config for spa port 1 would be lost
*Oct 29 18:09:03.435 IST: BUILTIN-8x1/10G[0/0] : config for spa port 2 would be lost
*Oct 29 18:09:03.435 IST: BUILTIN-8x1/10G[0/0] : config for spa port 3 would be lost
*Oct 29 18:09:03.436 IST: BUILTIN-8x1/10G[0/0] : config for spa port 4 would be lost
*Oct 29 18:09:03.437 IST: BUILTIN-8x1/10G[0/0] : config for spa port 5 would be lost
*Oct 29 18:09:03.437 IST: BUILTIN-8x1/10G[0/0] : config for spa port 6 would be lost
*Oct 29 18:09:03.438 IST: BUILTIN-8x1/10G[0/0] : config for spa port 7 would be lost
*Oct 29 18:09:03.439 IST: BUILTIN-8x1/10G[0/0] : Old mode cleanup done!
*Oct 29 18:09:03.440 IST: %SPA_OIR-6-OFFLINECARD: SPA (BUILTIN-8x1/10G) offline in subslot
 0/0
*Oct 29 18:09:03.445 IST: %IOSXE_OIR-6-SOFT_RELOADSPA: SPA(BUILTIN-100/40/4x10G) reloaded
on subslot 0/1
*Oct 29 18:09:03.445 IST: BUILTIN-100/40/4x10G[0/1] : EPA moving from 40G mode to 100G mode
*Oct 29 18:09:03.445 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 0 would be lost
*Oct 29 18:09:03.446 IST: BUILTIN-100/40/4x10G[0/1] : Old mode cleanup done!
*Oct 29 18:09:03.446 IST: %SPA_OIR-6-OFFLINECARD: SPA (BUILTIN-100/40/4x10G) offline in
subslot 0/1
```

```
*Oct 29 18:09:08.790 IST: BUILTIN-100/40/4x10G[0/1] : Number of ports 1
*Oct 29 18:09:08.792 IST: BUILTIN-100/40/4x10G[0/1] : XCVR namestring create: Maximum number
 of XCVR = 1
Router(config)#
*Oct 29 18:09:15.552 IST: %SPA_OIR-6-ONLINECARD: SPA (BUILTIN-100/40/4x10G) online in subslot
 0/1
```

The following example shows how to change to 10G mode from 100G on Bay 1 of C8500-12X4QC:

```
Router(config)# hw-module subslot 0/1 mode 10G
Present configuration of this subslot will be erased and will not be restored.
CLI will not be available until mode change is complete and EPA returns to OK state.
Do you want to proceed? [confirm]
*Oct 29 18:14:36.484 IST: %PLATFORM_SCC-1-AUTHENTICATION_FAIL: Chassis authentication failed

*Oct 29 18:14:38.219 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 0 would be lost
*Oct 29 18:14:38.227 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:14:38.227 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:14:38.227 IST: BUILTIN-100/40/4x10G[0/1] : HundredGigE0/1/0 moved to default
config
*Oct 29 18:14:39.228 IST: BUILTIN-100/40/4x10G[0/1] : Received mode change request from
100G to 10G! system_configured TRUE
*Oct 29 18:14:39.230 IST: %IOSXE_OIR-6-SOFT_RELOADSPA: SPA(BUILTIN-100/40/4x10G) reloaded
on subslot 0/1
*Oct 29 18:14:39.230 IST: BUILTIN-100/40/4x10G[0/1] : EPA moving from 100G mode to 10G mode
*Oct 29 18:14:39.230 IST: BUILTIN-100/40/4x10G[0/1] : config for spa port 0 would be lost
*Oct 29 18:14:39.231 IST: BUILTIN-100/40/4x10G[0/1] : Old mode cleanup done!
*Oct 29 18:14:39.232 IST: %SPA_OIR-6-OFFLINECARD: SPA (BUILTIN-100/40/4x10G) offline in
subslot 0/1
*Oct 29 18:14:44.472 IST: BUILTIN-100/40/4x10G[0/1] : Number of ports 4
*Oct 29 18:14:44.475 IST: BUILTIN-100/40/4x10G[0/1] : XCVR namestring create: Maximum number
 of XCVR = 4
*Oct 29 18:15:03.336 IST: %SPA_OIR-6-ONLINECARD: SPA (BUILTIN-100/40/4x10G) online in subslot
 0/1
```

The following example shows how to change to 100G mode from 100G on Bay 2 of C8500-12X4QC:

```
Router(config)# hw-module subslot 0/2 mode 100G
Present configuration of this subslot will be erased and will not be restored.
CLI will not be available until mode change is complete and EPA returns to OK state.
Do you want to proceed? [confirm]

*Oct 29 18:17:03.394 IST: BUILTIN-100G/3X40G[0/2] : config for spa port 0 would be lost
*Oct 29 18:17:03.401 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:17:03.401 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:17:03.401 IST: BUILTIN-100G/3X40G[0/2] : FortyGigabitEthernet0/2/0 moved to
default config
*Oct 29 18:17:03.401 IST: BUILTIN-100G/3X40G[0/2] : config for spa port 1 would be lost
*Oct 29 18:17:03.406 IST: BUILTIN-100G/3X40G[0/2] : Breakout XCVR type QSFP 4X10G AC7M (546)
 is not allowed as XCVR port Fortyrnet0/2/0 is not configured in breakout
*Oct 29 18:17:03.406 IST: %IOSXE_EPA-3-XCVR_PROHIBIT: Transceiver is prohibited to come
online for interface FortyGigabitEther
*Oct 29 18:17:03.407 IST: BUILTIN-100G/3X40G[0/2] : XCVR prohibited on port
FortyGigabitEthernet0/2/0, epa_name=BUILTIN-100G/3=FortyGigabitEthernet0/2/0,
xcvr_speed=40000000, admin_state=UNSHUT xcvr_type=546

*Oct 29 18:17:03.409 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:17:03.409 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
```

```
 console as console
*Oct 29 18:17:03.409 IST: BUILTIN-100G/3X40G[0/2] : FortyGigabitEthernet0/2/4 moved to
default config
*Oct 29 18:17:03.409 IST: BUILTIN-100G/3X40G[0/2] : config for spa port 2 would be lost
*Oct 29 18:17:03.417 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:17:03.417 IST: %SYS-5-CONFIG_P: Configured programmatically by process Exec from
 console as console
*Oct 29 18:17:03.417 IST: BUILTIN-100G/3X40G[0/2] : FortyGigabitEthernet0/2/8 moved to
default config
*Oct 29 18:17:03.423 IST: BUILTIN-100G/3X40G[0/2] : Breakout XCVR type QSFP 4SFP10G CU4M
(541) is not allowed as XCVR port Forhernet0/2/4 is not configured in breakout
*Oct 29 18:17:03.423 IST: %IOSXE_EPA-3-XCVR_PROHIBIT: Transceiver is prohibited to come
online for interface FortyGigabitEther
*Oct 29 18:17:03.423 IST: BUILTIN-100G/3X40G[0/2] : XCVR prohibited on port
FortyGigabitEthernet0/2/4, epa_name=BUILTIN-100G/3=FortyGigabitEthernet0/2/4,
xcvr_speed=40000000, admin_state=UNSHUT xcvr_type=541

*Oct 29 18:17:04.418 IST: BUILTIN-100G/3X40G[0/2] : Received mode change request from 40G
to 100G! system_configured TRUE
*Oct 29 18:17:04.423 IST: %IOSXE_OIR-6-SOFT_RELOADSPA: SPA(BUILTIN-100G/3X40G) reloaded on
 subslot 0/2
*Oct 29 18:17:04.423 IST: BUILTIN-100G/3X40G[0/2] : EPA moving from 40G mode to 100G mode
*Oct 29 18:17:04.423 IST: BUILTIN-100G/3X40G[0/2] : config for spa port 0 would be lost
*Oct 29 18:17:04.424 IST: BUILTIN-100G/3X40G[0/2] : config for spa port 1 would be lost
*Oct 29 18:17:04.425 IST: BUILTIN-100G/3X40G[0/2] : config for spa port 2 would be lost
*Oct 29 18:17:04.425 IST: BUILTIN-100G/3X40G[0/2] : Old mode cleanup done!
*Oct 29 18:17:04.426 IST: %SPA_OIR-6-OFFLINECARD: SPA (BUILTIN-100G/3X40G) offline in subslot
 0/2
*Oct 29 18:17:09.685 IST: BUILTIN-100G/3X40G[0/2] : Number of ports 1
*Oct 29 18:17:09.686 IST: BUILTIN-100G/3X40G[0/2] : XCVR namestring create: Maximum number
 of XCVR = 1
Router(config)#
Router(config)#
*Oct 29 18:17:16.017 IST: %SPA_OIR-6-ONLINECARD: SPA (BUILTIN-100G/3X40G) online in subslot
 0/2
```

Breakout Support

Understand Breakout Support

Breakout support for a port helps to split a higher density port to multiple independent and logical ports. Starting from Cisco IOS XE 17.4, breakout support is introduced in Bay 2 of C8500-12X4QC that supports breakout capable 40G native ports. The breakout support is of 4X10G and uses a 3-tuple approach.

Note Breakout support is only supported on C8500-12X4QC (not C8500-20X6C).

The following table explains the interface names when breakout is configured:

Table 1: Interface Names when Breakout is Configured

Sr. No	Interface names	Description
	Te0/2/0, Te0/2/1, Te0/2/2, Te0/2/3, Te0/2/4, Te0/2/5, Te0/2/6, Te0/2/7, Te0/2/8, Te0/2/9, Te0/2/10, Te0/2/11	All three 40 G native ports working in 10G breakout mode
	Fo0/2/0,Fo0/2/4, Te0/2/8, Te0/2/9, Te0/2/10, Te0/2/11	1st native port in 40G mode 2nd native port in 40G mode 3rd native port in 10G breakout mode
	Fo0/2/0, Te0/2/4, Te0/2/5, Te0/2/6, Te0/2/7 Fo0/2/8	1st native port in 40G mode 2nd native port 10G breakout mode 3rd native port in 40G mode
	Te0/2/0, Te0/2/1, Te0/2/2, Te0/2/3, Fo0/2/4, Fo0/2/8	1st native port in 10G breakout mode 2nd native port in 40G mode 3rd native port in 40G mode
	1st native port in 10G breakout mode 2nd native port in 40G mode 3rd native port in 40G mode	1st native port in 40G mode 2nd native port in 10G breakout mode 3rd native port in 10G breakout mode
	Te0/2/0, Te0/2/1, Te0/2/2, Te0/2/3, Te0/2/4, Te0/2/5, Te0/2/6, Te0/2/7, Fo0/2/8	1st native port in 10G breakout mode 2nd native port in 10G breakout mode 3rd native port in 40G mode
	Te0/2/0, Te0/2/1, Te0/2/2, Te0/2/3, Fo0/2/4, Te0/2/8, Te0/2/9, Te0/2/10, Te0/2/11	1st native port in 10G breakout mode 2nd native port in 40G mode 3rd native port in 10G breakout mode

Breakout Support

✎

Note Before using the breakout capability, ensure that Bay 2 is configured in 40G mode

```
Router(config)#hw-module subslot 0/2 breakout 10G port ?

all                configure all native ports in breakout mode
native_port_0      configure native port 0 in breakout mode
native_port_4      configure native port 4 in breakout mode
native_port_8      configure native port 8 in breakout mode
```

Sample Commands to Configure Breakout Support

When native_port 0 and 8 are in 10G breakout and native_port 4 is running in 40G mode

```
hw-module subslot 0/2 breakout 10g port native_port_0
hw-module subslot 0/2 breakout 10g port native_port_8
```

When all three native 40G ports have same breakout config

```
hw-module subslot 0/2 breakout 10g port all
hw-module subslot 0/2 breakout none port all
```

When you want to remove breakout configuration from all ports

```
hw-module subslot 0/2 breakout none port all
```

Bay Configuration C8500-12X

On C8500-12X4 there is one built-in EPA that supports ports TE0 - TE11 for SFP/SFP+ transceivers.

Bay Configuration C8500-20X6C

On C8500-20X6C there are two built-in EPAs that are configurable.

Bay Number	EPA	Port Configuration	Interface numbers
Bay 0 20xSFP+	1/10G EPA	Twenty 1G interfaces Twenty 10G interfaces Twenty 1/10G interfaces	0/0/0 0/0/1 0/0/2 0/0/3 0/0/4 0/0/5 0/0/6 0/0/7 0/0/8 0/0/9 0/0/10 0/0/11 0/0/12 0/0/13 0/0/14 0/0/15 0/0/16 0/0/17 0/0/18 0/0/19
Bay 1 6xQSFP+	40/100G EPA	Six 40/100G interfaces active The bay can be used in the following modes: • Six 40G interfaces Six 100G interfaces • Six 40/100G interfaces	0/1/0 0/1/1 0/1/2 0/1/3 0/1/4 0/1/5