

# Appendix A

## Specifications

This appendix lists the specifications for the BANDIT™ family of products.

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**Note:** For BANDIT II, BANDIT III, or VSR-1200 specifications, see the *BANDIT II™, BANDIT III™, and VSR-1200™ Document Set*.

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### A.1 Pin Configurations

#### A.1.1 CSU/DSU RJ48S Port

Table A-1. CSU/DSU RJ48S Pinout (1 of 2)

Pin <sup>1</sup>	Function
1	Tx Ring (to Network)
2	Tx Tip (to Network)
7	Rx Tip (from Network)

**Table A-1. CSU/DSU RJ48S Pinout (2 of 2)**

Pin <sup>1</sup>	Function
8	Rx Ring (from Network)

1. Unused pins are not listed.

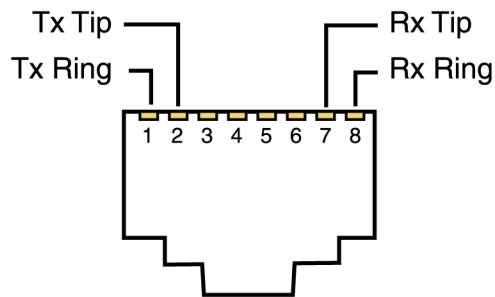


Figure A-1. CSU/DSU RJ48S Pinout

### A.1.2 T1/E1 RJ48C Port

**Table A-2. T1/E1 RJ48C Pinout**

Pin <sup>1</sup>	Function
1	Rx Tip
2	Rx Ring
4	Tx Tip
5	Tx Ring

1. Unused pins are not listed.

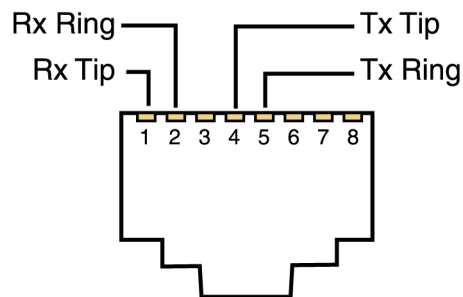


Figure A-2. T1/E1 RJ48C Pinout

### A.1.3 DB25 Port

*Table A-3. DB25 Serial Port Pin Configuration*

Pin Number <sup>1</sup>	Description
Pin 1	Shield
Pin 2	TXD
Pin 3	RXD
Pin 4	RTS
Pin 5	CTS
Pin 6	DSR
Pin 7	GND
Pin 8	DCD
Pin 15	TXC
Pin 17	RXC
Pin 20	DTR
Pin 24	SCTE

1. Unused pins are not listed.

### A.1.4 HD26 Port

*Table A-4. HD26 Serial Port Pin Configuration (1 of 2)*

HD26 Pin	Function
1	Earth Ground
2	TXD+
3	RXD+
4	RTS+
5	CTS+
6	DSR+
7	DCE/DTE (See cable pin setting in <a href="#">Table A-5.1</a> )
8	DCD+
9	RXC-
10	DCD-
11	SCTE-

**Table A-4. HD26 Serial Port Pin Configuration (2 of 2)**

HD26 Pin	Function
12	TXC-
13	CTS-
14	TXD-
15	TXC+
16	RXD-
17	RXC+
18	M0 (See cable pin setting in <a href="#">Table A-6.<sup>1</sup></a> )
19	RTS-
20	DTR+
21	M1 (See cable pin setting in <a href="#">Table A-6.<sup>1</sup></a> )
22	DSR-
23	DTR-
24	SCTE+
25	M2 (See cable pin setting in <a href="#">Table A-6.<sup>1</sup></a> )
26	Digital GND

1. You must order an adapter cable to provide the functions you need for pin 7 (described in [Table A-5](#)), and for pins 18, 21, and 25 (described in [Table A-6](#)). Contact your Encore Networks representative.

**Table A-5. Cable Pin Setting to Configure HD26 Serial Port as Physical DCE or DTE**

Physical Interface	Pin 7 of HD26 Interface
DTE	0 (Connect pin 7 to pin 26)
DCE	1 (Leave pin 7 open)

**Table A-6. Cable Pin Settings to Configure HD26 Serial Port's Electrical Interface (1 of 2)**

Electrical Interface	M2 (Pin 25)	M1 (Pin 21)	M0 (Pin 18)
V.11	0	0	0
RS-530A	0	0	1

**Table A-6. Cable Pin Settings to Configure HD26 Serial Port's Electrical Interface (2 of 2)**

Electrical Interface	M2 (Pin 25)	M1 (Pin 21)	M0 (Pin 18)
RS-530	0	1	0
X.21	0	1	1
V.35	1	0	0
RS-449/V.36	1	0	1
V.28/RS-232	1	1	0
No cable	1	1	1

0 = Connect the specified pin(s) to pin 26

1 = Leave the specified pin(s) open

**Table A-7. Pin Mapping for HD26-to-DB25 Serial Cable, RS-232, DTE**

HD26 Male		DB25 Male	
Pin	Function	Pin	Function
1	SHIELD	1	SHIELD
7, 18, 26	DTE/DCE, M0, S. GND	7	S. GND
9	RXC-A	17	RXC
10	DCD-A	8	DCD
11	SCTE-A	24	EXTER TX CLK
12	TXC-A	15	TXC
13	CTS-A	5	CTS
14	TXD-A	2	TXD
16	RXD-A	3	RXD
19	RTS-A	4	RTS
22	DSR-A	6	DSR
23	DTR-A	20	DTR

Note: The drain wire must be connected to the back shell at each end.

**Table A-8. Pin Mapping for HD26-to-DB25 Serial Cable, RS-232, DCE**

HD26 Male		DB25 Female	
Pin	Function	Pin	Function
1	SHIELD	1	SHIELD
9	RXC-A	24	EXTER TX CLK
10	DCD-A	8	DCD
11	SCTE-A	17	RXC
12	TXC-A	15	TXC
13	CTS-A	20	DTR
14	TXD-A	3	RXD
16	RXD-A	2	TXD
18, 26	M0, S. GND	7	S. GND
19	RTS-A	6	DSR
22	DSR-A	4	RTS
23	DTR-A	5	CTS

Note: The drain wire must be connected to the back shell at each end.

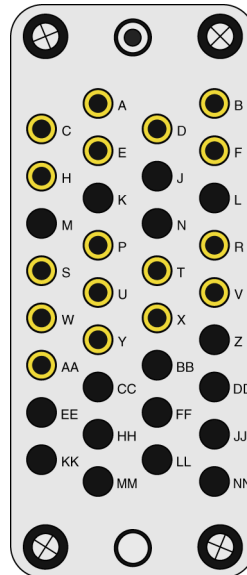
**Table A-9. RS-232 DTE Crossover Cable for DB25 Serial Port**

Input	Output
Pin 1 (Shield)	Pin 1 (Shield)
Pin 2 (TXD-A)	Pin 3 (RXD)
Pin 3 (RXD-A)	Pin 2 (TXD)
Pin 4 (RTS-A)	Pin 6 (DSR)
Pin 5 (CTS-A)	Pin 20 (DTR)
Pin 6 (DSR-A)	Pin 4 (RTS)
Pin 7 (GND)	Pin 7 (GND)
Pin 8 (DCD-A)	Pin 8 (DCD)
Pin 15 (TXC-A)	Pin 15 (TXC)
Pin 17 (RXC-A)	Pin 24 (EXT CLK)
Pin 20 (DTR-A)	Pin 5 (CTS)
Pin 24 (SCTE-A)	Pin 17 (RXC)

**A.1.4.1 HD26-to-Winchester V.35 Serial Connection**

You can connect the BANDIT's HD26 port to a Winchester port for a V.35 electrical interface.

[Figure A-3](#) shows the pin locations for the female Winchester V.35 connector.



*Figure A-3. Pin Locations for Winchester V.35 Connector, Female*

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**Note:** The pin locations for the male Winchester V.35 connector form a mirror image of the pin locations in [Figure A-3](#).

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[Table A-10](#) and [Table A-12](#) show the respective pin mappings for HD26-to-V.35 DTE and DCE connections.







### A.1.5 Cables for RJ45 Port

**Table A-14. RJ45-to-DB9 Terminal Adapter Cable**

8-Pin Mod. Pin	Function	Out	In	DB9 Pin
1	Unused			9
2	DCD	→		1
3	DTR		←	4
4	Common Ground			5
5	Receive Data	→		2
6	Transmit Data		←	3
7	CTS	→		8
8	RTS		←	7

**Table A-15. RJ45-to-DB25 Terminal Adapter Cable**

8-Pin Mod. Pin	Function	Out	In	DB25 Pin
1	Unused			22
2	DCD	→		8
3	DTR		←	20
4	Common Ground			7
5	Receive Data	→		3
6	Transmit Data		←	2
7	CTS	→		5
8	RTS		←	4

**Table A-16. RJ45-to-DB25 Modem Adapter Cable (1 of 2)**

8-Pin Mod. Pin	Port Function	Out	In	DB25 Pin	Modem Function
1	Unused			22	Not Connected
2	DCD	→		8	Not Connected
3	DTR		←	20/6	DTR/DSR

**Table A-16. RJ45-to-DB25 Modem Adapter Cable (2 of 2)**

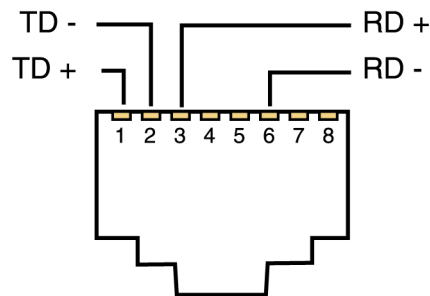
8-Pin Mod. Pin	Port Function	Out	In	DB25 Pin	Modem Function
4	Common Ground			7	Common Ground
5	Receive Data	→		2	Transmit Data
6	Transmit Data		←	3	Receive Data
7	CTS	→		4	RTS
8	RTS		←	5	CTS

### A.1.6 Ethernet Port

**Table A-17. 10-Base-T or 10/100-Base-T Ethernet Port Pinout, All BANDIT Products except VSR-1200, BANDIT II, and BANDIT III**

Pin <sup>1</sup>	Description
1	TD+
2	TD-
3	RD+
6	RD-

1. Unused pins are not listed.



*Figure A-4. RJ45 10-Base-T or 10/100-Base-T Ethernet Connector, All BANDIT Products except VSR-1200, BANDIT II, and BANDIT III*

**Table A-18. 10-Base-T or 10/100-Base-T Crossover Cable, All BANDIT Products except VSR-1200, BANDIT II, and BANDIT III**

Connector 1	Connector 2
1	3
2	6
3	1
6	2

## A.2 Port Speeds

**Table A-19. Port Speeds, Synchronous**

Synchronous (Bits/Second)
2,048,000
1,536,000
1,024,000
768,000
512,000
384,000
256,000
192,000
128,000
96,000
64,000
56,000
48,000
38,400
19,200
9,600
4,800
2,400

**Table A-20. Port Speeds, Asynchronous**

Asynchronous (Bits/Second)
230,400
115,200
57,600
48,000
3,8400
19,200
9,600
4,800
2,400
1,200

## **A.3 Chassis Specifications**

The following sections cover the physical, power, and environmental specifications for the chassis in the BANDIT family.

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**Note:** For information about the Remote Data Unit, see [Section A.4, RDU Specifications](#). For information about the BANDIT II, the BANDIT III, or the VSR-1200, see the *BANDIT II™, BANDIT III™, and VSR-1200™ Document Set*.

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### **A.3.1 Physical Specifications**

The products in the BANDIT family are designed for quick and easy integration with other equipment in a typical networking environment. [Table A-21](#) through [Table A-23](#) provide the physical specifications of the units.

**Table A-21. Physical Specifications, Tabletop Chassis**

Measurement	Original BANDIT	BANDIT IP	IBR-10	VSR-30
Height	1.7 in. (4.32 cm)	1.7 in. (4.32 cm)	1.7 in. (4.32 cm)	1.7 in. (4.32 cm)
Width	8.36 in. (21.34 cm)	8.36 in. (21.34 cm)	8.36 in. (21.34 cm)	8.36 in. (21.34 cm)
Depth	9.0 in. (22.86 cm)	9.0 in. (22.86 cm)	9.0 in. (22.86 cm)	9.0 in. (22.86 cm)
Weight	1.5 lb. (0.68 kg)	1.5 lb. (0.68 kg)	1.5 lb. (0.68 kg)	1.5 lb. (0.68 kg)
Installation Type	Tabletop	Tabletop	Tabletop	Tabletop

**Table A-22. Physical Specifications, Miniature (Desktop) Chassis**

Measurement	ILR-100	BANDIT Mini
Height	1.7 in. (4.32 cm)	1.7 in. (4.32 cm)
Width	6.0 in. (15.24 cm)	6.0 in. (15.24 cm)
Depth	6.25 in. (15.88 cm)	6.25 in. (15.88 cm)
Weight	1.5 lb. (3.3 kg)	1.5 lb. (3.3 kg)
Installation Type	Desktop	Desktop

**Table A-23. Physical Specifications, Rackmount Chassis (1 of 2)**

Measurement	BANDIT Plus
Height	1U (1.75 in.; 4.45 cm)
Width	19 in. (48.26 cm)
Depth	8.3 in. (21.08 cm)
Weight	4 lb. (1.81 kg)

**Table A-23. Physical Specifications, Rackmount Chassis (2 of 2)**

Measurement	BANDIT Plus
Installation Type	Rackmount

### A.3.2 Power

The BANDIT Mini's power supply accepts -22 to -56 volts DC (normally -24/-48 VDC) input power.

The original BANDIT, BANDIT-IP, IBR-10, and VSR-30 use an external AC power supply. The ILR-100 also uses an external power supply, of a different style. The BANDIT Plus uses one internal power supply. The RDU uses one internal power supply.

Each AC power supply, auto-ranging, with a locking connector, accepts input power of 100 to 240 VAC, 50–60 Hz. All AC power supplies for BANDIT devices deliver 5 volts DC to the chassis.

### A.3.3 Environmental Specifications

[Table A-24](#) provides the environmental specifications for all BANDIT chassis except the RDU, the BANDIT II, and the BANDIT III.

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**Note:** For information about the Remote Data Unit, see [Section A.4, RDU Specifications](#). For information about the BANDIT II or the BANDIT III, see the *BANDIT II™, BANDIT III™, and VSR-1200™ Document Set*.

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**Table A-24. Environmental Specifications**

Item	Specification
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 85% non-condensing
Altitude	Up to 10,000 ft. (3,048 m)

## A.4 RDU Specifications

The following sections cover the physical, power, and environmental specifications for the Remote Data Unit.

### A.4.1 Physical Specifications

The RDU is designed for quick and easy integration with the BANDIT Plus or the VSR-1200 and other equipment in a typical networking environment. [Table A-25](#) provides the physical specifications for the RDU.

**Table A-25. Physical Specifications, Remote Data Unit**

Measurement	Value
Height	1U (1.75 in.; 4.45 cm)
Width	19 in. (48.26 cm)
Depth	8.3 in. (21.08 cm)
Weight	4 lb. (1.81 kg)
Installation Type	Rackmount

### A.4.2 Power

The RDU's power supply is 100 to 240 VAC, 50–60 Hz, auto-ranging, with a locking connector. The RDU's power consumption is 10 watts AC; its power supply delivers 3.3 volts DC to the RDU.

### A.4.3 Environmental Specifications

[Table A-24](#) provides the environmental specifications for the RDU.

**Table A-26. Environmental Specifications**

Item	Specification
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 85% non-condensing
Altitude	Up to 10,000 ft. (3,048 m)



## A.5 Standards Compliance

All BANDIT products comply with the agency standards listed in [Table A-27](#).

*Table A-27. Standards Compliance*

Compliance	Agency
Safety	ANSI/UL Std. No. 60950, 3rd Edition (U.S. Safety) CAN/CSA-C22.2 No. 60950 (Canadian Safety) EN 60950, European Safety (CE Mark)
Emissions	FCC Part 15, Sub-Part B, Class A (U.S.) EN 55022: 1998 (Europe)
Immunity	EN 55024: 1998 (Europe)

