



Configuring the Cisco Remote-PHY Solution

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Prerequisites for Configuring the Cisco Remote-PHY Solution

- The Cisco CMTS must have at least one DOCSIS Timing, Communication, and Control (DTCC) card configured in the DOCSIS Timing Interface (DTI) mode for the Cisco cBR RF line card to work with the Cisco Remote-PHY Compact Shelf.

Restrictions for Configuring the Cisco Remote-PHY Solution

- Adding or removing the upstream or downstream channels in the channel group may trigger the Cisco Remote-PHY Compact Shelf to reset.
- The Cisco cBR RF line card supports only static DEPI configuration.
- The Cisco cBR RF line card does not support Spectrum Management, Inter Line Card RF Spanning, and High Availability.

How to Configure the Cisco Remote-PHY Solution

For detailed instructions, see the Cisco Remote-PHY Configuration Guide.

Configuration Example for the Cisco Remote-PHY Solution

Cisco Remote-PHY RPD CM Online Basic Configuration Example

```
interface TenGigabitEthernet0/1/0
ip address 209.165.200.225 255.255.255.224
```

```

ip helper-address 209.165.200.226

cable downstream controller-profile 3
rf-chan 0 31
rf-output NORMAL
type DOCSIS
frequency 111000000
qam-profile 1
docsis-channel-id 1

cable upstream controller-profile 3
us-channel 0 channel-width 3200000 3200000
us-channel 0 docsis-mode atdma
us-channel 0 frequency 11400000
us-channel 0 minislots-size 2
us-channel 0 modulation-profile 221
no us-channel 0 shutdown
us-channel 1 channel-width 3200000 3200000
us-channel 1 docsis-mode atdma
us-channel 1 frequency 14600000
us-channel 1 minislots-size 2
us-channel 1 modulation-profile 221
no us-channel 1 shutdown
us-channel 2 channel-width 3200000 3200000
us-channel 2 docsis-mode atdma
us-channel 2 frequency 17800000
us-channel 2 minislots-size 2
us-channel 2 modulation-profile 221
no us-channel 2 shutdown
us-channel 3 channel-width 3200000 3200000
us-channel 3 docsis-mode atdma
us-channel 3 frequency 21000000
us-channel 3 minislots-size 2
us-channel 3 modulation-profile 221
no us-channel 3 shutdown
us-channel 4 channel-width 3200000 3200000
us-channel 4 docsis-mode atdma
us-channel 4 frequency 24200000
us-channel 4 minislots-size 2
us-channel 4 modulation-profile 221
no us-channel 4 shutdown
us-channel 5 channel-width 3200000 3200000
us-channel 5 docsis-mode atdma
us-channel 5 frequency 27400000
us-channel 5 minislots-size 2
us-channel 5 modulation-profile 221
no us-channel 5 shutdown

interface Cable0/0/0
load-interval 30
downstream Downstream-Cable 0/0/0 rf-channel 0-23
upstream 0 Upstream-Cable 0/0/0 us-channel 0
upstream 1 Upstream-Cable 0/0/0 us-channel 1
upstream 2 Upstream-Cable 0/0/0 us-channel 2
upstream 3 Upstream-Cable 0/0/0 us-channel 3
upstream 4 Upstream-Cable 0/0/0 us-channel 4
upstream 5 Upstream-Cable 0/0/0 us-channel 5
cable upstream bonding-group 1
upstream 0
upstream 1
upstream 2
upstream 3
attributes 80000001
cable upstream bonding-group 2

```

```
upstream 2
upstream 3
upstream 4
upstream 5
attributes 80000001
cable upstream bonding-group 3
upstream 0
upstream 1
upstream 4
upstream 5
attributes 80000001
cable bundle 1
cable ip-init dual-stack

interface Wideband-Cable0/0/0:0
cable bundle 1
cable rf-channels channel-list 0-7 bandwidth-percent 10

interface Wideband-Cable0/0/0:1
cable bundle 1
cable rf-channels channel-list 8-15 bandwidth-percent 10

cable fiber-node 200
downstream Downstream-Cable 0/0/0
upstream Upstream-Cable 0/0/0

cable rpd node1
identifier 0004.9f03.0061
rpd-ds 0 base-power 42
core-interface Te0/1/0
rpd-ds 0 downstream-cable 0/0/0 profile 3
rpd-us 0 upstream-cable 0/0/0 profile 3
r-dti 1
rpd-event profile 0

interface Loopback1588
ip address 209.165.200.228 255.255.255.224
interface TenGigabitEthernet5/1/3 (connect to ASR903)
ip address 209.165.200.229 255.255.255.224

ip route 209.165.200.250 255.255.255.254 209.165.200.251 (route to ASR903 loopback ip)

ptp clock ordinary domain 0
servo tracking-type R-DTI
clock-port slave-from-903 slave
delay-req interval -4
sync interval -5
sync one-step
transport ipv4 unicast interface Lo1588 negotiation
clock source 209.165.200.250 (ASR903 loopback ip)

ptp r-dti 1
ptp-domain 0 (same domain number with ptp server)
clock-port 1
ethernet 1 (default value is same index with clock-port index, for RPD, ethernet 1=vbh0,
ethernet 2=vbh1)
clock-source 209.165.200.250 gateway 209.165.200.253 (clock-source is ASR903 loopback
ip, gateway is the RPD's next hop to access ASR903.)
```

