



ศูนย์เทคโนโลยีสารสนเทศและการสื่อสาร สบ.มท.  
Information and Communication Technology Center.

**SAMART**

# IP Telephony

*Voice GW types*



# Voice GW types

**ISR4351**



**ISR4431**



**ISR4331**

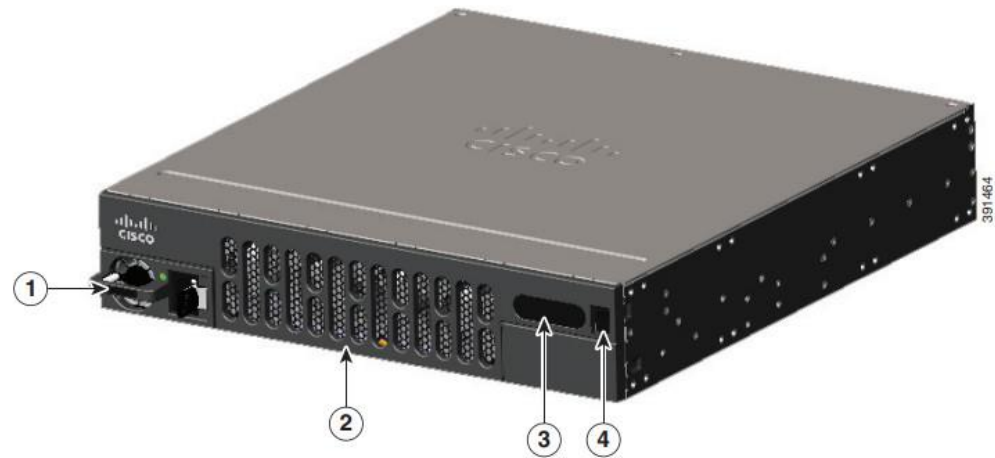


**ISR4321**



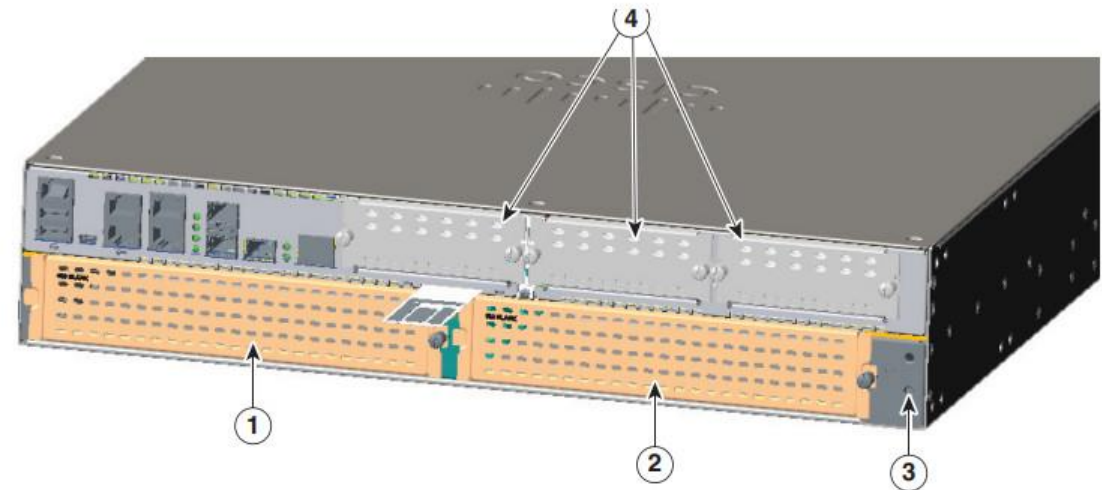
- Chassis View

Figure 1-17 Power Supply and Bezel Side View of Cisco 4351 ISR



1	Power supply unit	2	Router fan tray (hidden behind the removable bezel)
3	LEDs	4	Router power On/Off switch

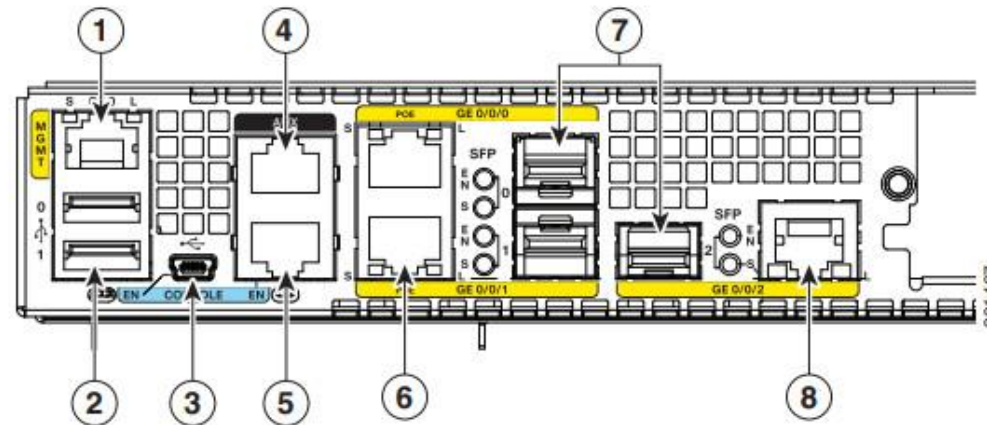
Figure 1-18 Back Panel Ports, Slots, and Serial Number on Cisco 4351 ISR



1	Enhanced Service Module (SM-X) slot	2	Enhanced Service Module (SM-X) slot
3	Ground connection	4	NIM slots

- Ports View

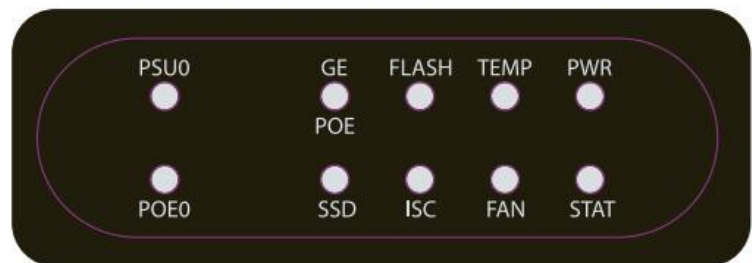
Figure 1-19 Ports on Cisco 4351 ISR



1	GE management port	2	USB Type A port
3	USB Type B mini port	4	Auxiliary port
5	Console port	6	RJ-45 port (GE 0/0/0, GE 0/0/1)
7	SFP port (GE 0/0/0, GE 0/0/1, GE 0/0/2)	8	RJ-45 port (GE/0/0/2)

- LEDs View

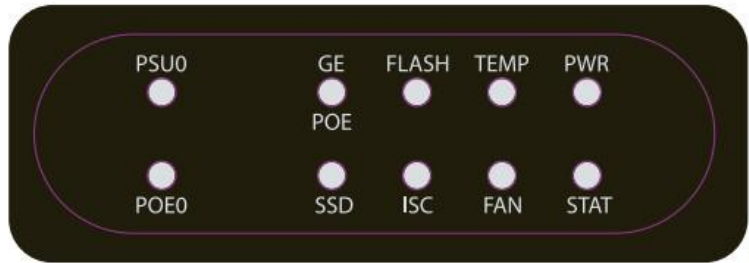
Figure 1-20 LEDs on Cisco 4351 ISR



LED	Represents	Color	Description
PSU0	Power Supply Unit (P0) Status	Green	PSU is on and provides power.
		Amber	Amber PSU is on but with errors or in a failure condition.
		Off	Power supply is turned off.
POE0	POE PSU	Green	PoE is on and provides power.
		Amber	PoE is in a failed condition.
		Off	PoE supply is not present.
GE POE	Internal PoE Daughter Card Status	Green	PSU is installed and provides power
		Amber	PSU is installed but in a failure condition.
		Off	PSU is off.

- LEDs View

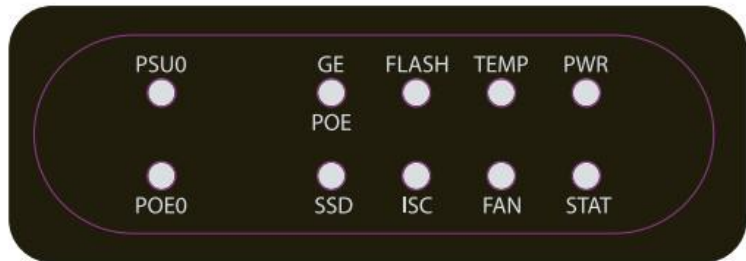
Figure 1-20 LEDs on Cisco 4351 ISR



LED	Represents	Color	Description
TEMP	Temperature Status	Solid green	All temperature sensors in the system are within acceptable range
		Amber	One or more temperature sensors in the system are outside the acceptable range.
		Off	Temperature is not being monitored.
FAN	Fan Status	Green	All fans are operating
		Amber	One fan has stopped working.
		Blinking Amber	Two or more fans have stopped working, or the fan tray is removed
		Off	Fans are not being monitored.

- LEDs View

Figure 1-20 LEDs on Cisco 4351 ISR

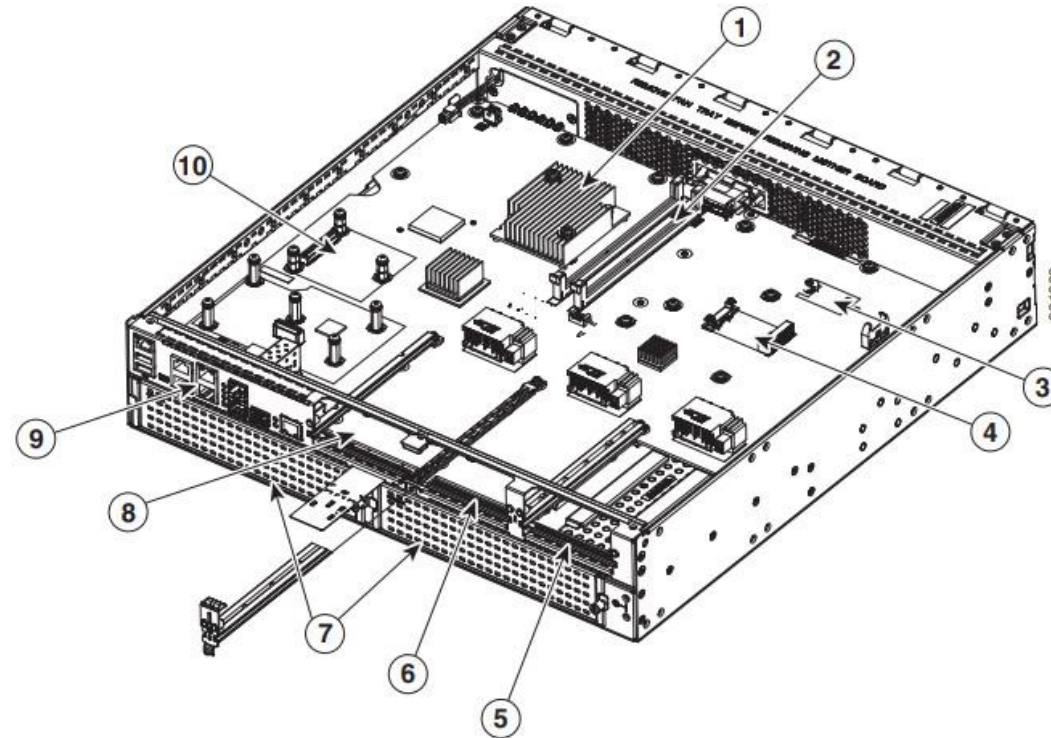


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LED	Represent s	Color	Description
STAT	System Status	Solid green	System operates normally.
		Blinkin g amber	BIOS/Rommon is booting.
		Amber	BIOS/Rommon has completed booting, and system is at Rommon prompt or booting platform software.
		Off	System is not out of reset or BIOS image is not loadable.

- Platform Summary

Figure 1-21 Platform Summary of Cisco 4351 ISR Chassis



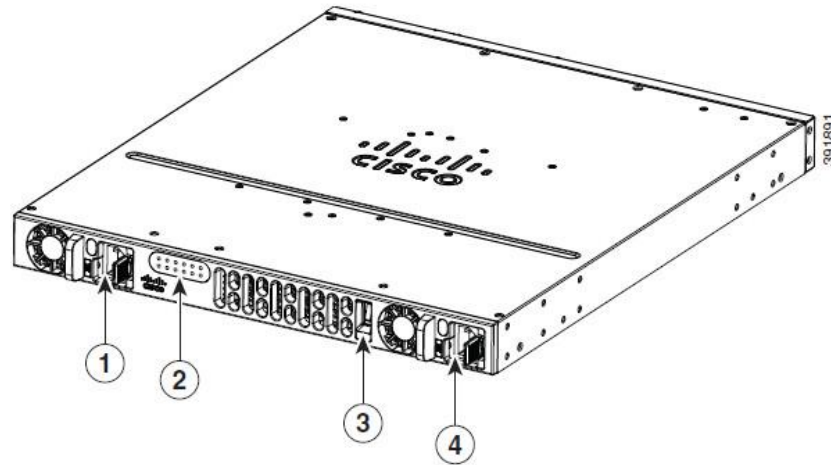
1	CPU	2	DIMMs
3	Flash memory card connector	4	SSD mSATA connector
5	NIM slot 3	6	NIM slot 2
7	SM-X slots	8	NIM slot 1
9	RJ-45 GE ports	10	ISC slot

โครงการค่าจัดหาระบบโทรศัพท์ (IP Telephony) เพื่อการสื่อสารแบบครบวงจรของกระทรวงมหาดไทย



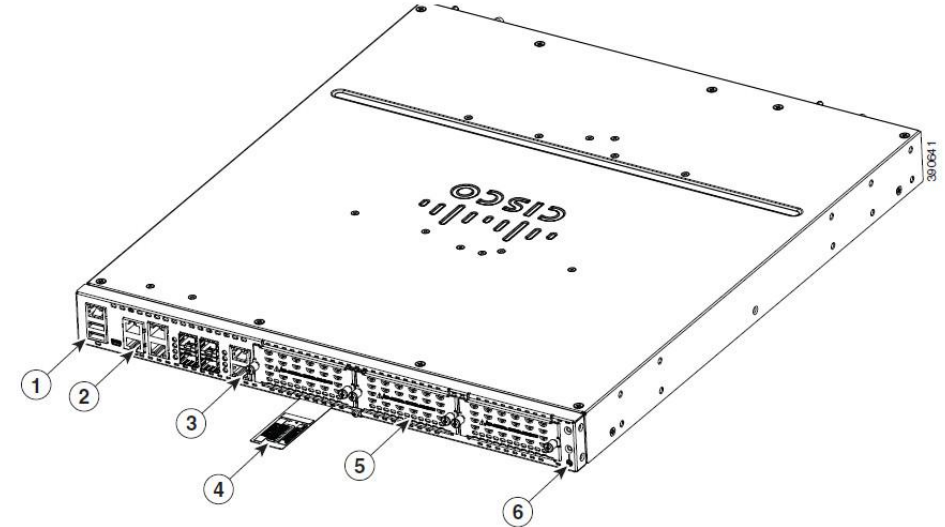
- Chassis View

Figure 1-13 Bezel View of Cisco 4431 ISR with Two Power Supply Units



1	Power supply unit (PSU1)	2	LEDs
3	On/Off switch	4	Optional power supply unit (PSU0)

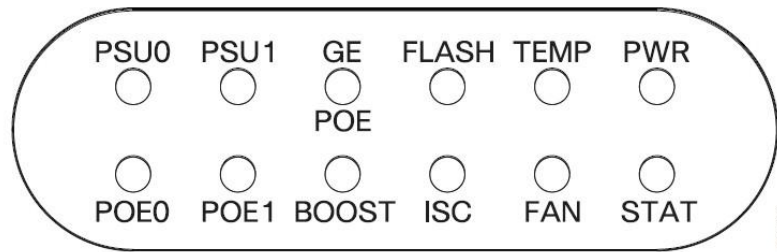
Figure 1-14 View of Cisco 4431 ISR Chassis



1	USB ports	2	GE ports
3	Screws to open the NIM slot	4	Router label tray
5	NIM slot (with cover)	6	Ground connection

- LEDs View

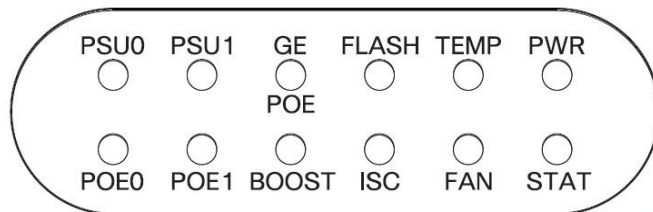
Figure 1-15 LEDs on the Cisco 4431 ISR



LED	Represents	Color	Description
PSU0, PSU1	Power Supply Unit (P0) Status	Green	PSU is on and provides power.
		Amber	Amber PSU is on but with errors or in a failure condition.
		Off	Power supply is turned off.
POE0, POE1	POE PSU	Green	PoE is on and provides power.
		Amber	PoE is in a failed condition.
		Off	PoE supply is not present.
GE POE	Internal PoE Daughter Card Status	Green	PSU is installed and provides power
		Amber	PSU is installed but in a failure condition.
		Off	PSU is off.

- LEDs View

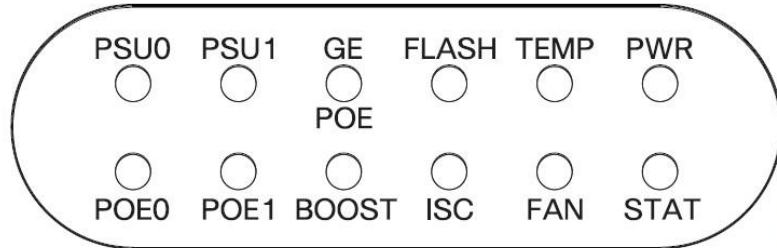
Figure 1-15 LEDs on the Cisco 4431 ISR



LED	Represents	Color	Description
BOOST	Power Over Ethernet Boost Mode	Green	Two PoE power supplies are installed and operating in boost mode.
		Off	This can mean one of the following: <ul style="list-style-type: none"> <li>No PoE PSU is installed.</li> <li>One PoE PSU is installed.</li> <li>Two PoE PSUs are installed and operate in redundant mode.</li> </ul>
FLASH	System Flash Status	Blinking Green	Compact flash/eUSB flash is present and currently being accessed. <b>Note</b> Do not remove the flash device while the system is powered on
ISC	ISC Slot Status	Green	PVDM4 is present and enabled.
		Amber	Initialized with error.
		Off	Not present.

- LEDs View

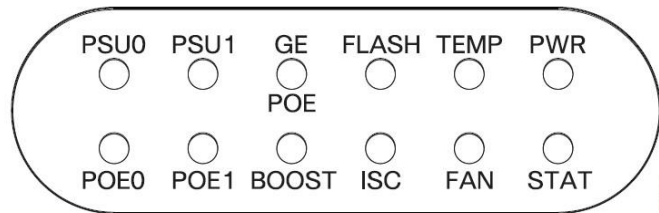
Figure 1-15 LEDs on the Cisco 4431 ISR



LED	Represents	Color	Description
TEMP	Temperature Status	Solid green	All temperature sensors in the system are within acceptable range
		Amber	One or more temperature sensors in the system are outside the acceptable range.
		Off	Temperature is not being monitored.
FAN	Fan Status	Green	All fans are operating
		Amber	One fan has stopped working.
		Blinking Amber	Two or more fans have stopped working, or the fan tray is removed
		Off	Fans are not being monitored.

- LEDs View

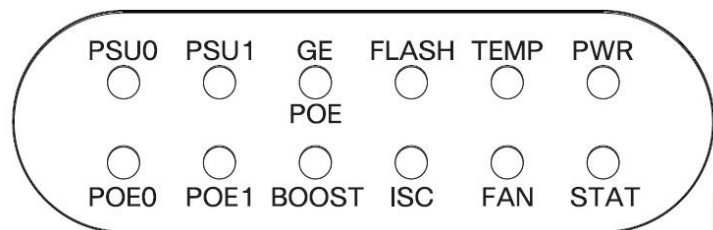
Figure 1-15 LEDs on the Cisco 4431 ISR



LED	Represents	Color	Description
PWR	System Power	Green	System power is on and system functions correctly
		Green blinking	System power is in the process of shutting down.
		Amber	System power is up, but low level initialization has failed
		Amber blinking:	System power is up, but the system has failed to come out of reset.
		Off	System power is off.

- LEDs View

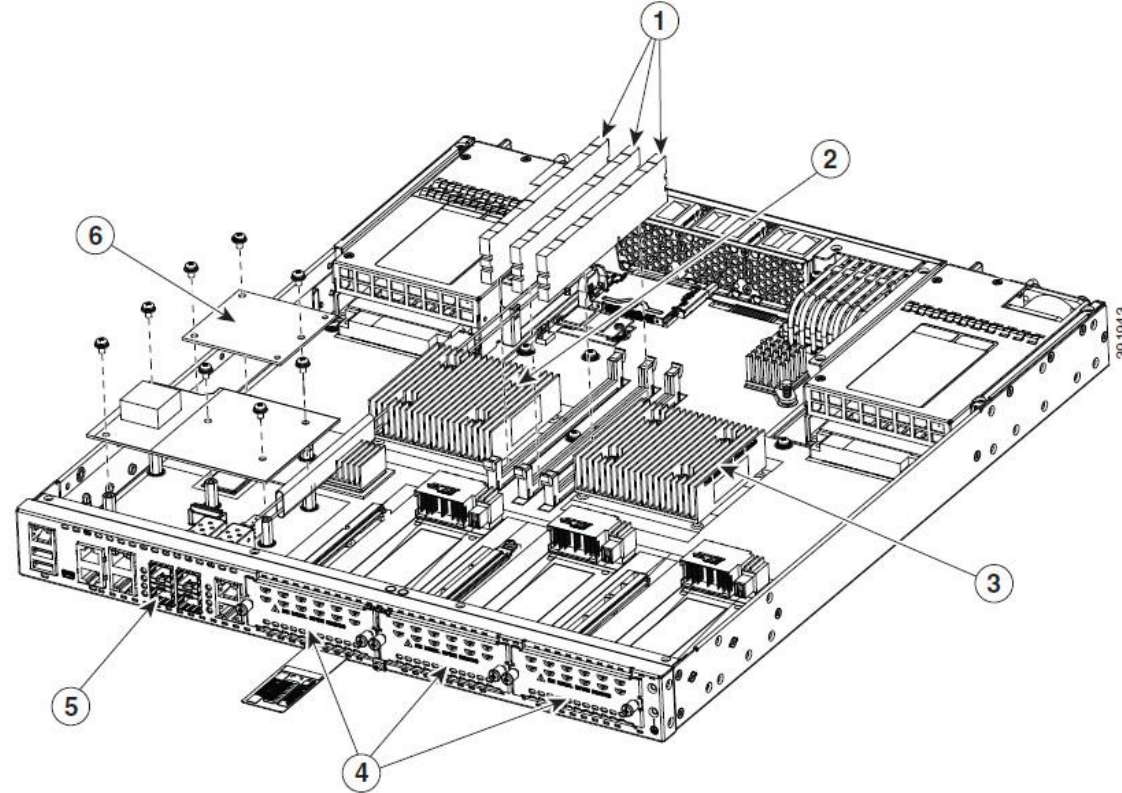
Figure 1-15 LEDs on the Cisco 4431 ISR



LED	Represents	Color	Description
STAT	System Status	Solid green	System operates normally.
		Blinking amber	BIOS/Rommon is booting.
		Amber	BIOS/Rommon has completed booting, and system is at Rommon prompt or booting platform software.
		Off	System is not out of reset or BIOS image is not loadable.

- Platform Summary

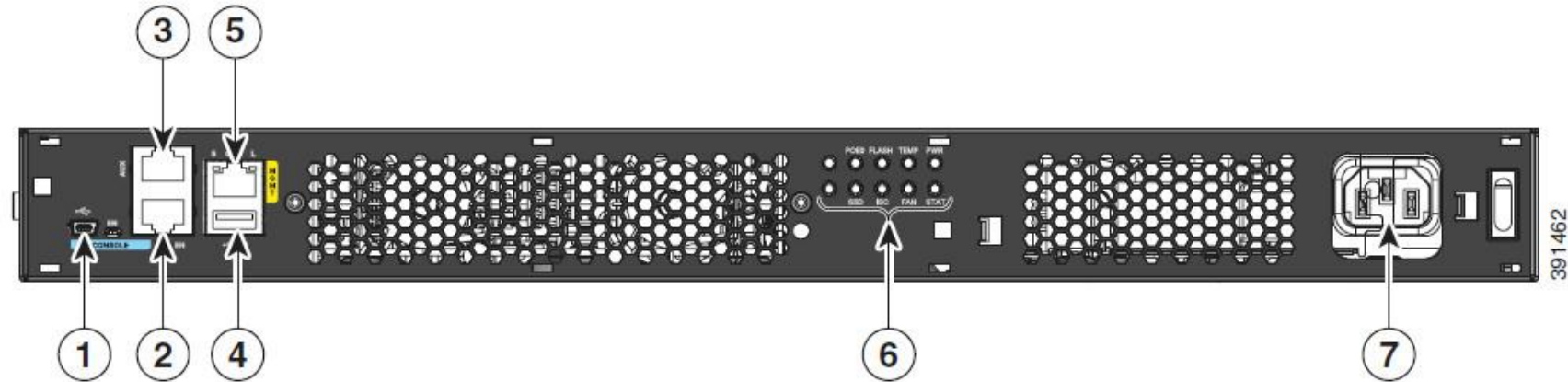
Figure 1-16 Platform Summary of the Cisco 4431 ISR



1	DIMMs	2	Forwarding plane processor
3	Control plane processor	4	NIMs
5	SFP GE ports	6	PVDM card

- Chassis View

**Figure 1-22** Bezel Side Ports and LEDs on Cisco 4331 ISR

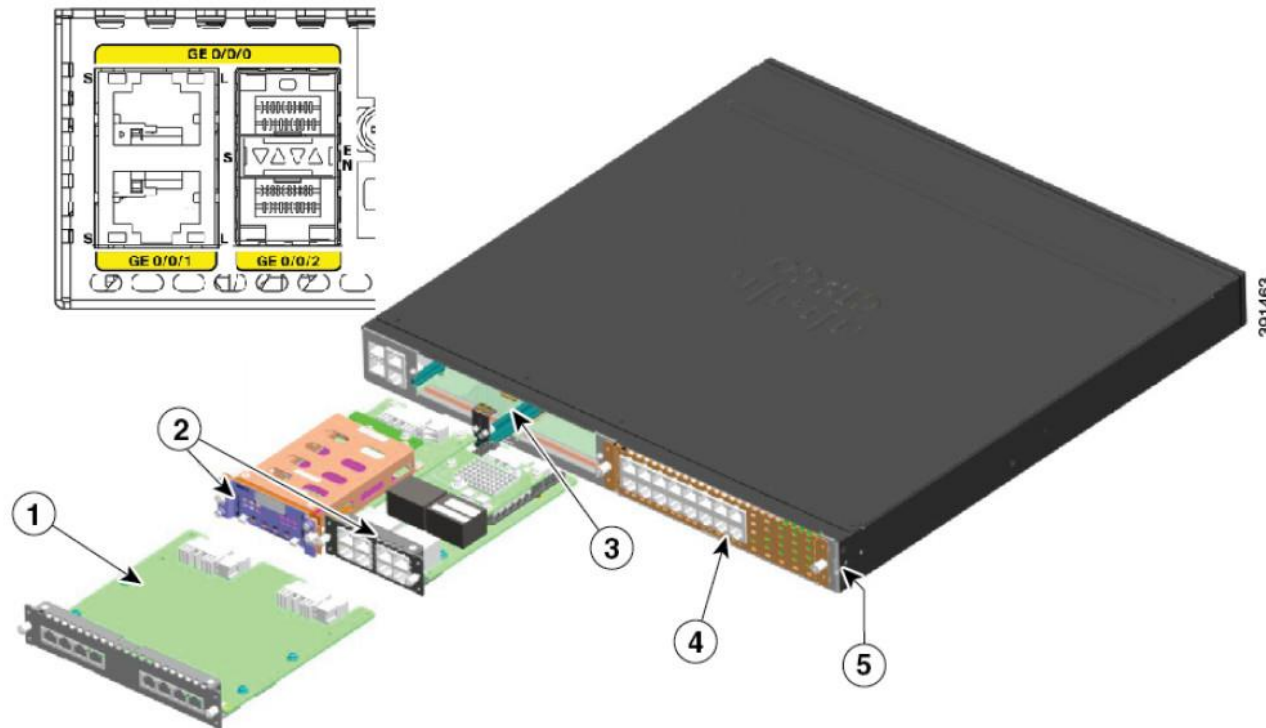


<b>1</b>	USB Type B mini port	<b>2</b>	Serial console port
<b>3</b>	AUX port	<b>4</b>	USB Type A port
<b>5</b>	Management port	<b>6</b>	LEDs
<b>7</b>	AC Power		



- Chassis View

Figure 1-23 Back Panel Ports and Slots on Cisco 4331 ISR



1	Double-wide NIM	2	NIMs
3	Removable module slot divider	4	SM-X slot
5	Ground connection		

- LEDs View



LED	Represents	Color	Description
POE0, POE1	POE PSU	Green	PoE is on and provides power.
		Amber	PoE is in a failed condition.
		Off	PoE supply is not present.
SSD	mSATA Slot Status	Green	SSD mSATA is present and enabled.
		Amber	Initialized with error.
		Off	Not present.
FLASH	System Flash Status	Blinkin g Green	Compact flash/eUSB flash is present and currently being accessed. <b>Note</b> Do not remove the flash device while the system is powered on

- LEDs View



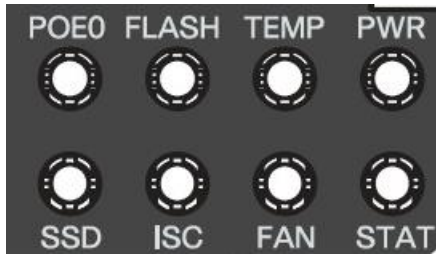
LED	Represents	Color	Description
ISC	ISC Slot Status	Green	PVDM4 is present and enabled.
		Amber	Initialized with error.
		Off	Not present.
TEMP	Temperature Status	Solid green	All temperature sensors in the system are within acceptable range
		Amber	One or more temperature sensors in the system are outside the acceptable range.
		Off	Temperature is not being monitored.
FAN	Fan Status	Green	All fans are operating
		Amber	One fan has stopped working.
		Blinking Amber	Two or more fans have stopped working, or the fan tray is removed
		Off	Fans are not being monitored.

- LEDs View



LED	Represents	Color	Description
PWR	System Power	Green	System power is on and system functions correctly
		Green blinking	System power is in the process of shutting down.
		Amber	System power is up, but low level initialization has failed
		Amber blinking:	System power is up, but the system has failed to come out of reset.
		Off	System power is off.

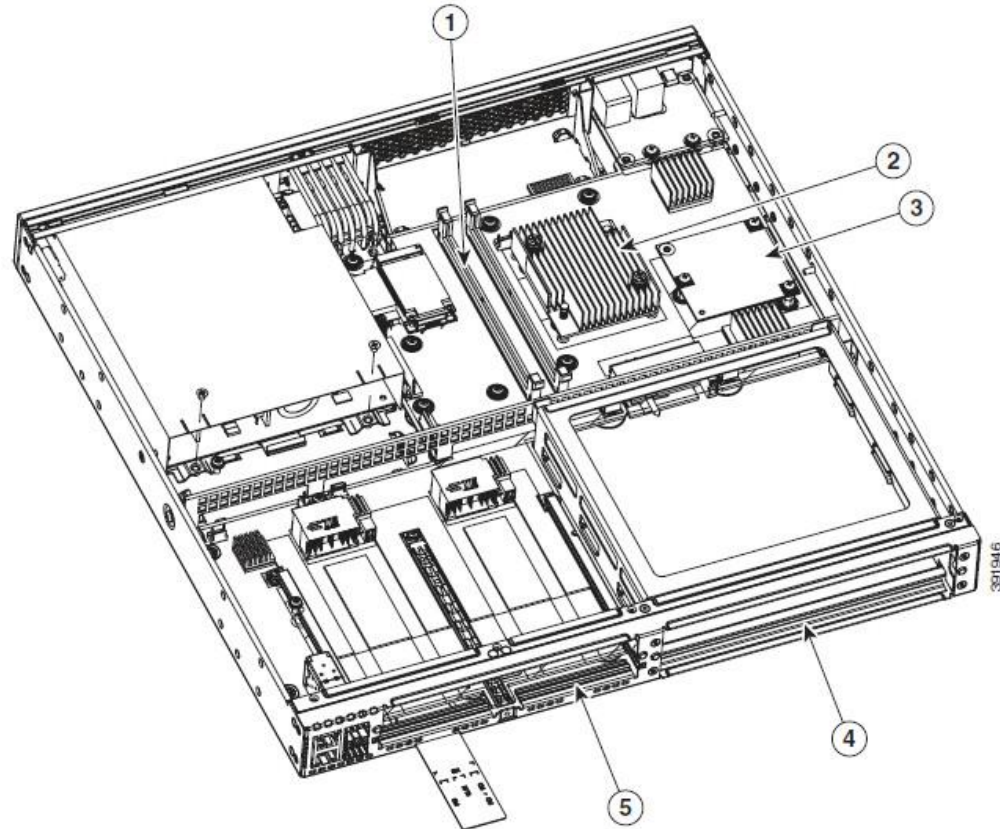
- LEDs View



LED	Represents	Color	Description
STAT	System Status	Solid green	System operates normally.
		Blinking amber	BIOS/Rommon is booting.
		Amber	BIOS/Rommon has completed booting, and system is at Rommon prompt or booting platform software.
		Off	System is not out of reset or BIOS image is not loadable.

- Platform Summary

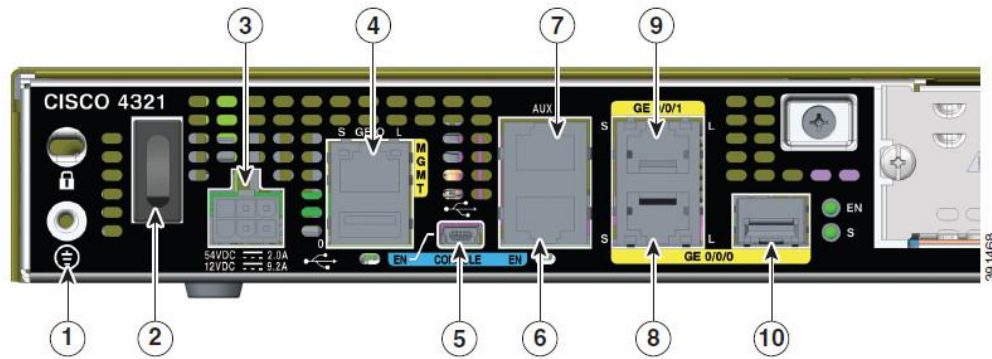
Figure 1-25 Platform Summary of Cisco 4331 ISR Chassis



1	DIMMs	2	CPU
3	ISC slot	4	SM-X slot
5	NIM slot		

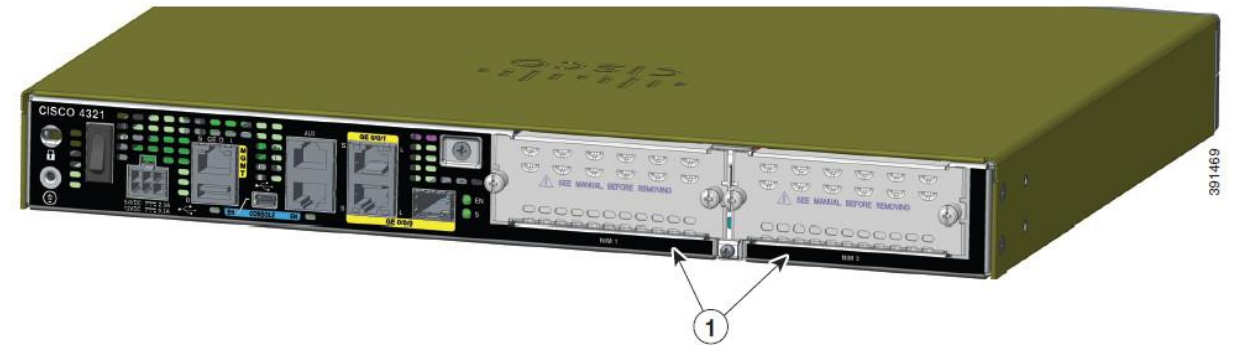
- Chassis View

Figure 1-26 Back Panel Ports on Cisco 4321 ISR



1	Grounding	2	Power switch
3	Power input connector	4	GE "MGMT" port (with USB port below)
5	USB Type B mini port	6	Console port
7	Auxiliary port	8	GE 0/0/0 (copper cable) port
9	GE 0/0/1 RJ-45 (copper cable) port	10	GE 0/0/0 SFP (fiber-optic) port

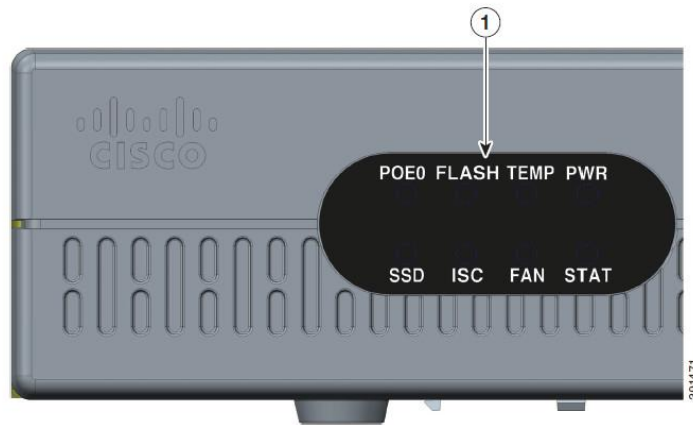
Figure 1-27 Back Panel (I/O Side) View of Cisco 4321 ISR



1	NIM slots
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- LEDs View

Figure 1-28 LEDs on Cisco 4321 ISR



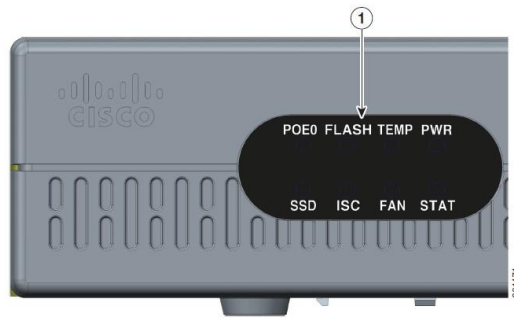
1 LEDs

LED	Represents	Color	Description
POE0,	POE PSU	Green	PoE is on and provides power.
		Amber	PoE is in a failed condition.
		Off	PoE supply is not present.
SSD	mSATA Slot Status	Green	SSD mSATA is present and enabled.
		Amber	Initialized with error.
		Off	Not present.
FLASH	System Flash Status	Blinking Green	Compact flash/eUSB flash is present and currently being accessed. <b>Note</b> Do not remove the flash device while the system is powered on



- LEDs View

Figure 1-28 LEDs on Cisco 4321 ISR

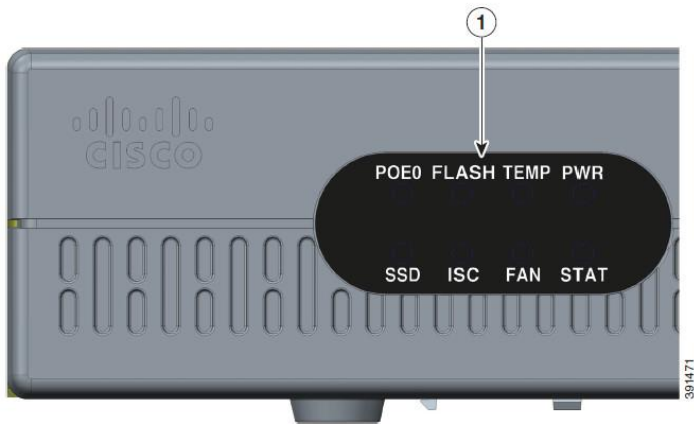


1 LEDs

LED	Represents	Color	Description
ISC	ISC Slot Status	Green	PVDM4 is present and enabled.
		Amber	Initialized with error.
		Off	Not present.
TEMP	Temperature Status	Solid green	All temperature sensors in the system are within acceptable range
		Amber	One or more temperature sensors in the system are outside the acceptable range.
		Off	Temperature is not being monitored.
FAN	Fan Status	Green	All fans are operating
		Amber	One fan has stopped working.
		Blinking Amber	Two or more fans have stopped working, or the fan tray is removed
		Off	Fans are not being monitored.

- LEDs View

Figure 1-28 LEDs on Cisco 4321 ISR

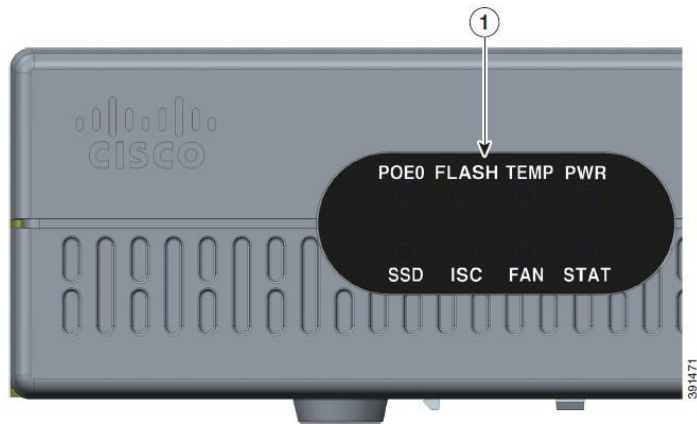


LED	Represents	Color	Description
PWR	System Power	Green	System power is on and system functions correctly
		Green blinking	System power is in the process of shutting down.
		Amber	System power is up, but low level initialization has failed
		Amber blinking:	System power is up, but the system has failed to come out of reset.
		Off	System power is off.

1 LEDs

- LEDs View

Figure 1-28 LEDs on Cisco 4321 ISR

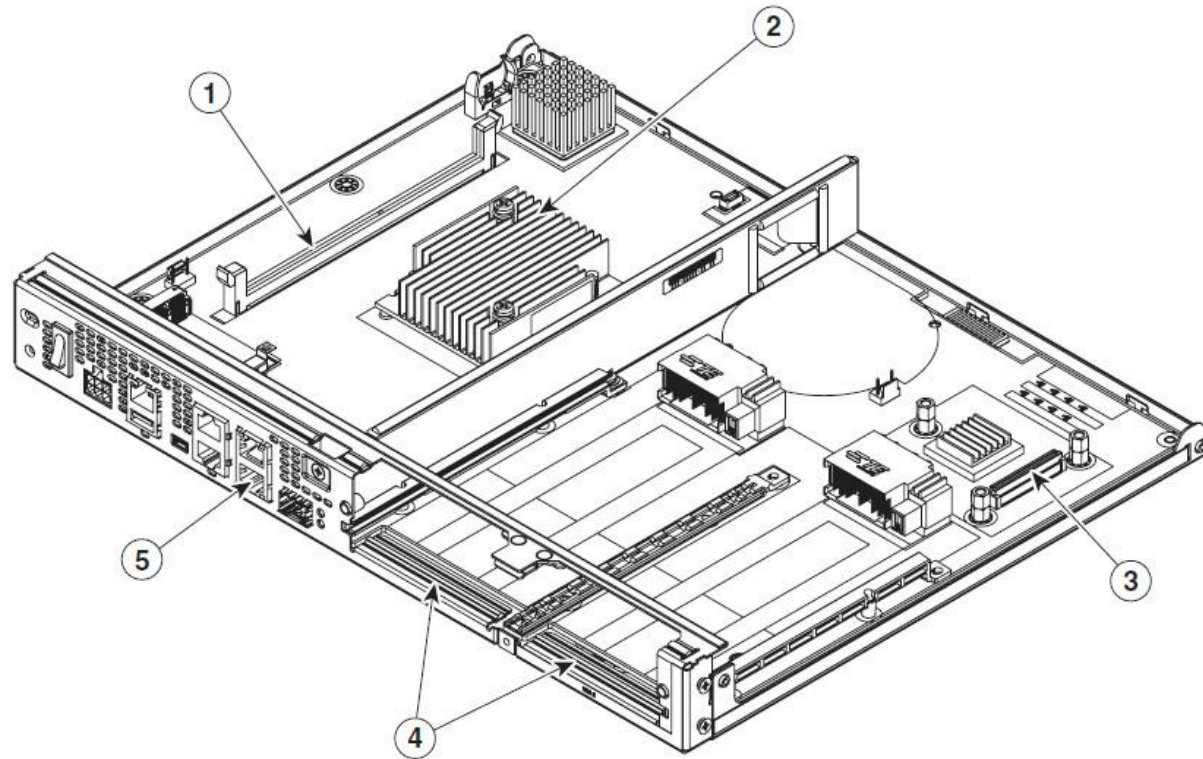


LED	Represents	Color	Description
STAT	System Status	Solid green	System operates normally.
		Blinking amber	BIOS/Rommon is booting.
		Amber	BIOS/Rommon has completed booting, and system is at Rommon prompt or booting platform software.
		Off	System is not out of reset or BIOS image is not loadable.

1 LEDs

- Platform Summary

Figure 1-29 Platform Summary of Cisco 4321 ISR Chassis



1	DIMM	2	CPU
3	ISC slot	4	NIM slots
5	GE ports		



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Thanks and Regards.

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