

LEDs

This section provides details of the LEDs in the controller unit and line card.

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Line Card LEDs

The LEDs of the 1.2T line card, and 1.2TL line card and OTN-XP line card are discussed here.

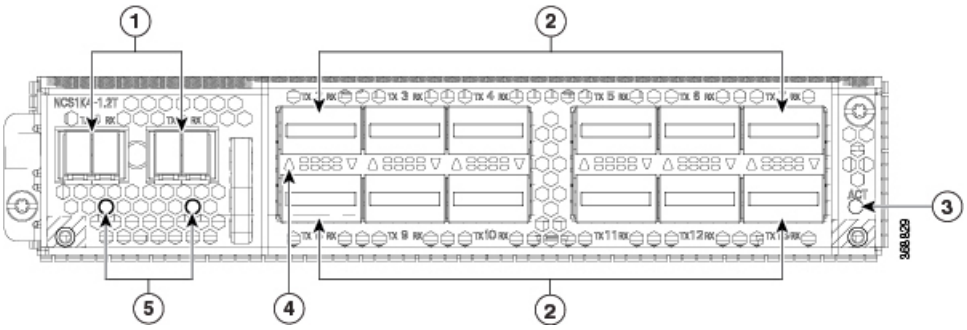
Table 1: Feature History

Feature Name	Release Information	Description
Attention LED	Cisco IOS XR Release 7.7.1	The attention LED is available on all ports of the NCS 1004 line cards. This LED can be selectively turned on for a specific QSFP port or simultaneously on all of the QSFP ports using the **hw-module location** command. When turned on, the LED flashes yellow. This LED flashing functionality helps field engineers quickly identify a specific port on the line card for troubleshooting, especially in a cluttered environment.

LEDs of 1.2T, 1.2TL, and 2-QDD-C Line Cards

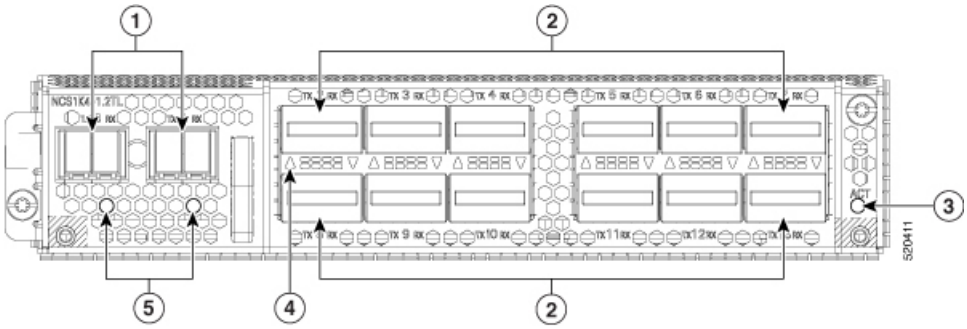
The front view of the 1.2T line card is as below.

Figure 1: Front View of the 1.2T Line Card



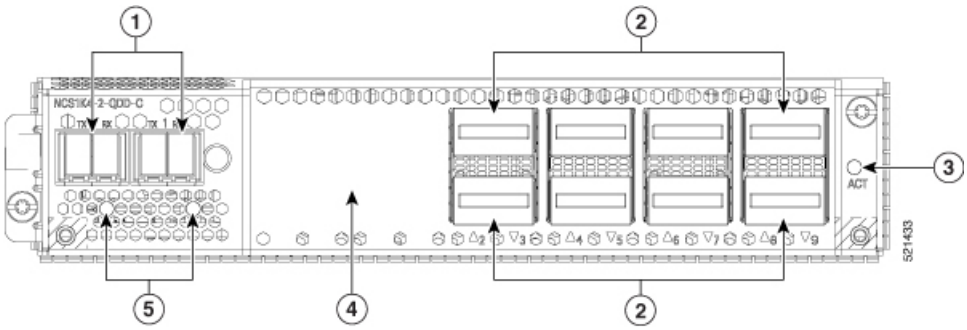
The front view of the 1.2TL line card is as below.

Figure 2: Front View of the 1.2TL Line Card



The front view of the 2-QDD-C line card is as below.

Figure 3: Front View of the 2-QDD-C Line Card



1	Trunk ports (0 and 1)
2	• 1.2T and 1.2TL line card 12 QSFP ports (2 to 13). Each QSFP port has Attention LED. • 2-QDD-C line card 8 QSFP ports (2 to 9). Each QSFP port has Attention LED.
3	ACT LED

4	QSFP port LEDs The LEDs for the QSFPs are embedded in the card cage. The *triangles* shown upwards or downwards (in 2-QDD-C, 1.2T and 1.2TL line cards) indicate the status of the corresponding QSFP.
5	Trunk port LEDs

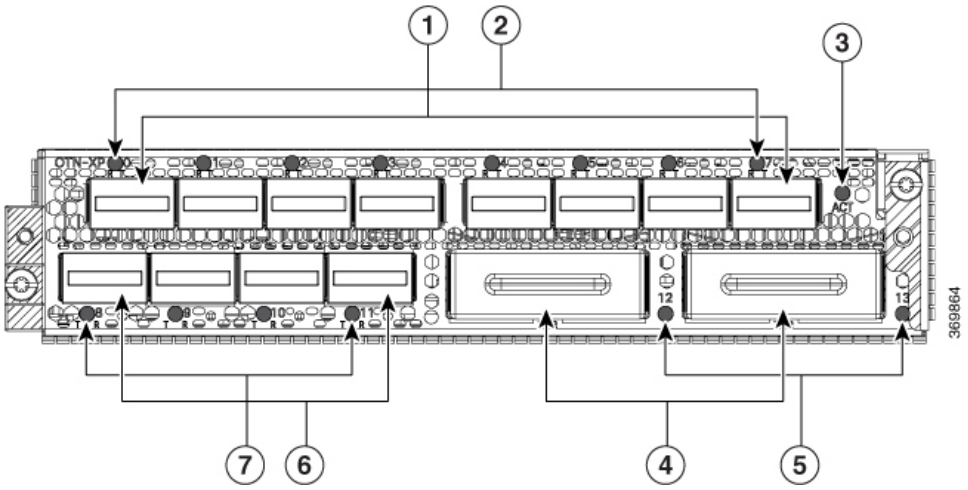
Table 2: Status of the Line Card LEDs

LED	Color	Status
Attention LED	Yellow Flashing	Used by the field engineers to identify a specific port in the line card. This is used for troubleshooting purposes. • Use the **hw-module location** *location***attention-led all-ports** command to turn on this LED on all the ports of the line card. • Use the **hw-module location** *location***attention-led** *port-number* command to turn on this LED on a specific port of the line card. • Use the **show controllers optics** *rack/slot/instance/port* **| in LED** command to display the LED status of ports.
ACT LED	Amber (solid)	The line card is booting. This colour appears as soon as the line card is inserted in to the chassis.
	Flashing Red	The line card is in the booting phase.
	Green	The line card is up and operational (not associated to the traffic status).
QSFP and Trunk port LEDs	Off	The port has not been provisioned.
	Red	Major alarm that could lead to a traffic-impacting situation.
	Green	Indicates that the module is operational and has no alarm.
	Amber (solid)	Indicates a minor alarm (such as low Rx or Tx power), which could lead to a traffic impacting situation.
	Amber (flashing)	This is used for troubleshooting, to identify the faulty port of a line card. Use the **controller optics** command in the configuration mode to point to a faulty port in the line card. The port is configured in maintenance mode or the attention LED is enabled for this port. **Note** Attention LED is not supported on ACT LED.

LEDs of OTN-XP Line Card

The front view of the OTN-XP line card is as below.

Figure 4: Front View of the OTN-XP Line Card



1	Eight QSFP-28 ports (0 to 7) Ports 1 and 5 are client ports for 100G TXP.
2	Corresponding LEDs for the eight QSFP-28 ports. Each QSFP-28 port has Attention LED.
3	ACT LED
4	Two CFP2 ports (12 and 13) Both are trunk ports.
5	Corresponding LEDs for the two CFP2 ports
6	Four QSFP-DD ports (8 to 11) QSFP-DD trunk ports are ports 9 and 11.
7	Corresponding LEDs for the four QSFP-DD ports.

Table 3: Status of the OTN-XP Line Card LEDs

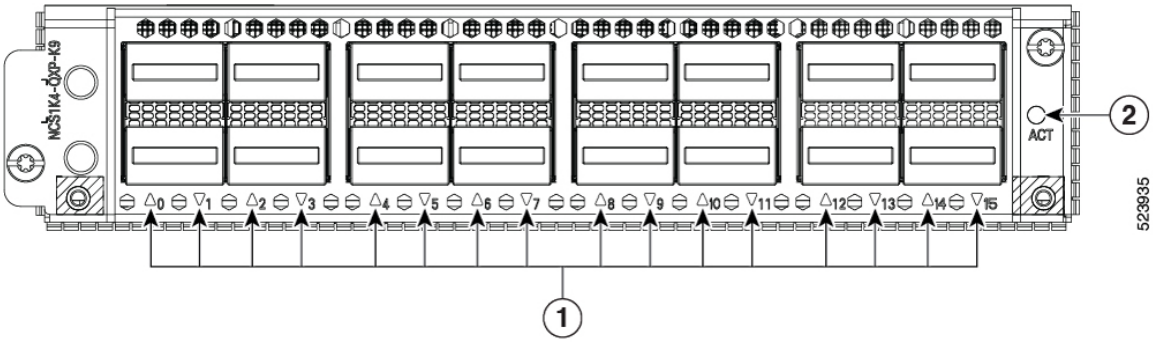
LED	Colour	Status
Attention LED	Red	The corresponding port is shut down.
	Green	The corresponding port is working.
	Yellow Flashing	Used by the field engineers to identify a specific port in the line card. This is used for troubleshooting purposes. • Use the **hw-module location** *location* **attention-led all-ports** command to enable this LED on all the ports of the line card. • Use the **hw-module location** *location* **attention-led** *port-number* command to enable this LED on a specific port of the line card. • Use the **show controllers optics** *rack/slot/instance/port* **| in LED** command to display the LED status of ports.
ACT LED	Flashing Red	The line card is booting. This colour appears as soon as the line card is inserted in to the chassis.
	Amber (solid)	Indicates that the line card is in the booting phase.
	Green	Indicates that the line card is up and operational (not associated to the traffic status).

LED	Colour	Status
QSFP and CFP2 port LEDs	Off	This indicates that the port has not been provisioned.
	Red	Indicates a major alarm, which could be a traffic impacting situation.
	Green	Indicates that the module is operational and has no alarm.
	Amber (solid)	Indicates a minor alarm (such as low Rx or Tx power), which could lead to a traffic impacting situation.
	Amber (flashing)	This is used for troubleshooting, to identify the faulty port in the line card. Use the **controller optics** command in the configuration mode to point to a faulty port in the line card.

LEDs of QXP-K9 Line Card

The front view of the QXP-K9 line card is as below.

Figure 5: Front View of the QXP-K9 Line Card



1	16 QSFP-DD ports (0 to 15)
2	ACT LED

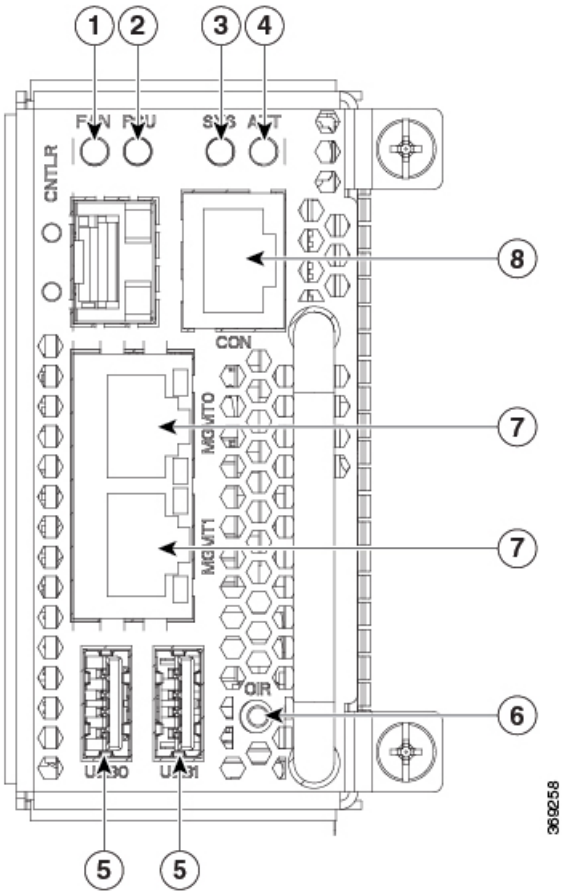
Table 4: Status of the QXP-K9 Line Card LEDs

LED	Color	Status
ACT LED	Flashing Red	The line card is booting. This color appears as soon as the line card is inserted in to the chassis.
	Amber (solid)	Indicates that the line card is in the booting phase.
	Green	Indicates that the line card is up and operational (not associated to the traffic status).
QSFP-DD port LEDs	Off	This indicates that the port has not been provisioned.
	Red	Indicates a major alarm, which could be a traffic impacting situation.
	Green	Indicates that the module is operational and has no alarm.
	Amber (solid)	Indicates a minor alarm (such as low Rx or Tx power), which could lead to a traffic impacting situation.
	Amber (flashing)	This is used for troubleshooting, to identify the faulty port of a line card. Use the **controller optics** command in the configuration mode to point to a faulty port in the line card.

Controller LEDs

The controller unit has four LEDs to indicate the system status and the status of the components.

Figure 6: Front View of the Controller



1	Fan Unit Status
2	Power Supply Unit Status
3	System Status
4	Attention LED
5	USB Ports (0 and 1)
6	OIR Button
7	Management Ports (0 and 1)
8	Console Port

Table 5: Status of the Controller LEDs

LED	Colour	Status
FAN LED	Green	Indicates all fans present in the chassis are in working condition.
	Red	Indicates either a fan is missing from its slot or is faulty.
PSU LED	Green	Indicates all PSUs present in the chassis are in working condition.
	Red	Indicates either a PSU is missing from its slot or is faulty.
SYS LED (during controller boot up)	Red	Indicates that the controller unit is powering ON.
	Red (flashing slowly)	Indicates BIOS loading.
	Yellow (flashing slowly)	Indicates OS loading.
	Red (flashing fast)	Indicates secure boot failure. Replace the controller unit.
	Yellow (flashing fast)	Indicates that the controller unit is not seated properly.
SYS LED (controller is operational)	Red	Indicates a major or critical alarm.
	Yellow	Indicates a minor alarm.
	Green	The module is operational and has no active alarms.
Attention LED	Blue (flashing)	Applicable during OIR procedures. Indicates that the system is cooling down.
	Blue	Used to identify a specific chassis in a rack or room. This is used for troubleshooting purposes. Use the **hw-module attention led location** command to turn on this LED.

Power Supply Unit LED

The following table has details of the PSU LED:

Table 6: Status of the PSU LED

LED	Colour	Status
PSU LED	Off (no colour)	Indicates no input to the PSU and the 12V from the other PSU (parallel unit) is not available.
	Amber (solid)	Indicates a critical fault on the PSU or that the PSU is in OFF condition. This occurs when there is no input to the PSU, 12V from the other PSU (parallel unit) is available.
	Green(blinking)	Indicates that the PSU is disabled. This occurs when input is present but the PSU is disabled by the system (the Enable pin is in OFF position).
	Amber (blinking)	Indicates a minor fault on the PSU. The minor fault could be - fan fault or 12V over-current warning or temperature warning.
	Green (solid)	Indicates that the PSU is working fine and that the Vout (output voltage) is in regulation.

Fan Unit LED

The following table has details of the fan unit LED:

Table 7: Status of the Fan Unit LED

LED	Colour	Status
FAN LED	Off (no colour)	Indicates that the fan unit is not inserted properly or chassis is powered off.
	Red (solid)	Indicates a fault in the fan unit. This occurs when the fan speed is out of range or the fan unit is inserted but not powered on.
	Green (solid)	Indicates that the fan unit is working fine.