Cables and Connectors

This chapter describes the I/O interfaces, the data cables, and power cordsets required in using the LS2020 enterprise ATM switch. These facilities are described in the following order:

- Low-speed connectors and data cables for X.21, RS-449, and V.35 serial interfaces.
- Circuit emulation access card (CEMAC) connectors and data cables for 75-ohm and 120-ohm interfaces.
- Medium-speed connectors and data cables for the 2-port access card, the 4-port T3/E3 access card, and the 8-port T3/E3 access card.
- OC-3c connectors and data cables
- FDDI connectors and data cables
- Ethernet connectors and data cables
- Fiber Ethernet access card (FEAC) connectors and data cables
- Console and modem connectors and data cables
- Country kits and power cordsets

Signal diagrams are provided for each I/O connector and data cable.

For most cables, two part numbers are provided in an associated table in the body of the chapter: the manufacturing number (which appears on the cable itself); and the order number (which is used in ordering the cable from Cisco Systems). Cables without associated order numbers are not available from Cisco Systems; such cables are widely available from other vendors as standard items.

Cable Drawing Conventions

Figure 3-1 shows the conventions used in representing the signal paths in the LS2020 I/O interface connectors and data cables illustrated in this chapter.
Low-Speed Connectors and Data Cables

This section presents the specifications for the connectors and data cables for the low-speed X.21, RS-449, and V.35 serial I/O interfaces of the LS2020 switch. This information is presented as follows:

- X.21 fantail connector - see the section “X.21 Fantail Connector.”
- RS-449 fantail connector - see the section “RS-449 Fantail Connector.”
- V.35 fantail connector - see the section “V.35 Fantail Connector.”
- DSU/CSU control ports on V.35 and RS-449 fantails - see the section “DSU/CSU Control Port Connector.”
- Internal data cable for connecting a low-speed access card to a fantail - see the section “Low-Speed Access Card Fantail Cable.”
- Data cable for connecting an X.21 fantail to an external X.21 device - see the section “X.21 Interface Cable.”
- Data cable for connecting an RS-449 fantail to an external RS-449 DCE device - see the section “RS-449 Interface Straight-Through Cable.”
- Data cable for connecting two LS2020 switches via their RS-449 fantail interfaces, or for connecting an RS-449 fantail to an external RS-449 DTE device - see the section “RS-449 Interface Crossover Cable.”
- Data cable for connecting a V.35 fantail to an external V.35 DCE device - see the section “V.35 Interface Straight-Through Cable.”
- Data cable for connecting two LS2020 switches via their V.35 fantail interfaces, or for connecting a V.35 fantail to an external V.35 DTE device - see the section “V.35 Interface Crossover Cable.”

**X.21 Fantail Connector**

Figure 3-2 shows the pin assignments of the X.21 fantail connector.

**Interface connector type:** DB15 female

**Connectors per fantail:** 8 (numbered 0 - 7)
RS-449 Fantail Connector

Figure 3-3 shows the pin assignments of the RS-449 fantail connector.

**Interface connector type:** DB37 male

**Connectors per fantail:** 4 (numbered 0 - 3)
Low-Speed Connectors and Data Cables

V.35 Fantail Connector

Figure 3-4 shows the pin assignments of the V.35 fantail connector.

**Interface connector type:** ISO 2593 male (34-pin block type)

**Connectors per fantail:** 4 (numbered 0 - 3)

![Figure 3-4 V.35 Connector Pin Assignments](image)

DSU/CSU Control Port Connector

The RS-232 DSU/CSU connector appears on both the V.35 and RS-449 fantails. If you connect the control port to the craft port on a DSU/CSU device, you can use the `csumon` program to communicate with the DSU/CSU from an LS2020 switch.

**Interface connector type:** DB9 male

**Connectors per fantail:** 4 (numbered 0 - 3)

Figure 3-5 shows the pin assignments of the RS-232 DSU/CSU control port connector.

![Figure 3-5 RS-232 DSU/CSU Control Port Pin Assignments](image)
Low-Speed Connectors and Data Cables

Low-Speed Access Card Fantail Cable

This 100-pin data cable is used as the means of interconnection between the bulkhead connector of a low-speed X.21, RS-449, or V.35 access card and the back of the fantail.

The cable is available from Cisco Systems in three lengths. For ordering purposes, use the appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1117-01</td>
<td>4 feet</td>
<td>L2020-CAB-F4=</td>
</tr>
<tr>
<td>72-1118-01</td>
<td>8 feet</td>
<td>L2020-CAB-F8=</td>
</tr>
<tr>
<td>72-1119-01</td>
<td>12 feet</td>
<td>L2020-CAB-F12=</td>
</tr>
</tbody>
</table>

Note that two such data cables are required to connect one X.21 fantail to a low-speed access card, while one only such cable is required to connect each V.35 or RS-449 fantail to a low-speed access card.

X.21 Interface Cable

This cable is used to connect the X.21 fantail connector to an external X.21 device.

The cable is available from Cisco Systems in three lengths. For ordering purposes, use the appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-0991-01</td>
<td>30 feet</td>
<td>LS-CAB-X21-TC30=</td>
</tr>
<tr>
<td>72-0992-01</td>
<td>50 feet</td>
<td>LS-CAB-X21-TC50=</td>
</tr>
<tr>
<td>72-0993-01</td>
<td>100 feet</td>
<td>LS-CAB-X21-TC100=</td>
</tr>
</tbody>
</table>

Note Use the switches on the X.21 fantail to select a DTE or DCE interface for each port.

Figure 3-6 is a signal diagram for the X.21 fantail cable.
Low-Speed Connectors and Data Cables

Figure 3-6  X.21 Cable Signal Diagram

<table>
<thead>
<tr>
<th>DTE end female</th>
<th>DCE end male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective GND</td>
<td>1</td>
</tr>
<tr>
<td>Transmit (T(A))</td>
<td>2</td>
</tr>
<tr>
<td>Transmit (T(B))</td>
<td>9</td>
</tr>
<tr>
<td>Receive (R(A))</td>
<td>4</td>
</tr>
<tr>
<td>Receive (R(B))</td>
<td>11</td>
</tr>
<tr>
<td>Signal element timing (S(A))</td>
<td>6</td>
</tr>
<tr>
<td>Signal element timing (S(B))</td>
<td>13</td>
</tr>
<tr>
<td>Signal GND</td>
<td>8</td>
</tr>
<tr>
<td>Control (C(A))</td>
<td>3</td>
</tr>
<tr>
<td>Control (C(B))</td>
<td>10</td>
</tr>
<tr>
<td>Indication (I(A))</td>
<td>5</td>
</tr>
<tr>
<td>Indication (I(B))</td>
<td>12</td>
</tr>
</tbody>
</table>

DB-15 female connector

DB-15 male connector

RS-449 Interface Straight-Through Cable

This cable is used to connect an RS-449 fantail interface to an external RS-449 DCE device.

This cable is available from Cisco Systems. For ordering purposes, use the appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1002-01</td>
<td>30 feet</td>
<td>LS-CAB-RS4-TC30=</td>
</tr>
<tr>
<td>72-1003-01</td>
<td>50 feet</td>
<td>LS-CAB-RS4-TC50=</td>
</tr>
<tr>
<td>72-1004-01</td>
<td>100 feet</td>
<td>LS-CAB-RS4-TC100=</td>
</tr>
</tbody>
</table>

Figure 3-7 is a signal diagram for the RS-449 fantail straight-through cable.
Figure 3-7 RS-449 Straight-through Cables Signal Diagram

LightStream DTE end female
- Signal Ground (SG) 19
- Send Common (SC) 37
- Test Mode (TM) 18
- StandBy indicator (SB) 36
- Terminal Timing (TT+) 17
- Terminal Timing (TT–) 35
- DCE Send Timing+ (SR/SF) 16
- DCE Send Timing– (NS) 34
- Incoming Call (IC) 15
- Signal Quality (SQ) 33
- Remote Loopback (RL) 14
- Select Standby (SS) 32
- Receiver Ready (RR+) 13
- Receiver Ready (RR–) 31
- Terminal Ready (TR+) 12
- Terminal Ready (TR–) 30
- Signal Ground (TR–) 30
- Data Mode (DM+) 11
- Data Mode (DM–) 29
- Local Loopback (LL) 10
- terminal In Service (IS) 28
- Clear to Send (CS+) 9
- Clear to Send (CS–) 27
- Receive Timing (RT+) 8
- Receive Timing (RT–) 26
- Request to Send (RS+) 7
- Signal Ground (RS–) 25
- Receive Data (RD+) 6
- Receive Data (RD–) 24
- Send Timing (ST+) 5
- Send Timing (ST–) 23
- Send Data (SD+) 4
- Send Data (SD–) 22
- SPARE 3
- SPARE 21
- Signalling rate Indicator (SI) 2
- Receive Common (RC) 20
- Protective Ground (PG) 1

DCE end male
- Signal Ground (SG) 19
- Send Common (SC) 37
- Test Mode (TM) 18
- StandBy indicator (SB) 36
- Terminal Timing (TT+) 17
- Terminal Timing (TT–) 35
- DCE Send Timing+ (SR/SF) 16
- DCE Send Timing– (NS) 34
- Incoming Call (IC) 15
- Signal Quality (SQ) 33
- Remote Loopback (RL) 14
- Select Standby (SS) 32
- Receiver Ready (RR+) 13
- Receiver Ready (RR–) 31
- Terminal Ready (TR+) 12
- Terminal Ready (TR–) 30
- Signal Ground (TR–) 30
- Data Mode (DM+) 11
- Data Mode (DM–) 29
- Local Loopback (LL) 10
- terminal In Service (IS) 28
- Clear to Send (CS+) 9
- Clear to Send (CS–) 27
- Receive Timing (RT+) 8
- Receive Timing (RT–) 26
- Request to Send (RS+) 7
- Signal Ground (RS–) 25
- Receive Data (RD+) 6
- Receive Data (RD–) 24
- Send Timing (ST+) 5
- Send Timing (ST–) 23
- Send Data (SD+) 4
- Send Data (SD–) 22
- SPARE 3
- SPARE 21
- Signalling rate Indicator (SI) 2
- Receive Common (RC) 20
- Protective Ground (PG) 1

DB-37 female connector

DB-37 male connector
RS-449 Interface Crossover Cable

This cable is used to connect two LS2020 switches via their RS-449 fantail interfaces, or to connect an RS-449 fantail interface to an external RS-449 DTE device.

The cable is available from Cisco Systems. For ordering purposes, use an appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1008-01</td>
<td>8 feet</td>
<td>LS-CAB-RS4-TT8=</td>
</tr>
<tr>
<td>72-1005-01</td>
<td>30 feet</td>
<td>LS-CAB-RS4-TT30=</td>
</tr>
<tr>
<td>72-1006-01</td>
<td>50 feet</td>
<td>LS-CAB-RS4-TT50=</td>
</tr>
<tr>
<td>72-1007-01</td>
<td>100 feet</td>
<td>LS-CAB-RS4-TT100=</td>
</tr>
</tbody>
</table>

Figure 3-8 is a signal diagram for the RS-449 fantail crossover cable.
Figure 3-8  RS-449 Crossover Cable Signal Diagram

LightStream DTE end female

Signal Ground (SG)  19
Send Common (SC)  37
Test Mode (TM)  18
StandBy indicator (SB)  36
Terminal Timing (TT+)  17
Terminal Timing (TT–)  35
DCE Send Timing+ (SR/SF)  16
DCE Send Timing– (NS)  34
Incoming Call (IC)  15
Signal Quality (SQ)  33
Remote Loopback (RL)  14
Select Standby (SS)  32
Receiver Ready (RR+)  13
Receiver Ready (RR–)  31
Terminal Ready (TR+)  12
Terminal Ready (TR–)  30
Data Mode (DM+)  11
Data Mode (DM–)  29
Local Loopback (LL)  10
Terminal In Service (IS)  28
Clear to Send (CS+)  9
Clear to Send (CS–)  27
Receive Timing (RT+)  8
Receive Timing (RT–)  26
Request to Send (RS+)  7
Signal Ground (RS–)  25
Receive Data (RD+)  6
Receive Data (RD–)  24
Send Timing (ST+)  5
Send Timing (ST–)  23
Send Data (SD+)  4
Send Data (SD–)  22
SPARE  3
SPARE  21
Signaling rate Indicator (SI)  2
Receive Common (RC)  20
Protective Ground (PG)  1

DTE end female

19  Signal Ground (SG)
37  Send Common (SC)
18  Test Mode (TM)
36  StandBy indicator (SB)
17  Terminal Timing (TT+)
35  Terminal Timing (TT–)
16  DCE Send Timing+ (SR/SF)
34  DCE Send Timing– (NS)
15  Incoming Call (IC)
33  Signal Quality (SQ)
14  Remote Loopback (RL)
32  Select Standby (SS)
13  Receiver Ready (RR+)
31  Receiver Ready (RR–)
12  Terminal Ready (TR+)
30  Signal Ground (TR–)
11  Data Mode (DM+)
29  Data Mode (DM–)
10  Local Loopback (LL)
28  Terminal In Service (IS)
9  Clear to Send (CS+)
27  Clear to Send (CS–)
8  Receive Timing (RT+)
26  Receive Timing (RT–)
7  Request to Send (RS+)
25  Signal Ground (RS–)
6  Receive Data (RD+)
24  Receive Data (RD–)
5  Send Timing (ST+)
23  Send Timing (ST–)
4  Send Data (SD+)
22  Send Data (SD–)
3  SPARE
21  SPARE
2  Signaling rate Indicator (SI)
20  Receive Common (RC)
1  Protective Ground (PG)

DB-37 female connector

DB-37 male connector
V.35 Interface Straight-Through Cable

This cable is used to connect a V.35 fantail interface to an external V.35 DCE device.

The cable is available from Cisco Systems. For ordering purposes, use an appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1009-01</td>
<td>30 feet</td>
<td>LS-CAB-V35-TC30=</td>
</tr>
<tr>
<td>72-1010-01</td>
<td>50 feet</td>
<td>LS-CAB-V35-TC50=</td>
</tr>
<tr>
<td>72-1011-01</td>
<td>100 feet</td>
<td>LS-CAB-V35-TC100=</td>
</tr>
</tbody>
</table>

Figure 3-9 is a signal diagram for the V.35 fantail straight-through cable.
Figure 3-9 V.35 Straight-through Cable Signal Diagram

LightStream DTE end
female

Protective Ground (PG) A
Signal Ground (SG) B
Request To Send (RTS) C
Clear To Send (CTS) D
Data Set Ready (DSR) E
Data Carrier Detect (DCD) F
Data Terminal Ready (DTR) G
Ring Indicator (RI) H
LTST (Cisco 4000) I
Local Loopback (LL) J
Remote Loopback (RL) K
Send Data (SD+) L
Receive Data RD+ M
Send Data (SD–) N
Receive Data (RD–) O
Terminal Timing (TT+) P
Receive Timing (RT+) Q
Terminal Timing (TT–) R
Receive Timing (RT–) S
Send Timing (ST+) T
Send Timing (ST–) U
DCE Send Timing+ V
DCE Send Timing– W
DCE DSR (T300) X
Test Mode (TN) Y

DCE end
male

A Protective Ground (PG)
B Signal Ground (SG)
C Request To Send (RTS)
D Clear To Send (CTS)
E Data Set Ready (DSR)
F Data Carrier Detect (DCD)
G Data Terminal Ready (DTR)
H Ring Indicator (RI)
I LTST (Cisco 4000)
J Local Loopback (LL)
K Remote Loopback (RL)
L Send Data (SD+)
M Receive Data RD+
N Send Data (SD–)
O Receive Data (RD–)
P Terminal Timing (TT+)
Q Receive Timing (RT+)
R Terminal Timing (TT–)
S Receive Timing (RT–)
T Send Timing (ST+)
U Send Timing (ST–)
V DCE Send Timing+
W DCE Send Timing–
X DCE DSR (T300)
Y Test Mode (TN)

34-position female block connector

34-position male block connector
V.35 Interface Crossover Cable

This cable is used to connect two LS2020 switches via their V.35 fantail interfaces, or to connect a V.35 fantail to an external V.35 DTE device.

This cable is available from Cisco Systems. For ordering purposes, use the appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-0997-01</td>
<td>8 feet</td>
<td>LS-CAB-V35-TT8=</td>
</tr>
<tr>
<td>72-0994-01</td>
<td>30 feet</td>
<td>LS-CAB-V35-TT30=</td>
</tr>
<tr>
<td>72-0995-01</td>
<td>50 feet</td>
<td>LS-CAB-V35-TT50=</td>
</tr>
<tr>
<td>72-0996-01</td>
<td>100 feet</td>
<td>LS-CAB-V35-TT100=</td>
</tr>
</tbody>
</table>

Figure 3-10 is a signal diagram for the V.35 fantail crossover cable.
Figure 3-10  V.35 Crossover Cable Signal Diagram

<table>
<thead>
<tr>
<th>Female</th>
<th></th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective Ground (PG)</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Signal Ground (SG)</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Request To Send (RTS)</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Data Set Ready (DSR)</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>Data Terminal Ready (DTR)</td>
<td>H</td>
<td>J</td>
</tr>
<tr>
<td>Data Carrier Detect (DCD)</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Local Loopback (LL)</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>Remote Loopback (RL)</td>
<td>N</td>
<td>NN</td>
</tr>
<tr>
<td>Send Data A (SD A)</td>
<td>P</td>
<td>R</td>
</tr>
<tr>
<td>Receive Data A (RD A)</td>
<td>R</td>
<td>P</td>
</tr>
<tr>
<td>Send Data B (SD B)</td>
<td>S</td>
<td>T</td>
</tr>
<tr>
<td>Receive Data B (RD B)</td>
<td>T</td>
<td>S</td>
</tr>
<tr>
<td>Terminal Timing A (TT A)</td>
<td>U</td>
<td>V</td>
</tr>
<tr>
<td>Receive Timing A (RT A)</td>
<td>V</td>
<td>U</td>
</tr>
<tr>
<td>Terminal Timing B (TT B)</td>
<td>W</td>
<td>X</td>
</tr>
<tr>
<td>Receive Timing B (RT B)</td>
<td>X</td>
<td>W</td>
</tr>
<tr>
<td>Send Timing A (ST A)</td>
<td>Y</td>
<td>LL</td>
</tr>
<tr>
<td>Send Timing B (ST B)</td>
<td>AA</td>
<td>JJ</td>
</tr>
<tr>
<td>DCE Send Timing A (DCEST A)</td>
<td>KK</td>
<td></td>
</tr>
<tr>
<td>DCE Send Timing B (DCEST B)</td>
<td>JJ</td>
<td>AA</td>
</tr>
<tr>
<td>Test Mode (TM)</td>
<td>NN</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

34-position female block connector

34-position female block connector
Circuit Emulation Access Card (CEMAC) Connectors and Cables

Figure 3-11 shows the CEMAC card and its associated data cable. To make a more secure connection, unscrew the top mounting screw (shown as “1” in the figure) in the connector retention bracket and reposition it in the connector (as shown by “2” in the figure). Next, tighten down the mounting screw to attach the data cable to the CEMAC card securely (as shown by “3” in the figure). Finally, secure the cable to the CEMAC bulkhead connector with the Velcro strip.
Figure 3-11  CEMAC Access Card and Data Cable Connection

1 Seat cable firmly in bulkhead connector
2 Secure cable with Velcro strip
3 Add optional cable tie
Table 3-1 shows the pinout assignments of the CEMAC access card connector.

<table>
<thead>
<tr>
<th>Port</th>
<th>Tip</th>
<th>Ring</th>
<th>Tip</th>
<th>Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>26</td>
<td>1</td>
<td>39</td>
<td>14</td>
</tr>
<tr>
<td>1</td>
<td>27</td>
<td>2</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>28</td>
<td>3</td>
<td>41</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>29</td>
<td>4</td>
<td>42</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>5</td>
<td>43</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>31</td>
<td>6</td>
<td>44</td>
<td>19</td>
</tr>
<tr>
<td>6</td>
<td>32</td>
<td>7</td>
<td>45</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>33</td>
<td>8</td>
<td>46</td>
<td>21</td>
</tr>
<tr>
<td>Not used</td>
<td>34</td>
<td>9</td>
<td>47</td>
<td>22</td>
</tr>
<tr>
<td>Not used</td>
<td>35</td>
<td>10</td>
<td>48</td>
<td>23</td>
</tr>
<tr>
<td>Not used</td>
<td>36</td>
<td>11</td>
<td>49</td>
<td>24</td>
</tr>
<tr>
<td>Not used</td>
<td>37</td>
<td>12</td>
<td>50</td>
<td>25</td>
</tr>
</tbody>
</table>

Note: The information in this table is an extraction from Figure 10 of American National Standard T1.403-1989.

CEMAC Fantail

Figure 3-12 shows the E1 fantail for 75-ohm CEMAC applications. For convenience, Figure 3-12 illustrates both the BNC and SMZ connector types that can be used in the E1 fantail.

Figure 3-12 E1 Fantail (75-ohm)

Refer to the LightStream 2020 Hardware Reference and Troubleshooting Guide for information regarding the configuration of the TX GND and RX GND jumpers on the E1 fantail.
E1 Fantail Data Cable

This 50-pin cable is used as the means of interconnection between the 8-port bulkhead connectors on the CEMAC card and the back of the E1 fantail. Figure 3-13 illustrates this cable.

The cable is available from Cisco Systems in three lengths. For ordering purposes, use the appropriate order number from the table below.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1094-01</td>
<td>4 feet</td>
<td>LS-CAB-8E1-4B=</td>
</tr>
<tr>
<td>72-1095-01</td>
<td>8 feet</td>
<td>LS-CAB-8E1-8B=</td>
</tr>
<tr>
<td>72-1096-01</td>
<td>12 feet</td>
<td>LS-CAB-8E1-12B=</td>
</tr>
</tbody>
</table>

Figure 3-13  E1 Fantail Data Cable

Medium Speed Connectors and Cables

This section describes the connectors and cables for the medium-speed (2-port) access card, as well as the T3 and E3 (4-port and 8-port) access cards, as indicated below:

- External connectors on the medium-speed (2-port) access card - see Figure 3-14.
- External connectors on the T3 and E3 (4-port and 8-port) access cards - see Figure 3-15.
- Cable harness used to connect the T3/E3 access card to its associated dressing panel - see Figure 3-16.
- Data cable used to connect the medium speed access card and the T3/E3 access cards to external devices - see Figure 3-17.
Connectors on Medium-speed Access Card

**Interface connector type:** 75 ohm BNC jacks

**Connectors per access card:** 4 (2 receive and 2 transmit)

Figure 3-14 shows the external coaxial connectors for the medium-speed (2-port) access card.

![Medium-speed Access Card Connectors](image)

**Figure 3-14** Medium-speed Access Card Connectors

Connectors on T3/E3 Access Card

**Interface connector type:** SMB connector at card; BNC connector at fantail

**Connectors per access card:** 8 or 16, depending on the number of ports (either 4 or 8) on the T3/E3 access card. Each port has one receive connector and one transmit connector.

Figure 3-15 shows the external connectors for the 4-port and 8-port versions of the T3 and E3 access cards.
Figure 3-15  T3/E3 Access Card Connectors
T3/E3 Fantail Cable Harness and Dressing Panel

To interconnect patch panel/fantails to T3/E3 access cards, both 4-port and 8-port coaxial cable harnesses are offered by Cisco Systems. In addition, both the 4-port and 8-port harnesses are available in 4-, 8-, or 12-foot lengths.

The table below shows appropriate ordering information for the T3 fantail cable harnesses in desired port and length combinations.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Ports</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1097-01</td>
<td>4</td>
<td>4 feet</td>
<td>LS-CAB-4T3-4B=</td>
</tr>
<tr>
<td>72-1098-01</td>
<td>4</td>
<td>8 feet</td>
<td>LS-CAB-4T3-8B=</td>
</tr>
<tr>
<td>72-1099-01</td>
<td>4</td>
<td>12 feet</td>
<td>LS-CAB-4T3-12B=</td>
</tr>
<tr>
<td>72-1061-01</td>
<td>8</td>
<td>4 feet</td>
<td>LS-CAB-8T3-4B=</td>
</tr>
<tr>
<td>72-1062-01</td>
<td>8</td>
<td>8 feet</td>
<td>LS-CAB-8T3-8B=</td>
</tr>
<tr>
<td>72-1063-01</td>
<td>8</td>
<td>12 feet</td>
<td>LS-CAB-8T3-12B=</td>
</tr>
</tbody>
</table>

The table below shows appropriate ordering information for the E3 fantail cable harnesses in desired port and length combinations.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Ports</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-1097-01</td>
<td>4</td>
<td>4 feet</td>
<td>LS-CAB-4E3-4B=</td>
</tr>
<tr>
<td>72-1098-01</td>
<td>4</td>
<td>8 feet</td>
<td>LS-CAB-4E3-8B=</td>
</tr>
<tr>
<td>72-1099-01</td>
<td>4</td>
<td>12 feet</td>
<td>LS-CAB-4E3-12B=</td>
</tr>
<tr>
<td>72-1061-01</td>
<td>8</td>
<td>4 feet</td>
<td>LS-CAB-8E3-4B=</td>
</tr>
<tr>
<td>72-1062-01</td>
<td>8</td>
<td>8 feet</td>
<td>LS-CAB-8E3-8B=</td>
</tr>
<tr>
<td>72-1063-01</td>
<td>8</td>
<td>12 feet</td>
<td>LS-CAB-8E3-12B=</td>
</tr>
</tbody>
</table>

The table below shows appropriate ordering information for the T3/E3 coaxial cable dressing panel.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>700-00605-01</td>
<td>LS2020-T3E3-FT=</td>
</tr>
</tbody>
</table>

Figure 3-16 shows the T3/E3 coaxial cable dressing panel, together with a T3/E3 fantail cable harness. Note however that these components, although shown as connected in Figure 3-16, are available separately using the ordering information from the tables above.
**T3/E3 75-Ohm Coaxial Cable**

*Where used:*

- To connect two LS2020 switches via their T3/E3 access cards.
- To connect an LS2020 T3/E3 access card to an external device.
- To connect two LS2020 switches via their T3, E3/PLCP, or E3/G.804 medium-speed access cards.
- To connect an LS2020 T3, E3/PLCP, or E3/G.804 medium-speed access card to an external device.

The T3/E3 75-ohm coaxial cable is available from Cisco Systems in four different lengths. Use the appropriate number from the table below for ordering purposes.

<table>
<thead>
<tr>
<th>Manufacturing No.</th>
<th>Length</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>72-0998-01</td>
<td>3 feet</td>
<td>LS-CAB-T3-CX3=</td>
</tr>
<tr>
<td>72-0399-01</td>
<td>25 feet</td>
<td>LS-CAB-T3-CX25=</td>
</tr>
<tr>
<td>72-1000-01</td>
<td>50 feet</td>
<td>LS-CAB-T3-CX50=</td>
</tr>
<tr>
<td>72-1001-01</td>
<td>100 feet</td>
<td>LS-CAB-T3-CX100=</td>
</tr>
</tbody>
</table>

Figure 3-17 is a physical representation of 75-ohm T3/E3 coaxial cable.
OC-3C Connectors and Cables

Figure 3-18 shows the external connectors on both the multimode and single mode OC-3c access cards. The multimode OC-3c and single mode OC-3c cables are described in separate sections below.

**Multimode interface connector type:** Duplex SC

**Connectors per multimode access card:** 4 (2 per port; ports are numbered 0 and 1)

**Single mode interface connector type:** ST

**Connectors per single mode access card:** 4 (2 per port; ports are numbered 0 and 1)

**Figure 3-18 Connectors on Multimode and Single Mode OC-3c Access Cards**

Multimode OC-3c Cable

**Where used:** To connect a multimode OC-3c access card on an LS2020 switch to another OC-3c device.

Cisco Systems does not provide this cable; it is widely available from other vendors.

The LS2020 OC-3c interfaces operate at a wavelength of 1300 nanometers. Multimode cables should conform to the following specifications:

**Standard:** ISO/IEC 9314-3

**Maximum path length** (all cables in a connection, end to end): 2 km

**Cabling:** 62.5 micron core with an optical loss of 0-9 dB, or 50 micron core with an optical loss of 7 dB.
OC-3C Connectors and Cables

Note  A single fiber link should not mix 62.5 and 50 micron cable.

Note  Protective covers are provided for all OC-3c access cards and cable connectors. To shield connectors from dust and damage, keep covers on any connectors that are not being used.

Figure 3-19 shows a multimode OC-3c cable with simplex SC connectors.

**Figure 3-19  Multimode OC-3c Cable with Simplex SC Connectors**

Note  Multimode OC-3c cables are available with both simplex SC connectors (as shown in Figure 3-19) and duplex SC connectors; both connector types are compatible with LS2020 multimode access cards. However, the use of duplex SC connectors is preferred because they are keyed in a way that prevents incorrect connections.

Single Mode OC-3c Cable

Where used: To connect a single mode OC-3c access card on an LS2020 switch to another OC-3c device. Cisco Systems does not provide this cable; it is widely available from other sources.

The LS2020 OC-3c interfaces operate at a wavelength of 1300 nanometers. Single mode cables should conform to the following specifications:

Standard: EIA class IVa

Cabling: 8.3 micron core with an optical loss of 0-12 dB and a maximum cable attenuation of 500 MHz/km at 1300 nanometers.

Note  Protective covers are provided for all OC-3c access cards and cable connectors. To shield connectors from dust and damage, keep covers on any connectors that are not being used.

Connector Type: ST

Figure 3-20 shows a single mode OC-3c cable with ST connectors.
FDDI Connectors and Cables

Figure 3-21 shows the media interface connectors (MICs) on an FDDI access card.

Each FDDI port consists of two connectors, A (red) and B (blue). FDDI connectors are keyed to ensure proper connection of the cable to the access card.

FDDI Cable

**Where used:** To connect an LS2020 multimode FDDI access card to another FDDI device. Cisco Systems does not provide this cable; it is widely available from other vendors.

The LS2020 FDDI interface operates at a wavelength of 1300 nanometers. Cables should conform to the following specifications:

- **Cabling:** 62.5 micron core, graded-index fiber with an optical loss of 11 dB and a maximum cable attenuation of 1.5 dB/km at 1300 nanometers.
- **Connectors:** MIC
Maximum path length: (all cables in a connection, end to end): 2 km

**Note** Protective covers are provided for all FDDI access card and cable connectors. To shield connectors from dust and damage, keep covers on any connectors that are not being used.

Figure 3-22 shows a physical representation of an FDDI cable.

**Figure 3-22** FDDI Cable

---

**Ethernet Connectors and Cables**

This section describes the Ethernet connectors and cables for the NP access card and the Ethernet access card.

**15-pin Ethernet AUI Connector**

Figure 3-23 is a schematic diagram of the 15-pin Ethernet AUI connector for the NP access card and the Ethernet access card (ports 0 and 7).

The data cable for this connector is described in the section “Ethernet AUI Data Cable” later in this chapter.

**Interface connector type:** AUI DB15 connector

**AUI connectors per NP access card:** one

**AUI connectors per Ethernet access card:** 2 (numbered 0 and 7)
Ethernet Connectors and Cables

Figure 3-23 Ethernet AUI Connector Schematic Diagram

Ethernet 10Base-T (RJ-45) Connector

Figure 3-24 shows the RJ-45 connectors and pinout assignments on the Ethernet access card. These connectors are used by the twisted pair (10Base-T) ports.

The cables used with these ports are described in the section Ethernet 10Base-T Straight-Through Cable and the section Ethernet 10Base-T Crossover Cable.
Figure 3-24  Ethernet RJ-45 Connectors and Pinout Assignments

RJ-45 10BaseT pin assignments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TD+</td>
<td>1</td>
</tr>
<tr>
<td>TD−</td>
<td>2</td>
</tr>
<tr>
<td>RD+</td>
<td>3</td>
</tr>
<tr>
<td>RD−</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>FLT VCC</td>
<td></td>
</tr>
<tr>
<td>TP 0</td>
<td></td>
</tr>
<tr>
<td>TP 7</td>
<td></td>
</tr>
<tr>
<td>AUI 0</td>
<td></td>
</tr>
<tr>
<td>EAC</td>
<td></td>
</tr>
</tbody>
</table>

RJ-45 connectors for 10BaseT ports
**Ethernet Connectors and Cables**

**Ethernet AUI Data Cable**

**Where used:** Connects an AUI port on the NP access card or Ethernet access card of an LS2020 switch to an Ethernet 10Base2 or 10Base5 transceiver.

Cisco Systems does not provide this cable; it is widely available from other vendors.

Figure 3-25 shows a schematic diagram of the Ethernet AUI data cable.

![Ethernet AUI Data Cable Schematic Diagram](image)

**Ethernet 10Base-T Straight-Through Cable**

**Where used:**

- To connect an Ethernet access card on an LS2020 switch to an Ethernet hub.
- To connect an Ethernet access card on an LS2020 switch directly to another device on the Ethernet, such as a workstation, when the workstation port has a built-in crossover function. (See the note under the Ethernet 10Base-T Crossover Cable section later in this chapter).

Cisco Systems does not provide this cable; it is widely available from other vendors.

Figure 3-26 shows a physical representation of the Ethernet 10Base-T (twisted pair) straight-through cable and provides a schematic diagram of its pinout assignments.

<table>
<thead>
<tr>
<th>Pin 1</th>
<th>Pin 8</th>
<th>Pin 9</th>
<th>Pin 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>LightStream end male</td>
<td>Remote end female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+12V</td>
<td>+12V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive–</td>
<td>Receive–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmit–</td>
<td>Transmit–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collision–</td>
<td>Collision–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage Common (SG)</td>
<td>Voltage Common (SG)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3-25** Ethernet AUI Data Cable Schematic Diagram

**Figure 3-26** Ethernet 10Base-T Straight-Through Cable
Figure 3-26  Ethernet 10Base-T Straight-through Cable and Pinout Assignments

![Ethernet 10Base-T Straight-through Cable](image)

**Pinout**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Transmit Data (TD+)</th>
<th>Transmit Data (TD−)</th>
<th>Receive Data (RD+)</th>
<th>Receive Data (RD−)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

**Ethernet 10Base-T Crossover Cable**

*Where used:* To directly connect an Ethernet access card on an LS2020 switch to another device on the Ethernet, such as a workstation.

**Note**  Some MAUs (medium access units) have a built-in crossover function and, therefore, use straight-through cables instead of crossover cables. Ports on such MAUs are marked with the letter X.

Cisco Systems does not provide this cable; it is widely available from other sources.

Figure 3-27 shows a physical representation of the Ethernet 10Base-T (twisted pair) crossover cable and provides a schematic diagram of its pinout assignments.

Figure 3-27  Ethernet 10Base-T Crossover Cable and Pinout Assignments

![Ethernet 10Base-T Crossover Cable](image)

**Pinout**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Transmit Data (TD+)</th>
<th>Transmit Data (TD−)</th>
<th>Receive Data (RD+)</th>
<th>Receive Data (RD−)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>
Fiber Ethernet Connectors and Cable

This section describes the fiber Ethernet Connectors and data cable.

Fiber Ethernet Access Card Connectors

Figure 3-28 shows the bulkhead connectors on the fiber Ethernet access card.

Figure 3-28  Fiber Ethernet Access Card Connectors

![Diagram of Fiber Ethernet Access Card Connectors]
Fiber Ethernet Access Card Data Cable

**Where used:** To connect a multimode fiber (10Base-FL) Ethernet access card in an LS2020 chassis to another fiber Ethernet device.

Cisco Systems does not provide this cable; it is widely available from other vendors.

The LS2020 fiber Ethernet interfaces operate at a wavelength of 850 nanometers. Multimode cables should conform to the following specifications:

**Standard:** ISO/IEC 9314-3

**Maximum path length** (all cables in a connection, end to end): 2 km

**Cabling:** 62.5 micron core with an optical loss of 0-9 dB, or 50 micron core with an optical loss of 7 dB.

---

**Note** A single fiber link should not mix 62.5 and 50 micron cable.

---

**Connector Type:** ST

---

**Note** Protective covers are provided for all fiber Ethernet access cards and cable connectors. To shield connectors from dust and damage, keep covers in place on any connectors that are not being used.

---

Figure 3-29 illustrates the multimode fiber Ethernet access card data cable.

---

Modem/Console Connectors and Cables

Figure 3-30 and Figure 3-31 illustrate the modem and console connectors, respectively, on the switch card console/modem assembly.

The data cable used for both the console and modem ports is described in the section RS-232 Straight-Through Data Cable.

---

**RS-232 Modem Connector Specification**

- **Interface connector type:** DB25 male, DTE
- **Connectors per assembly:** 1, labeled MODEM
Figure 3-30 shows a schematic diagram of the RS-232 modem port connector.

**RS-232 Console Connector Specification**

*Interface connector type:* DB25 female, DCE

*Connectors per assembly:* 1, labeled CNSL

Figure 3-31 shows a schematic diagram of the console port connector.
RS-232 Straight-Through Data Cable

Where used: To connect the LS2020 console port or modem port to a console or modem.

Cisco Systems does not provide this cable; it is widely available from other vendors.

Figure 3-32 shows a schematic diagram of the RS-232 straight-through data cable.

![RS-232 Straight-through Data Cable Schematic Diagram](image-url)
Country Kits and Power Cordsets

AC-Powered LightStream 2020 Systems

A variety of power cordsets is available for AC-powered LS2020 switches. These cordsets are available either with systems or as spare parts. This section enables you to choose the proper cordset for your LS2020 site.

If you are specifying a cordset as part of a new system order, refer to the LS2020 Price List or the Products Catalogue and order the appropriate Country Power Kit. Doing so ensures that you will also receive the appropriate labels and instructions for the country of destination.

If you want to check the cordset included in a specific Country Power Kit, refer to Table 3-2, which cross-references cordset product numbers and Country Power Kit models.

If you need to order a replacement cordset that is not part of a Country Power Kit, you must reference the cordset’s part number. This part number (P/N) appears above each cordset illustrated in the following section entitled “LightStream 2020 AC Power Cordsets.”

DC-powered LightStream 2020 Systems

A DC-powered system does not use a detachable power cord. The DC power cord must be permanently wired to a DC power source. Therefore, in place of a Country Power Kit, each DC-powered system is shipped with a DC Mounting Kit, Order Number L2020-PWR-DC=.

LightStream 2020 AC Power Cordsets

Each LS2020 AC power tray is equipped with one recessed male power inlet. The power connectors follow IEC Standard 320 C20 and require cordsets with an IEC 320 C19 female connector. (All cordsets offered by Cisco Systems for the LS2020 switch have IEC 320 C19 female connectors.)

Table 3-2 summarizes the specifications of AC power cordsets. The table lists the country of use, cordset rating, plug type, part number, and Country Power Kit for each cordset.
### Table 3-2  Specifications for LightStream 2020 AC Power Cordsets

<table>
<thead>
<tr>
<th>Country of Use</th>
<th>Cordset Rating</th>
<th>Plug Type</th>
<th>Mfg. Part Number</th>
<th>Country Power Kit Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada, Mexico, Japan, and USA</td>
<td>125V @ 20A</td>
<td>NEMA 5-20P</td>
<td>37-0037-01</td>
<td>L2020-PWR-NA=</td>
</tr>
<tr>
<td>Canada, Mexico, Japan, and USA</td>
<td>125V @ 20A</td>
<td>NEMA L5-20P</td>
<td>37-0038-01</td>
<td>L2020-PWR-NA125=</td>
</tr>
<tr>
<td>Canada, Mexico, Japan, and USA</td>
<td>250V @ 20A</td>
<td>NEMA L6-20P</td>
<td>37-0039-01</td>
<td>L2020-PWR-NA250=</td>
</tr>
<tr>
<td>Continental Europe, including Austria, Belgium, Finland, France, Germany, the Netherlands, Norway, Portugal, Spain, and Sweden</td>
<td>250V @ 16A</td>
<td>CEE 7/7</td>
<td>37-0040-01</td>
<td>L2020-PWR-E=</td>
</tr>
<tr>
<td>Argentina, Australia, New Zealand, and Papua New Guinea</td>
<td>250V @ 15A</td>
<td>AS3112-1981</td>
<td>37-0041-01</td>
<td>L2020-PWR-A=</td>
</tr>
<tr>
<td>Denmark</td>
<td>250V @ 10A</td>
<td>107-2-DI</td>
<td>37-0042-01</td>
<td>L2020-PWR-D=</td>
</tr>
<tr>
<td>England, Hong Kong, Ireland, Malaysia, Scotland, Singapore, and Wales</td>
<td>250V @ 13A</td>
<td>BS 1363</td>
<td>37-0043-01</td>
<td>L2020-PWR-U=</td>
</tr>
<tr>
<td>India and South Africa</td>
<td>250V @ 15A</td>
<td>BS 546</td>
<td>37-0044-01</td>
<td>L2020-PWR-IN=</td>
</tr>
<tr>
<td>Israel</td>
<td>250V @ 16A</td>
<td>SI 32</td>
<td>37-0045-01</td>
<td>L2020-PWR-IS=</td>
</tr>
<tr>
<td>Italy</td>
<td>250V @ 16A</td>
<td>CEI 23-16</td>
<td>37-0046-01</td>
<td>L2020-PWR-I=</td>
</tr>
<tr>
<td>Switzerland</td>
<td>250V @ 10A</td>
<td>SEV 1011</td>
<td>37-0047-01</td>
<td>L2020-PWR-CH=</td>
</tr>
</tbody>
</table>

**P/N 37-0037-01**  
Cordset Rating: 20A, 125V  
Used in Country Kit: L2020-PWR-NA=  
*For Canada, Japan, Mexico, and USA*

![Cable Diagram](image_url)

Plug: NEMA 5-20P  
Cordage: 12/3 SJT  
Connector: IEC 320 C19  
Length: 2.5 m (8 feet 2 inches)
Country Kits and Power Cordsets

P/N 37-0038-01
Cordset Rating: 20A, 125V
Used in Country Kit L2020-PWR-NA125=
For Canada, Japan, Mexico, and USA

P/N 37-0039-01
Cordset Rating: 20A, 250V
Used in Country Kit L2020-PWR-NA250=
For Canada, Japan, Mexico, and USA

P/N 37-0040-01
Cordset Rating: 16A, 250V
Used in Country Kit L2020-PWR-E=
For Continental Europe: including Austria, Belgium, Finland, France, Germany, Holland, Norway, Portugal, Spain, and Sweden
<table>
<thead>
<tr>
<th>P/N</th>
<th>Used in Country Kit</th>
<th>Cordset Rating</th>
<th>Plug</th>
<th>Cordage</th>
<th>Connector</th>
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<td>15A, 250V</td>
<td>AS3112-1981</td>
<td>3 x 1.5 mm²</td>
<td>IEC 320 C19</td>
<td>2.5 m (8 feet 2 inches)</td>
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<td></td>
<td>For Argentina, Australia, New Zealand, and Papua New Guinea</td>
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<td>For Denmark</td>
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<td>For England, Hong Kong, Ireland, Malaysia, Scotland, Singapore, and Wales</td>
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<td>37-0044-01</td>
<td>L2020-PWR-IN=</td>
<td>For India, South Africa</td>
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<td>Used in Country Kit</td>
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<td>Country Kits and Power Cordsets</td>
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<td>Length: 2.5 m (8 feet 2 inches)</td>
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<th>Country Kits and Power Cordsets</th>
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<td>Country Kits and Power Cordsets</td>
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<td>For Italy</td>
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| P/N    | 37-0047-01 | Used in Country Kit | L2020-PWR-CH= 
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<td>Connector:</td>
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<td>Length:</td>
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