



Cisco ASR 1000 Series Router Route Processor and Embedded Services Processor Signals and Pinouts

This appendix contains the following sections:

- [Cisco ASR 1000-RP1 Pinout Specifications, on page 1](#)
- [Cisco ASR1000-RP2 Pinout Specifications, on page 3](#)
- [Cisco ASR1000-ESP40 Console Port Pinout Specifications, on page 5](#)
- [Cisco ASR1000-ESP100 Console Port Pinout Specifications, on page 5](#)
- [Cisco ASR1000-ESP200 Console Port Pinout Specifications, on page 6](#)

Cisco ASR 1000-RP1 Pinout Specifications

The following tables list the pinouts for the ports on the Cisco ASR1000-RP1.

MGMT Ethernet Port Signals and Pinouts

The following table lists the Management Ethernet 10/100 RJ-45 port pinouts.

Table 1: RJ-45 Management Ethernet Port Pinouts

Pin	Signal	Direction	Description
1	TX Data+	Output	Transmit Data
2	TX Data-	Output	Transmit Data
3	RX Data+	Input	Receive Data
4, 5	NC	—	—
6	RX Data-	Input	Receive Data
7,8	NC	—	—

BITS Interface Port Signals and Pinouts

The following table lists the pinouts of the Building Integrated Timing Supply (BITS) RJ45 port.

Table 2: BITS RJ-45 Receptacle Pinouts for Cisco ASR1000-RP1

Pin	Signal	Direction	Description
1	RX Ring	Input	Receive Ring
2	RX TIP	Input	Receive (T1/E1)
3, 4	N/C	—	—
5	TX Ring	Unused	—
6	TX TIP	Unused	—
7,8	N/C	—	—

Console Port Signals and Pinouts

The following table lists the pinouts of the dual RJ-45 ports for the front panel console port.

Table 3: Console Port Pinouts for Cisco ASR1000-RP1

Pin	Signal	Direction	Description
1	RTS	Output	Request to Send (tied to pin 8, CTS)
2	DTR	Output	Data Terminal Ready (always On)
3	TXD	Output	Transmit Data
4	GND	—	Ring Indicator
5	GND	—	—
6	RXD	Input	Receive Data
7	DSR	Input	unused
8	CTS	Input	Clear to Send (tied to pin 1, RTS)

Auxiliary Port Signals and Pinouts

The following table lists the pinouts of the dual RJ-45 ports for the auxiliary port.

Table 4: Auxiliary Port Pinouts for Cisco ASR1000-RP1

Pin	Signal	Direction	Description
1	RTS	Output	Request to Send
2	DTR	Output	Data Terminal Ready (always On)
3	TXD	Output	Transmit Data
4	RI	—	Ring Indicator
5	GND	—	—
6	RXD	Input	Receive Data
7	DSR/DCD	Input	Data Set Ready/Data Carrier Detect
8	CTS	Input	Clear to Send

Cisco ASR1000-RP2 Pinout Specifications

The following tables list the pinouts for the ports on the Cisco ASR1000-RP2.

MGMT Ethernet Port Pinouts

The following table lists the RJ-45 port pinouts for the front panel Management Ethernet 10/100/1000 RJ-45 port.

Table 5: RJ-45 Management Ethernet Port Pinouts

Pin	Signal	Direction	Description
1	Bi Data A+	Bi	Bidirectional Data
2	Bi Data A-	Bi	Bidirectional Data
3	Bi Data B+	Bi	Bidirectional Data
4	Bi Data C+	Bi	Bidirectional Data
5	Bi Data C-	Bi	Bidirectional Data
6	Bi Data B-	Bi	Bidirectional Data
7	Bi Data D+	Bi	Bidirectional Data
8	Bi Data D-	Bi	Bidirectional Data

BITS/DTI Interface Port Signals and Pinouts

The following table lists the pinouts of the front panel BITS/DTI RJ45 port.

Table 6: BITS/DTI RJ-45 Receptacle Pinouts for Cisco ASR1000-RP2

Pin	Signal	Direction	Description
1	RX Ring	Input/Bi (DTI)	Receive Ring/Bidirectional (DTI)
2	RX TIP	Input/Bi (DTI)	Receive TIP (T1/E1)/Bidirectional (DTI)
3, 4	N/C	—	—
5	TX Ring	Output	Transmit Ring / unused for DTI
6	TX TIP	Output	Transmit TIP/ unused for DTI
7,8	N/C	—	—

Console Port Signals and Pinouts

The following table lists the pinouts of the dual RJ-45 ports for the front panel console port.

Table 7: Console Port Pinouts

Pin	Signal	Direction	Description
1	RTS	Output	Request to Send (tied to pin 8, CTS)
2	DTR	Output	Data Terminal Ready (always On)
3	TXD	Output	Transmit Data
4	RI	Input	Ring Indicator
5	GND	—	—
6	RXD	Input	Receive Data
7	DSR/DCD	Input	Data Setl Ready/Data Carrier detect
8	CTS	Input	Clear to Send

Auxiliary Port Signals and Pinouts

The following table lists the pinouts of the dual RJ-45 ports for the auxiliary port signals.

Table 8: Auxiliary Port Pinouts

Pin	Signal	Direction	Description
1	RTS	Out	Request to Send
2	DTR	Out	Data Terminal Ready (Always On)
3	TXD	Out	Transmit Data
4	RI	—	Ring Indicator
5	GND	—	—
6	RXD	In	Receive Data
7	DSR/DCD	In	Data Set Ready/Data Carrier Detect
8	CTS	In	Clear to Send

Cisco ASR1000-ESP40 Console Port Pinout Specifications

Cisco ASR1000-ESP40 provides a debug console on a 10-pin header. The following table lists the console port pinouts for Cisco ASR1000-ESP40.

Table 9: Console Port Pinout for Cisco ASR1000-ESP40

Pin	Signal	Direction	Description
1	—	—	Not Connected
2	DSR	In	Unused
3	RXD	In	Receive Data
4	RTS	In	Request to send, tied to CTS
5	TXD	Out	Transmit data
6	CTS	Out	Clear to Send, tied to RTS
7	DTR	Out	Data Terminal Ready (Always On)
8	—	—	Not Connected
9	GND	Ground	Ground

Cisco ASR1000-ESP100 Console Port Pinout Specifications

Cisco ASR1000-ESP100 provides a debug console on an 8-pin header. The following table lists the console port pinouts for Cisco ASR1000-ESP100.

Table 10: Console Port Pinout for Cisco ASR1000-ESP100

Pin	Signal	Direction	Description
1	RTS	IN	Request to send, tied to CTS
2	DTR	OUT	Unused
3	TXD	OUT	Transmit data
4	GND	Ground	Ground
5	GND	Ground	Ground
6	RXD	IN	Receive data
7	DSR	IN	Unused
8	CTS	OUT	Clear to send, tied to RTS

Cisco ASR1000-ESP200 Console Port Pinout Specifications

Cisco ASR1000-ESP200 provides a debug console on an 8-pin header. The following table lists the console port pinouts for Cisco ASR1000-ESP200.

Table 11: Console Port Pinout for Cisco ASR1000-ESP200

Pin	Signal	Direction	Description
1	RTS	IN	Request to send, tied to CTS
2	DTR	OUT	Unused
3	TXD	OUT	Transmit data
4	GND	Ground	Ground
5	GND	Ground	Ground
6	RXD	IN	Receive data
7	DSR	IN	Unused
8	CTS	OUT	Clear to send, tied to RTS