



10-Gigabit Ethernet WAN PHY Controller Commands

This module describes the commands to configure a 10-Gigabit Ethernet WAN PHY physical controller on the Cisco CRS Router.

To use commands of this module, 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 any command, contact your AAA administrator for assistance.

For information on 10-Gigabit Ethernet (GE) interface commands see the *Ethernet Interface Commandson* module.

- [clear controller wanphy, on page 2](#)
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clear controller wanphy

To clear the alarms counters for a specific 10-Gigabit Ethernet WAN PHY controller, use the **clear controller wanphy** command in EXEC mode.

clear controller wanphy interface-id stats

Syntax Description

interface-id Physical interface instance. Naming notation is *rack/slot/module/port* and a slash between values is required as part of the notation.

- *rack*: Chassis number of the rack.
- *slot*: Physical slot number of the line card.
- *module*: Module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number.
- *port*: Physical port number of the interface.

For more information about the syntax for the router, use the question mark (?) online help function.

stats Clears alarm counters for the specified 10-Gigabit Ethernet WAN PHY controller.

Command Default

No default behavior or values

Command Modes

EXEC mode

Command History

Release	Modification
Release 3.5.0	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
interface	read, write, execute

Examples

This example shows how to configure a 10-Gigabit Ethernet WAN PHY controller in Slot 6:

```
RP/0/RP0/CPU0:router # clear controller wanphy 0/6/0/0 stats
```

Related Commands

Command	Description
show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.

clear counters wanphy

To clear the alarms counters for a specific 10-Gigabit Ethernet WAN PHY interface, use the **clear counters wanphy** command in EXEC mode.

clear counters wanphy interface-id stats

Syntax Description	<p><i>interface-id</i> Physical interface instance. Naming notation is <i>rack/slot/module/port</i> and a slash between values is required as part of the notation.</p> <ul style="list-style-type: none"> • <i>rack</i>: Chassis number of the rack. • <i>slot</i>: Physical slot number of the line card. • <i>module</i>: Module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number. • <i>port</i>: Physical port number of the interface. <p>For more information about the syntax for the router, use the question mark (?) online help function.</p>
	<p>stats Clears alarm counters for the specified 10-Gigabit Ethernet WAN interface.</p>

Command Default No default behavior or values

Command Modes EXEC mode

Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.5.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.5.0	This command was introduced.
Release	Modification				
Release 3.5.0	This command was introduced.				

Usage Guidelines No specific guidelines impact the use of this command.

Task ID	<table border="1"> <thead> <tr> <th>Task ID</th> <th>Operations</th> </tr> </thead> <tbody> <tr> <td>interface</td> <td>read, write, execute</td> </tr> </tbody> </table>	Task ID	Operations	interface	read, write, execute
Task ID	Operations				
interface	read, write, execute				

Examples This example shows how to clear the alarms counters for a 10-Gigabit Ethernet WAN interface:

```
RP/0/RP0/CPU0:router # clear counters wanphy 0/6/0/0 stats
```

Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>show controllers wanphy, on page 10</td> <td>Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.</td> </tr> <tr> <td>clear controller wanphy, on page 2</td> <td>Clears the alarms counters for a specific 10-Gigabit Ethernet WAN PHY controller.</td> </tr> </tbody> </table>	Command	Description	show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.	clear controller wanphy, on page 2	Clears the alarms counters for a specific 10-Gigabit Ethernet WAN PHY controller.
Command	Description						
show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.						
clear controller wanphy, on page 2	Clears the alarms counters for a specific 10-Gigabit Ethernet WAN PHY controller.						

controller wanphy

To enter WAN physical controller configuration mode in which you can configure a 10-Gigabit Ethernet WAN PHY controller, use the **controller wanphy** command in Global Configuration mode. To return the 10-Gigabit Ethernet WAN PHY controller to its default WAN mode configuration, use the **no** form of this command.

controller wanphy interface-id

Syntax Description

interface-id Physical interface instance. Naming notation is *rack/slot/module/port* and a slash between values is required as part of the notation.

- *rack*: Chassis number of the rack.
- *slot*: Physical slot number of the line card.
- *module*: Module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number.
- *port*: Physical port number of the interface.

For more information about the syntax for the router, use the question mark (?) online help function.

Command Default

No default behavior or values

Command Modes

Global Configuration

Command History

Release	Modification
Release 3.5.0	This command was introduced.

Usage Guidelines



Note

After you use the **no controller wanphy** command to return a 10-Gigabit Ethernet WAN PHY controller to its default configuration, you need to cycle the power to the 10-Gigabit Ethernet SPA for the mode configuration changes to take effect.

Task ID

Task ID Operations

interface read,
write

Examples

This example shows how to enter WAN PHY controller configuration mode:

```
RP/0/RP0/CPU0:router # configure
RP/0/RP0/CPU0:router (config) # controller wanphy 0/6/0/0
RP/0/RP0/CPU0:router (config-wanphy) #
```

The following example shows how to configure a 10-Gigabit Ethernet WAN PHY controller in slot 6 to run in LAN mode:

```
RP/0/RP0/CPU0:router # configure
RP/0/RP0/CPU0:router(config)# controller wanphy 0/6/0/0
RP/0/RP0/CPU0:router(config-wanphy)# lanmode on
RP/0/RP0/CPU0:router(config-wanphy)# commit
RP/0/RP0/CPU0:router(config-wanphy)# exit
RP/0/RP0/CPU0:router(config)# exit
RP/0/RP0/CPU0:router(config)# hw-module subslot 0/6/0 shutdown unpowered
RP/0/RP0/CPU0:router(config)# commit
RP/0/RP0/CPU0:router(config)# no hw-module subslot 0/6/0 shutdown unpowered
```

The following example shows how to return a 10-Gigabit Ethernet WAN PHY controller in slot 6 to run in its default WAN mode:

```
RP/0/RP0/CPU0:Router # configure
RP/0/RP0/CPU0:Router(config)# no controller wanphy 0/6/0/0
RP/0/RP0/CPU0:Router(config)# commit
RP/0/RP0/CPU0:Router(config)# exit
RP/0/RP0/CPU0:router(config)# hw-module subslot 0/6/0 shutdown unpowered
RP/0/RP0/CPU0:Router(config)# commit
RP/0/RP0/CPU0:router(config)# no hw-module subslot 0/6/0 shutdown unpowered
```

Related Commands

Command	Description
lanmode on, on page 6	Configures a 10-Gigabit Ethernet WAN PHY controller to run in LAN mode for a 1-Port 10-Gigabit Ethernet LAN/WAN-PHY SPA.
show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.

lanmode on

To configure a 10-Gigabit Ethernet WAN PHY controller to run in LAN mode for a 1-Port 10-Gigabit Ethernet LAN/WAN-PHY SPA, use the **lanmode on** command in WAN physical controller configuration mode. To return the controller to the default, use the **no** form of this command.



Note This command is not supported on 10-Gigabit Ethernet Line Cards and MPAs. It is supported with WAN PHY SPA.

lanmode on

Syntax Description This command has no keywords or arguments.

Command Default The 10-Gigabit Ethernet WAN PHY controller default varies depending on the installed line card:

- For the 1-Port 10-Gigabit Ethernet LAN/WAN-PHY SPA, the default mode is WAN mode.
- For the 4-Port, 8-Port, 14-Port, and 20-Port 10-Gigabit Ethernet LAN/WAN-PHY PLIMs, the default mode is LAN mode.
- For the 1-Port, 2-Port 100-Gigabit Ethernet LAN/WAN-PHY SPA, the default mode is LAN mode.

Command Modes WAN physical controller configuration

Command History	Release	Modification
	Release 3.5.0	This command was introduced.

Usage Guidelines No specific guidelines impact the use of this command.

Task ID	Task ID	Operations
	interface	read, write

Examples This example shows how to enable LAN mode on a 10-Gigabit Ethernet WAN PHY controller:

```
RP/0/RP0/CPU0:router:Router # configure
RP/0/RP0/CPU0:router:Router(config)# controller wanphy 0/6/0/0
RP/0/RP0/CPU0:router:Router(config-wanphy)# lanmode on
```

To complete the mode change the SPA must be power-cycled.

This example shows how to disable LAN mode on a 10-Gigabit Ethernet WAN PHY controller and return that controller to the default WAN mode:

```
RP/0/RP0/CPU0:router:Router # configure
RP/0/RP0/CPU0:router:Router(config)# controller wanphy 0/6/0/0
```

```
RP/0/RP0/CPU0:router:srt-crs1(config-wanphy)# no lanmode on
```

To complete the mode change the SPA must be power-cycled.

Related Commands

Command	Description
show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.

report sd-ber

To enable Signal Degrade (SD) Bit Error Rate (BER) reporting, use the **report sd-ber** command in wanphy configuration mode. To disable Signal Degrade (SD) Bit Error Rate (BER) reporting, use the **no** form of this command.

report sd-ber

Syntax Description	This command has no keywords or arguments.				
Command Default	Signal Degrade (SD) Bit Error Rate (BER) reporting is disabled by default.				
Command Modes	Wanphy configuration				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.9.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.9.0	This command was introduced.
Release	Modification				
Release 3.9.0	This command was introduced.				
Usage Guidelines	No specific guidelines impact the use of this command.				

Task ID	Task ID	Operations
	interface	read, write

Examples

This example shows how to enable Signal Degrade (SD) Bit Error Rate (BER) reporting.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# controller wanphy 0/6/1/0
RP/0/RP0/CPU0:router(config-wanphy)# report sd-ber
RP/0/RP0/CPU0:router(config-wanphy)#
```

Related Commands	Command	Description
	report sf-ber disable, on page 9	Disables SF BER reporting.
	show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.
	threshold sf-ber, on page 17	Configures the threshold of the SF BER that is used to trigger a link state change.

report sf-ber disable

To disable Signal Failure (SF) Bit Error Rate (BER) reporting, use the **report sf-ber disable** command in wanphy configuration mode. To enable Signal Failure (SF) Bit Error Rate (BER) reporting, use the no form of this command. In the case of A9K-8X100GE-SE line cards, the commands **report sf-ber** and **no report sf-ber** are used to enable and disable SF BER respectively.

report sf-ber disable

Syntax Description	This command has no keywords or arguments.				
Command Default	Signal Failure (SF) Bit Error Rate (BER) reporting is enabled by default.				
Command Modes	Wanphy configuration				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.9.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.9.0	This command was introduced.
Release	Modification				
Release 3.9.0	This command was introduced.				
Usage Guidelines	No specific guidelines impact the use of this command.				

Task ID	Task ID	Operations
	interface	read, write

Examples

This example shows how to disable Signal Failure (SF) Bit Error Rate (BER) reporting.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# controller wanphy 0/6/1/0
RP/0/RP0/CPU0:router(config-wanphy)# report sf-ber disable
RP/0/RP0/CPU0:router(config-wanphy)#
```

Related Commands	Command	Description
	report sd-ber, on page 8	Enables Signal Degrade (SD) Bit Error Rate (BER) reporting.
	show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.
	threshold sf-ber, on page 17	Configures the threshold of the SF BER that is used to trigger a link state change.

show controllers wanphy

To display alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller, use the **show controllers wanphy** command in EXEC mode.

show controller wanphy *interface-id* [**alarms** | **all** | **registers**]

Syntax Description

interface-id Physical interface instance. Naming notation is *rack/slot/module/port* and a slash between values is required as part of the notation.

- *rack*: Chassis number of the rack.
- *slot*: Physical slot number of the line card.
- *module*: Module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number.
- *port*: Physical port number of the interface.

For more information about the syntax for the router, use the question mark (?) online help function.

alarms Displays information about any alarms that are detected by the specified 10-Gigabit Ethernet WAN PHY controller.

all Displays registers, alarms, and module information for the specified 10-Gigabit Ethernet WAN PHY controller.

registers Displays registers for the specified 10-Gigabit Ethernet WAN PHY controller.

Command Default

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 3.5.0	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
interface	read

Examples

This example shows sample output from the **show controllers wanphy** command with the **all** keyword:

```
RP/0/RP0/CPU0:router# show controllers wanphy 0/3/4/0 all
```

```
Interface: wanphy0_3_4_0
Configuration Mode: WAN Mode
SECTION
```

```

LOF = 1, LOS = 1, BIP(B1) = 2912
LINE
AIS = 1, RDI = 0, FEBE = 949, BIP(B2) = 48562
PATH
AIS = 1, RDI = 0, FEBE = 0, BIP(B2) = 0
LOP = 0, NEWPTR = 0, PSE = 0, NSE = 0
WIS ALARMS
SER = 9, FEPLMP = 0, FEALSP = 0
WLOS = 1, PLCD = 0
LFEBIP = 47260, PBEC = 949

Active Alarms[All defects]: lof,
Active Alarms[Highest Alarms]: lof
Rx(K1/K2): N/A, Tx(K1/K2): N/A
S1S0 = N/A, C2 = N/A
PATH TRACE BUFFER
Remote IP addr: 000.000.000.000
BER thresholds: N/A
TCA thresholds: N/A

REGISTERS
P_FEBE : 949
L_FE_BIP: 47260
L_BIP : 48562
P_BEC : 949
S_BIP : 2912
J1-Rx0 : 0x3136
J1-Rx1 : 0x352e
J1-Rx2 : 0x3234
J1-Rx3 : 0x332e
J1-Rx4 : 0x3132
J1-Rx5 : 0x3900
J1-Rx6 : 0x3138
J1-Rx7 : 0x372e
Internal Information
Operational Mode : WAN Mode
Curent Alarms: 0x8

```

Table 1: show controllers wanphy Command Output Fields

Field	Description
Interface	<p>Identifies the WAN physical interface, in the format <i>rack/slot/module/port</i>.</p> <ul style="list-style-type: none"> • <i>rack</i>: Chassis number of the rack. • <i>slot</i>: Physical slot number of the line card. • <i>module</i>: Module number. A physical layer interface module (PLIM) is always 0. Shared port adapters (SPAs) are referenced by their subslot number. • <i>port</i>: Physical port number of the interface.
Configuration Mode	Current configuration mode running on this controller. Can be WAN mode or LAN mode.

Field	Description
SECTION	<p>Displays the following section alarms:</p> <ul style="list-style-type: none"> • LOF—Number of Loss of Framing (LOF) errors on this connection section. LOF alarms are critical because they indicate that the link associated with this section is down. • LOS—Number of loss of signal (LOS) errors on this connection section. LOS alarms are critical because they indicate that the link associated with this section is down. • BIP(B1)—Number of bit interleaved parity (BIP) B1 errors on this section that exceeded the specified threshold.
LINE	<p>Displays the following line alarms:</p> <ul style="list-style-type: none"> • AIS—Number of AIS errors on this line. AIS alarms are critical because they indicate that the line is down. • RDI—Remote defect indication. <ul style="list-style-type: none"> • Line remote defect indication is reported by the downstream LTE when it detects LOF4, LOS5, or AIS6. • Path remote defect indication is reported by the downstream PTE when it detects a defect on the incoming signal. • FEBE—Number of far-end block errors (FEBE) on this line. Line FEBE errors are accumulated from the M0 or M1 byte, and are reported when the downstream LTE detects BIP7 (B2) errors. • BIP(B2)—Number of bit interleaved parity (BIP) B2 errors on this line that exceeded the specified threshold.
PATH	<p>Displays the following path alarms:</p> <ul style="list-style-type: none"> • AIS—Number of AIS errors on this path. AIS alarms are critical because they indicate that the line associated with this path is down. • RDI—Number of RDI errors on this path. Path RDI is a legacy alarm and is not supported. • FEBE—Number of FEBE errors on this path. Path FEBEs are accumulated from the G1 byte, and are reported when the downstream PTE detects BIP (B3) errors. • BIP(B2)—Number of bit interleaved parity (BIP) errors on this path that exceeded the specified threshold. • LOP—Number of loss of pointer (LOP) errors on this path. Path LOPs are reported as a result of an invalid pointer (H1, H2) or an excess number of new data flag enabled indications. • NEWPTR—Inexact count of the number of times the SONET framer has validated a new SONET pointer value (H1, H2). • PSE—Inexact count of the number of times the SONET framer has detected a positive stuff event (PSE) in the received pointer (H1, H2). • NSE—Inexact count of the number of times the SONET framer has detected a negative stuff event in the received pointer (H1, H2). <p>Note For Cisco IOS XR software release 3.5.0, the following fields display no errors: RDIFEBEBIP(B2)NEWPTRPSENSE</p>

Field	Description
WIS ALARMS	<p>Displays the following WAN Interconnect Sublayer (WIS) layer alarms:</p> <ul style="list-style-type: none"> • SER—Number of Severely Errored Frames (SER) errors • FELCDP—Number of Far End - Loss of Code-group Delineation - Path (FELCDP) errors • FEAI SP—Number of Far End - AIS - Path (FEAI SP) errors • WLOS—Number of WIS LOS (WLOS) errors. • PLCD—Number of Path Loss of Code-group Delineation (PLCD) errors • LFEBIP—Number of Line - Far End - BIP (LFEBI) errors • PBEC—Number of Path - Block Error Counter (PBEC) errors <p>Note Alarms are applicable only when the controller is configured in WAN-PHY mode.</p>
Active Alarms[All defects]	<p>Total number of currently active alarms on this interface.</p> <p>Note Alarms are applicable only when the controller is configured in WAN-PHY mode.</p>
Active Alarms[Highest Alarms]	<p>Total number of the most significant active alarms on this interface. These alarms are likely causing all other alarms on the interface.</p> <p>Note Alarms are applicable only when the controller is configured in WAN-PHY mode.</p>
Rx(K1/K2)	Total number of errored K1/K2 bytes from the Line OverHead (LOH) of the SONET frame that were received by this interface.
Tx(K1/K2)	Total number of errored K1/K2 bytes from the Line OverHead (LOH) of the SONET frame that were transmitted by this interface.
S1S0	Number of errored payload pointer bytes on this interface.
C2	Number of errored STS identifier (C1) bytes on this interface.
PATH TRACE BUFFER	Rx J1 trace buffer received from the far end. If the received data is valid it will be shown below the PATH TRACE BUFFER field.
Remote IP addr	Byte string containing the IP address of the remote end of this connection. If the received data is invalid, this field displays no IP address.
BER thresholds	BER threshold values of the specified alarms for a the 10-Gigabit Ethernet controller.
TCA thresholds	TCA threshold values of the specified alarms for a the 10-Gigabit Ethernet controller.

Field	Description
REGISTERS	<p>Displays output from the following registers in hexadecimal format:</p> <ul style="list-style-type: none"> • P_FEBE—Total number of Far End Block Errors (FEBEs) that occurred on the path that is associated with this interface. • L_FE_BIP—Total number of far end BIP errors that occurred on this interface. • L_BIP—Total number of local BIP errors that occurred on this interface. • P_BEC—Total BIP error count (BEC) that occurred on the path that is associated with this interface. • S_BIP—Total number of far end BIP errors that occurred on the current section. • J1-Rx0—Characters from far end IPV4 address string. • J1-Rx1—Characters from far end IPV4 address string. • J1-Rx2—Characters from far end IPV4 address string. • J1-Rx3—Characters from far end IPV4 address string. • J1-Rx4—Characters from far end IPV4 address string. • J1-Rx5—Characters from far end IPV4 address string. • J1-Rx6—Characters from far end IPV4 address string. • J1-Rx7—Characters from far end IPV4 address string. <p>Note The following Serdes-WIS HW registers are used to debug counters and can be cleared only by power cycling the hardware: P_FEBE, L_FE_BIP, L_BIP, P_BEC, S_BIP. The J1-Rx registers (J1-Rx0 through J1-Rx7) comprise the raw 16 bytes of data received from the Rx J1 Path Trace Buffer, and are used to debug IPV4 address sent from far end.</p>
Internal Information	<p>Displays the following internal information for the interface:</p> <ul style="list-style-type: none"> • Operational Mode—Current operation mode for this controller. Can be WAN mode or LAN mode. <p>Use the Operational Mode field to detect whether the hardware was power cycled after a mode configuration change. If the Operational Mode field shows output that is different from the Configuration Mode field, then the hardware was not power cycled properly after a mode configuration change.</p> <ul style="list-style-type: none"> • Current Alarms—Bit map of all currently active alarms on this controller. Use this information for debugging purposes. <p>Note Alarms are applicable only when the controller is configured in WAN-PHY mode.</p>

The following example shows sample output from the **show controllers wanphy** command with the **alarms** keyword:

```
RP/0/RP0/CPU0:router# show controllers wanphy 0/3/4/0 alarms

Interface: wanphy0_3_4_0
Configuration Mode: WAN Mode
SECTION
  LOF = 1, LOS = 1, BIP(B1) = 2912
LINE
  AIS = 1, RDI = 0, FEBE = 949, BIP(B2) = 48562
```

```

PATH
  AIS = 1, RDI = 0, FEBE = 0, BIP(B2) = 0
  LOP = 0, NEWPTR = 0, PSE = 0, NSE = 0
WIS ALARMS
  SER = 9, FELCDP = 0, FEALSP = 0
  WLOS = 1, PLCD = 0
  LFEBIP = 47260, PBEC = 949

Active Alarms[All defects]:
Active Alarms[Highest Alarms]:
  Rx(K1/K2): N/A, Tx(K1/K2): N/A
  S1S0 = N/A, C2 = N/A
PATH TRACE BUFFER
Remote IP addr: 981.761.542.321
BER thresholds: N/A
TCA thresholds: N/A

```

The alarm information displayed in the **show controllers wanphy interface-id alarms** command output are described in [Table 1: show controllers wanphy Command Output Fields, on page 11](#).

This example shows sample output from the **show controllers wanphy** command with the **registers** keyword:

```

RP/0/RP0/CPU0:router# show controllers wanphy 0/3/4/0 registers
Interface: wanphy0_3_4_0

Configuration Mode: WAN Mode
REGISTERS
P_FEBE   : 949
L_FE_BIP: 47260
L_BIP    : 48562
P_BEC    : 949
S_BIP    : 2912
J1-Rx0   : 0x3136
J1-Rx1   : 0x352e
J1-Rx2   : 0x3234
J1-Rx3   : 0x332e
J1-Rx4   : 0x3132
J1-Rx5   : 0x3900
J1-Rx6   : 0x3138
J1-Rx7   : 0x372e
Internal Information
Operational Mode : WAN Mode
Curent Alarms: 0x0

```

The registers displayed in the **show controllers wanphy interface-id registers** command output are described in [Table 1: show controllers wanphy Command Output Fields, on page 11](#).

Related Commands	Command	Description
	clear controller wanphy, on page 2	Clears the alarms counters for a specific 10-Gigabit Ethernet WAN PHY controller.
	lanmode on, on page 6	Configures a 10-Gigabit Ethernet WAN PHY controller to run in LAN mode for a 1-Port 10-Gigabit Ethernet LAN/WAN-PHY SPA.

threshold sd-ber

To configure the threshold of the Signal Degrade (SD) Bit Error Rate (BER) that is used to trigger a signal degrade alarm, use the **threshold sd-ber** command in wanphy configuration mode. To return the Signal Degrade (SD) Bit Error Rate (BER) to the default value, use the **no** form of this command.

threshold sd-ber *exponent*

Syntax Description	<i>exponent</i> Value of 10 raised to the <i>n</i> power, where <i>n</i> is the exponent of 10, as in 10- <i>n</i> . Valid values are 3 to 9, meaning 10-3 to 10-9.								
Command Default	The default is 6, meaning (10-6).								
Command Modes	Wanphy configuration								
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.9.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.9.0	This command was introduced.				
Release	Modification								
Release 3.9.0	This command was introduced.								
Usage Guidelines	No specific guidelines impact the use of this command.								
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Examples	<p>This example shows how to configure sd-ber threshold:</p> <pre>RP/0/RP0/CPU0:router# configure RP/0/RP0/CPU0:router(config)# controller wanphy 0/6/1/0 RP/0/RP0/CPU0:router(config-wanphy)# threshold sd-ber 9 RP/0/RP0/CPU0:router(config-wanphy)#</pre>								
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Command	Description								
report sd-ber, on page 8	Enables Signal Degrade (SD) Bit Error Rate (BER) reporting.								
report sf-ber disable, on page 9	Disables SF BER reporting.								
threshold sf-ber, on page 17	Configures the threshold of the SF BER that is used to trigger a link state change.								

threshold sf-ber

To configure the threshold of the Signal Failure (SF) Bit Error Rate (BER) that is used to trigger a link state change, use the **threshold sf-ber** command in wanphy configuration mode. To return the Signal Failure (SF) Bit Error Rate (BER) to the default value, use the **no** form of this command.

threshold sf-ber *exponent*

Syntax Description	<i>exponent</i> Value of 10 raised to the <i>n</i> power, where <i>n</i> is the exponent of 10, as in 10- <i>n</i> . Valid values are 3 to 9, meaning 10-3 to 10-9.								
Command Default	The default is 3, meaning (10-3).								
Command Modes	Wanphy configuration								
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.9.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.9.0	This command was introduced.				
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Command	Description								
report sd-ber, on page 8	Enables Signal Degrade (SD) Bit Error Rate (BER) reporting.								
report sf-ber disable, on page 9	Disables SF BER reporting.								
show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.								

wanmode on

To configure a 10-Gigabit Ethernet WAN PHY controller to run in WAN mode for the 10-Gigabit Ethernet LAN/WAN-PHY physical layer interface modules (PLIMs), use the **wanmode on** command in WAN physical controller configuration mode. To return the controller to the default, use the **no** form of this command.

wanmode on

Syntax Description

This command has no keywords or arguments.

Command Default

The 10-Gigabit Ethernet WAN PHY controller default varies depending on the installed line card:

- For the 1-Port 10-Gigabit Ethernet LAN/WAN-PHY SPA, the default mode is WAN mode. This command does not apply.
- For the 4-Port, 8-Port, 14-Port, and 20-Port 10-Gigabit Ethernet LAN/WAN-PHY PLIMs, the default mode is LAN mode.

Command Modes

WAN physical controller configuration

Command History

Release	Modification
Release 4.0.0	This command was introduced.

Usage Guidelines

Use the **wanmode on** command to change from the default LAN mode state for all 10-Gigabit Ethernet LAN/WAN-PHY physical layer interface modules (PLIMs).



Note

This command does not apply to the 1-Port 10-Gigabit Ethernet LAN/WAN-PHY SPA because the default state is WAN mode. Use the **lanmode on** and **no lanmode on** commands to change modes for that SPA.

Task ID

Task ID Operations

interface read,
write

Examples

This example shows how to enable WAN mode on a 10-Gigabit Ethernet WAN PHY controller for a 10-Gigabit Ethernet LAN/WAN-PHY PLIM:

```
RP/0/RP0/CPU0:Router # configure
RP/0/RP0/CPU0:Router(config)# controller wanphy 0/6/0/0
RP/0/RP0/CPU0:Router(config-wanphy)# wanmode on
```

This example shows how to disable WAN mode on a 10-Gigabit Ethernet WAN PHY controller and return that controller to the default WAN mode for 10-Gigabit Ethernet LAN/WAN-PHY PLIMs:

```
RP/0/RP0/CPU0:Router # configure
```

```
RP/0/RP0/CPU0:Router(config)# controller wanphy 0/6/0/0
RP/0/RP0/CPU0:srt-crs1(config-wanphy)# no wanmode on
```

Related Commands	Command	Description
	show controllers wanphy, on page 10	Displays alarms, registers, and module information for a 10-Gigabit Ethernet WAN PHY controller.

wanmode on