



# Troubleshooting

This chapter provides information about troubleshooting issues, if any, on the Cisco ASR 920-24SZ-IM, ASR-920-24SZ-M, ASR-920-24TZ-M Router:

- [Pinouts, on page 1](#)

## Pinouts

The sections describe the pinouts for the Cisco ASR 920-24SZ-IM, ASR-920-24SZ-M, ASR-920-24TZ-M Router interfaces.

## BITS Port Pinouts



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**Note** BITS port is supported only on Cisco ASR-920-24SZ-IM Router.

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The table below summarizes the BITS port pinouts.

**Table 1: BITS Port Pinouts**

Pin	Signal Name	Direction	Description
1	RX Ring	Input	Receive Ring
2	RX Tip	Input	Receive Tip
3	—	—	Not used
4	TX Ring	Output	TX Ring
5	TX Tip	Output	TX Tip
6	—	—	Not used
7	—	—	Not used

Pin	Signal Name	Direction	Description
8	—	—	Not used

## GPS Port Pinout

The table below summarizes the GPS port pinouts.



**Note** GPS port is supported only on Cisco ASR-920-24SZ-IM Router.



**Note** The 10 Mhz and 1 PPS interfaces can be configured as input or output using Cisco IOS CLI commands. For more information, see the *Cisco ASR 920 Series Aggregation Services Router Configuration Guide*.

**Table 2: GPS Port Pinout**

Category	10 Mhz (input and output)	1PPS (input and output)
Waveform	Input—Sine wave Output—Square wave	Input—Pulse shape Output—Pulse shape
Amplitude	Input— > 1.7 volt p-p(+8 to +10 dBm) Output— > 2.4 volts TTL compatible	Input— > 2.4 volts TTL compatible Output— > 2.4 volts TTL compatible
Impedance	50 ohms	50 ohms
Pulse Width	50% duty cycle	26 microseconds
Rise Time	Input—AC coupled Output—5 nanoseconds	40 nanoseconds

## Time-of-Day Port Pinouts

The table below summarizes the ToD/1-PPS port pinouts.



**Note** ToD port is supported only on Cisco ASR-920-24SZ-IM Router.

**Table 3: RJ-45 1PPS/ToD Port Pinouts**

<b>Pin</b>	<b>Signal Name</b>	<b>Direction</b>	<b>Description</b>
1	RESERVED	Output	Do Not Connect
2	RESERVED	Input	Do Not Connect
3	1PPS_N	Output or Input	1PPS RS422 signal
4	GND	—	—
5	GND	—	—
6	1PPS_P	Output or Input	1PPS RS422 signal
7	TOD_N	Output or Input	Time-of-Day character
8	TOD_P	Output or Input	Time-of-Day character

## Alarm Port Pinouts

The following table summarizes the external alarm input pinouts.

**Table 4: External Alarm Input Pinouts**

<b>Pin</b>	<b>Signal Name</b>	<b>Description</b>
1	ALARM0_IN	Alarm input 0
2	ALARM1_IN	Alarm input 1
3	—	No connect
4	ALARM2_IN	Alarm input 2
5	ALARM3_IN	Alarm input 3
6	—	No connect
7	—	No connect
8	COMMON	Alarm common

## Management Ethernet Port Pinouts

The following table summarizes the Management Ethernet port pinouts.

**Table 5: Fan Alarm Port Pinout**

<b>Pin</b>	<b>Signal Name</b>
1	TRP0+
2	TRP0-
3	TRP1+
4	TRP2+
5	TRP2-
6	TRP1-
7	TRP3+
8	TRP3-

## USB Console Port Pinouts

The following table summarizes the USB console port pinouts.

**Table 6: Single USB Console Port Pinouts**

<b>Pin</b>	<b>Signal Name</b>	<b>Description</b>
A1	Vcc	+5VDC
A2	D-	Data -
A3	D+	Data +
A4	Gnd	Ground




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**Note** The USB console port +5VDC is input, and operates as an USB peripheral device.

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## USB Flash or MEM Port Pinouts

The following table summarizes the USB flash or MEM port pinouts.

**Table 7: Single USB Flash or MEM Port Pinouts**

Pin	Signal Name	Description
A1	Vcc	+5VDC (500mA)
A2	D-	Data -
A3	D+	Data +
A4	Gnd	Ground



**Note** USB TYPE-A receptacle is used.



**Note** The USB flash or MEM port +5VDC is output. Cisco ASR 920-24SZ-IM, ASR-920-24SZ-M, ASR-920-24TZ-M Router provides power for USB flash or MEM port. This port operates as a USB host device.

## RJ45C Port Pinouts

The following table summarizes the RJ45C port pinouts on the 8 Port T1/E1 Interface Module.

**Table 8: RJ45C Port Pinouts**

Pin	Signal Name
1	RX_TIP
2	RX_RING
4	TX_TIP
5	TX_RING
3, 6, 7, 8	Not Connected

## Check Optical Fiber Specifications

The specification for optical fiber transmission defines two types of fiber: single mode and multimode. Within the single-mode category, three transmission types are defined: short reach, intermediate reach, and long reach. Within the multimode category, only short reach is available. For information about optical SFP modules, see the documentation for the SFP module at:

[http://www.cisco.com/en/US/partner/products/hw/modules/ps5455/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/partner/products/hw/modules/ps5455/prod_installation_guides_list.html) .

## Check Alarm Conditions

The table below summarizes the meaning of the alarm conditions on the Cisco ASR 920-24SZ-IM, ASR-920-24SZ-M, ASR-920-24TZ-M Router.

*Table 9: Alarm Condition Summary*

<b>Alarm Type</b>	<b>Alarm Meaning</b>
Critical	Port in down state. Environmental sensor threshold exceeded critical level (voltage, temperature)
Major	Environmental sensor threshold exceeded major level (voltage, temperature)
Info	Port administratively shut down.