APPENDIX C

Cabling Summary

Introduction

This appendix provides details on the IGX cabling required to connect customer devices and lines to the IGX node.

Note In all cable references, the transmit direction is from the IGX, receive is to the IGX.

T1 Cabling

Trunk cables connect the customer DSX-1 crossconnect point or T1-E1 Channel Service Unit to the IGX node at the BC-T1 or BC-E1 back card. Refer to Table C-1 for details.

Table C-1 T1 Trunk/Circuit Line Cabling Specification

Cable Parameter	Description
Cable Type:	Western Electric 22 AWG, ABAM individually shielded twisted pair. Two pair per T1 line (1 transmit and 1 receive).
Cable Connector:	Male DB-15 subminiature. See Table C-2 for pinouts. The connector pinouts are the same for the both the BA-T1 and for the MT3 Distribution Panel.
Max. Cable Length:	533 ft (162 m.) maximum between the IGX and the first repeater or CSU. Selection of cable length equalizers.

Table C-2 T1 Connector Pin Assignments

Pin #	Description
1	Transmit, Tip
2	Transmit Pair Shield
3	Receive, Tip
4	Receive Pair Shield
9	Transmit, Ring
11	Receive, Ring

Note Transmit direction is from the IGX to the T1 trunk.

E1 Cabling

E1 trunk cables connect the customer DSX-1 crossconnect point or E1 Channel Service Unit to the IGX node at the BC-E1 back card.

Table C-3 E1 Trunk/Circuit Line Cabling Specification

Cable Parameter	Description
Cable Type:	75-ohm coax cable for unbalanced connection or 100–120-ohm twisted pair for balanced connection. Two cables/pairs (1 transmit, 1 receive) per E1 line.
Cable Connector:	Two female BNC for unbalanced connection; male DB15 for balanced connection. See Table C-4 and Table C-5 for pinouts.
Max. Cable Length:	E1 output complies with G.703, so cabling must not exceed -6dB/1000 feet at 1024 kHz (applies to 75 Ohm coax or 120 Ohm twisted pair up to 350 meters or 1000 feet). StrataCom supplies cable with a maximum attenuation of 7 dB /1000 ft., so the maximum length of this cable is 850 feet (260 meters).

Table C-4 E1 Connector Pin Assignments (unbalanced)

Connector	Description
Rx BNC	Receive E1 from trunk
Tx BNC	Transmit E1 to trunk

Table C-5 E1 Connector Pin Assignments (balanced)

Pin #	Description
1	Receive, Tip
9	Receive, Ring
2	Receive Pair Shield
3	Transmit, Tip
11	Transmit, Ring
10	Transmit Pair Shield

Note Transmit direction is from the IGX to the E1 trunk.

Subrate (SR) Cabling

Table C-6 Subrate Trunk Cabling Specification

Cable Parameter	Description
Cable Type:	100–120-ohm twisted pair telephone cable.
Cable Connector:	V.11, DB15 subminiature, male. V.35, 34 pin M block (Winchester), male. MIL188/RS-449, DB-37 subminiature, male. See Table C-7 through Table C-9 for pinouts.
Max. Cable Length:	Depends on operating speed. Ranges from 400 m. for 256 Kbps to 50 m. for 1.92 Mbps.

Table C-7 SR Connector Pin Assignments (V.11)

Pin #	Description
1	Shield ground
2	TX-A
9	TX-B
3	CA
10	CB
4	RX-A
11	RX-B
5	IA
12	IB
6	SA
13	SB
7	not used
8	Signal ground
14	not used
15	not used

Table C-8 SR Connector Pin Assignments (V.35)

Pin #	Name	Source	Description
A	Gnd.	both	Protective (Shield) ground
B	Sig. Gnd.	both	Signal ground
C	RTS	DTE	Request to Send
D	CTS	DCE	Clear to Send
E	DSR	DCE	Data Set Ready
F	DCD	DCE	Data Carrier Detect (RLSD)
H	DTR	DTE	Data Terminal Ready
J	RI	DCE	Ring Indicator

Pin #	Name	Source	Description
K	TM	DCE	Test Mode
L-N			not used
P/S	TxD	DTE	Transmit Data from DTE
R/T	RxD	DCE	Received Data to DTE
U/W	XTC	DTE	External Transmitter Clock
V/X	RxC	DCE	Receiver Clock
Y/AA	TxC	DCE	Transmitter Clock
BB-EE			not used

Table C-9 SR Connector Pin Assignments (RS-449)

Pin #	IGX Name	EIA Name	Source	Description
1	Frm. Gnd.		Both	Shield Ground
2	SI	SI	DCE	Signaling Rate Indicator (to DTE)
4/22	TxD	SD	DTE	Transmit Data from DTE
5/23	TxC	ST	DCE	Transmitter Clock
6/24	RxD	RD	DCE	Received Data to DTE
7/25	RTS	RS	DTE	Request to Send
8/26	RxC	RT	DCE	Receiver Clock
9/27	CTS	CS	DCE	Clear to Send
10	LL	LL	DTE	Local Loopback
11/29	DSR	DM	DCE	Data Set Ready
12/30	DTR	TR	DTE	Data Terminal Ready
13/31	DCD	RR	DCE	Data Carrier Detect (RLSD)
14	RL	RL	DTE	Remote Loopback
15	RI	IC	DCE	Ring Indicator
16	SF	SF	DTE	Signal Rate Select (to DCE)
17/35	XTC	TT	DTE	External Transmitter Clock
18	TM	TM	DCE	Test Mode
19	Sig. Gnd.	SG	Both	Signal Ground
20		RC	DCE	Receive Common
28	BSY	IS	DTE	Busy (in service)
32	SS	SS	DTE	Select Standby
33	SQ	SQ	DCE	Signal Quality Detect
34	NS	NS	DTE	New Synchronization
36	SB	SB	DCE	Standby Indicator
37		SC	DTE	Send Common
3, 21				Spare

BTM Cabling

Trunk cables for the BTM/AIT card set connect either an AIT-T3 or AIT-E3 to a DSX-3 cross-connect point, another AIT-T3/E3 in a co-located node, or a BPX LM-3T3 card.

Table C-10 T3 /E3 Trunk Cables

Cable Parameter	Description
Type:	75-ohm coax cable (RG-59 B/U for short runs, AT&T 734A for longer runs). Two per T3/E3 line (XMT and RCV). The chosen cable has frequency/attenuation characteristics that follow a √f law with a maximum attenuation of 6 dB at 1024 KHz.
Max. Length:	450 feet max. between the BTM back card (either an AIT-T3 or AIT-E3) and the DSX-3 point.
Connector	Female BNC; Rx is receive T3/E3 to BTM back card, Tx is transmit T3/E3 to DSX-3 cross-connect.

Table C-11 T3 Connector Pin Assignments

Connector	Description
Rx BNC	Receive T3 from trunk
Tx BNC	Transmit T3 to trunk

Data Cabling

Cables for use with the LDM and SDM for synchronous and asynchronous data circuits are specified in Table C-12.

Table C-12 Synchronous Data Cables

Cable Parameter	Description
Cable Type:	Standard RS-232C/D (V.24), V.35, or RS-449/422 (with adaptor cable for X.21).
Cable Connectors:	RS-232C/D (V.24): DB-25 Subminiature, male. V.35: 34 pin M block-type (Winchester), male. RS-449/422: DB-37 Subminiature, male. See Table C-13 through Table C-21 for pinouts.
Max. Cable Length:	Not to exceed interface standards.

SDI RS-232D Port Pin Assignments

Table C-13 contains a listing of IGX RS-232D Port pin assignments for the SDI data card. A standard RS-232 cable is used for this application.

Table C-13 SDI RS-232D Port Pin Assignments

Pin #	IGX Name	EIA Name	Source	Description
1	Frame Gnd.	AA	Both	Frame Ground
2	TxD	BA	DTE	Transmit Data from DTE
3	RxD	BB	DCE	Received Data to DTE
4	RTS	CA	DTE	Request to Send
5	CTS	CB	DCE	Clear to Send
6	DSR	CC	DCE	Data Set Ready
7				Signal Ground
8	DCD	CF	DCE	Data Carrier Detect (RLSD)
9	+VS		Both	+12 volt test
10	-VS		Both	–12 volt test
11	QM		DCE	Equalizer Mode (to DTE only)
12	SDCD	SCF	DCE	Secondary Data Carrier Detect
13	SCTS	SCB	DCE	Secondary Clear to Send
14	STxD	SBA	DTE	Secondary Transmit Data
15	TxC	DB	DCE	Transmitter Clock
16	SRxD	SBB	DCE	Secondary Received Data
17	RxC	DD	DCE	Receiver Clock
18	RL		DTE	Remote Loop Back
19	SRTS	SCA	DTE	Secondary Request to Send
20	DTR	CD	DTE	Data Terminal Ready
21	SQ	CG	DCE	Signal Quality Detect
22	RI	CE	DCE	Ring Indicator
23	SF	CH	DTE	Signal Rate Select (to DCE)
23	SI	CI	DCE	Signaling Rate Indicator (to DTE)
24	XTC	DA	DTE	External Transmitter Clock
25	TST		DCE	Test Indicator

SDI RS-232C (V.24) Port Pin Assignments

Table C-14 contains a listing of IGX RS-232 Port pin assignments for the SDI data card. A standard RS-232 (V.24) cable is used for this application.

Table C-14 SDI RS-232C Port Pin Assignments

Pin #	IGX Name	EIA Name	Source	Description
1	Frame Gnd.	AA	Both	Frame Ground
2	TxD	BA	DTE	Transmit Data from DTE
3	RxD	BB	DCE	Received Data to DTE
4	RTS	CA	DTE	Request to Send
5	CTS	CB	DCE	Clear to Send
6	DSR	CC	DCE	Data Set Ready
7				Signal Ground
8	DCD	CF	DCE	Data Carrier Detect (RLSD)
9	+VS		Both	+12 volt test
10	-VS		Both	-12 volt test
11	QM Pin 11		DCE DTE	Equalizer Mode (to DTE). Pin 11 to (DCE)
12	SDCD	SCF	DCE	Secondary Data Carrier Detect
13	SCTS	SCB	DCE	Secondary Clear to Send
14	STxD	SBA	DTE	Secondary Transmit Data
15	TxC	DB	DCE	Transmitter Clock
16	SRxD	SBB	DCE	Secondary Received Data
17	RxC	DD	DCE	Receiver Clock
18	DCR		DCE	Divided Receiver Clock
19	SRTS	SCA	DTE	Secondary Request to Send
20	DTR	CD	DTE	Data Terminal Ready
21	SQ	CG	DCE	Signal Quality Detect
22	RI	CE	DCE	Ring Indicator
23	SFCI	CH CI	DTE DCE	Signal Rate Select (to DCE). Signaling Rate Indicator (to DTE)
24	XTC	DA	DTE	External Transmitter Clock
25	BSY		DTE	Busy (in service)

SDI RS-449/422 Port Pin Assignments

A standard RS-449 cable is used for this application unless the interface is X.21.

Table C-15 SDI RS-449/422 Port Pin Assignments

Pin #	IGX Name	EIA Name	Source	Description
1			Both	Shield Ground
2	SI	SI	DCE	Signaling Rate Indicator (to DTE)
3				Spare
4/22	TxD	SD	DTE	Transmit Data from DTE
5/23	TxC	ST	DCE	Transmitter Clock
6/24	RxD	RD	DCE	Received Data to DTE
7/25	RTS	RS	DTE	Request to Send
8/26	RxC	RT	DCE	Receiver Clock
9/27	CTS	CS	DCE	Clear to Send
10	LL	LL	DTE	Local Loopback
11/29	DSR	DM	DCE	Data Set Ready
12/30	DTR	TR	DTE	Data Terminal Ready
13/31	DCD	RR	DCE	Data Carrier Detect (RLSD)
14	RL	RL	DTE	Remote Loopback
15	RI	IC	DCE	Ring Indicator
16	SF	SF	DTE	Signal Rate Select (to DCE)
17/35	XTC	TT	DTE	External Transmitter Clock
18	TM	TM	DTE	Test Mode
19		SG	Both	Signal Ground
20		RC	DCE	Receive Common
21				Spare
28	BSY	IS	DTE	Busy (in service)
32	SS	SS	DTE	Select Standby
33	SQ	SQ	DCE	Signal Quality Detect
34	NS	NS	DTE	New Synchronization
36	SB	SB	DCE	Standby Indicator
37		SC	DTE	Send Common

See Table C-16 and Table C-17 for Wire Lists for adapter cables for X.21 application. This adapter cable is available in two models, one is used when the SDI is a DCE, the other when it is a DTE. It has a male DB-37 on the IGX end and a female DB-15 (DCE) or male DB-15 (DTE) on the user end.

Table C-16 Wiring List, SDI RS-449 to X.21 Adapter Cable (for RS-449 DCE Port)

DB-37 Pin # (SDI)	IGX Name	DB-15 Pin # (User)	Description
1	Drain	1	Frame Ground
4	TxD-A	2	Transmit Data from DTE
22	TxD-B	9	Transmit Data from DTE
6	RxD-A	4	Receive Data to DTE
24	RxD-B	11	Receive Data to DTE
7	RTS-A	3	Request to Send
25	RTS-B	10	Request to Send
9	CTS-A	5	Clear to Send
27	CTS-A	12	Clear to Send
8	RxC-A	6	Receive Clock
26	RxC-B	13	Receive Clock
19	SG	8	Signal Ground

Table C-17 Wiring List, SDI RS-449 to X.21 Adapter Cable (for RS-449 DTE Port)

DB-37 Pin # (SDI)	IGX Name	DB-15 Pin # (User)	Description
1	Drain	1	Frame Ground
4	TxD-A	2	Transmit Data from DTE
22	TxD-B	9	Transmit Data from DTE
6	RxD-A	4	Receive Data to DTE
24	RxD-B	11	Receive Data to DTE
7	RTS-A	3	Request to Send
25	RTS-B	10	Request to Send
9	CTS-A	5	Clear to Send
27	CTS-A	12	Clear to Send
5	TxC-A	6	Transmit Clock
23	TxC-B	13	Transmit Clock
19	SG	8	Signal Ground
5 to 8	TxC-A		Receive Clock[1]
23 to 26	TxC-B		Receive Clock[1]

1. Loops Receive Clock to Transmit Clock when necessary.

SDI V.35 Port Pin Assignments

Table C-18 contains a listing of IGX V.35 Port pin assignments for the SDI card. A standard V.35 cable is used for this application.

Table C-18 SDI V.35 Port Pin Assignments

Pin #	Name	Source	Description
A	Gnd.	both	Protective (Shield) ground
B	Sig. Gnd.	both	Signal ground
C	RTS	DTE	Request to Send
D	CTS	DCE	Clear to Send
E	DSR	DCE	Data Set Ready
F	DCD	DCE	Data Carrier Detect (RLSD)
H	DTR	DTE	Data Terminal Ready
J	RI	DCE	Ring Indicator
K	TM	DCE	Test Mode
P/S	TxD	DTE	Transmit Data from DTE
R/T	RxD	DCE	Receive Data to DTE
U/W	XTC	DTE	External Transmitter Clock
V/X	RxC	DCE	Receiver Clock
Y/a	TxC	DCE	Transmitter Clock

LDI RS-232 Port Pin Assignments

Table C-19 lists the LDI RS-232 Port Pin Assignments at the DB-15 connector on the card. The LDM card supports only a limited subset of EIA control leads. The LDI is always used with a DCE or DTE DB-15 to DB-25 Adapter Cable. Refer to Table C-19 and Table C-20 for wiring lists and the pin-outs for the standard male DB-25 connector to the user data device.

Table C-19 LDI RS-232C Port Pin Assignments

Pin #	IGX Name	EIA Name	Source	Description
1	Shield	AA	Both	Frame Ground
2	TxD	BA	DTE	Transmit Data from DTE
3	CTS	CB	DCE	Clear to Send
4	RxD	BB	DCE	Received Data to DTE
5	RTS	CA	DTE	Request to Send
6	XTC	DB	DCE	Transmitter Clock
7	RxC	DD	DCE	Receiver Clock
8	SG	AB	Both	Signal Ground
9	DSR	CC	DCE	Data Set Ready

Pin #	IGX Name	EIA Name	Source	Description
10	DTR	CD	DTE	Data Terminal Ready
11	+VS		Both	+12V test voltage
12	–VS		Both	–12V test voltage
13	DCD	CF	DCE	Data Carrier Detect (RLSD)
14	RL		DTE	Remote Loop (for modem loopback)
15	MOD			Mode Select for cable (DTE or DCE)

Table C-20 Wiring List, DB15 to DB25 Adapter Cable (LDI as DTE)[1]

DB-15 Pin # (LDI)	IGX Name	DB-25 Pin # (User)	Description
1	Frm. Gnd.	1	Frame Ground
2	RxD	3	Received Data to DTE
3	RTS	4	Request to Send
4	TxD	2	Transmit Data from DTE
5	CTS	5	Clear to Send
6	XTC	24	External Transmit Clock
7	RxC	17	Receive Clock
8	SG	7	Signal Ground
9	DTR	20	Data Terminal Ready
10	DSR	6	Data Set Ready
11	+VS	9	+12V test voltage[2]
12	–VS	10	–12V test voltage[2]
13	DCD	8	Data Carrier Detect (RLSD)
14	RL	21	Remote Loop output
15	MOD	n.c.	Connects internally to DB15-8
(3)	LL	18	Local Loop output

1. This may be ordered in 25’ length as StrataCom Model 5626-25.
2. May be used to force a control lead permanently high or low.
3. There is no LDI local loop output. Suggest using DTR output, DB15-9.

Note Two adapter cables are available for the LDI card. The choice of cable determines whether the LDI card functions as a DCE or as a DTE. These may be ordered from StrataCom or made by the customer. Make sure the correct cable is used for the type of user device connected.

Table C-21 Wiring List, DB15 to DB25 Adapter Cable (LDI as DCE)[1]

DB-15 Pin # (LDI)	IGX Name	DB-25 Pin # (User)	Description
1	Shield	1	Frame Ground
2	TxD	2	Transmit Data from DTE
3	CTS	5	Clear to Send
4	RxD	3	Receive Data to DTE
5	RTS	4	Request to Send
6	RxC	17 *	Receive Clock, connects to DB25-15 for looped clock
7	XTC	24	External Transmit Clock
8	SG	7	Signal Ground
9	DSR	6	Data Set Ready
10	DTR	20	Data Terminal Ready
11	+VS	9	+12V test voltage[2]
12	–VS	10	–12V test voltage[2]
13	n.c.	n.c.	not used
14	DCD	8	Data Carrier Detect (RLSD)
15	MOD	n.c.	Mode Select, no connection for DCE cable
n.c.	TxC	15 *	Transmit Clock, connects to DB25-17 for looped clock

1. This may be ordered in a 25’ length as StrataCom Model 5625-25.
2. May be used to force a control lead permanently high or low.
3. There is no LDI local loop output. Suggest using DTR output, DB15-9.

LDI DDS Port Pin Assignments

Table C-22 contains a listing of DB15 DDS port pin assignments on the LDI4/DDS card. Standard twisted pair cable is used for this application.

Table C-22 DDS Connector Pinouts

Pin #	Mnemonic	Name	Description
1	TTIP	Transmit Tip	Transmit output from the port -tip side
9	TRING	Transmit Ring	Transmit output from the port -ring side
2	GND	Ground	Ground for transmit pair shield
3	RTIP	Receive Tip	Receive input to the port -tip side
11	RRING	Receive Ring	Receive input to the port -ring side
4	GND	Ground	Ground for receive pair shield
5-8			not used
10			not used
12-15			not used

FRI V.35 Port Pin Assignments

Table C-23 contains a listing of IGX V.35 Port pin assignments for the Frame Relay FRI card. A standard V.35 cable is used for this application.

Table C-23 FRI V.35 Port Pin Assignments

Pin #	Name	Source	Description
A	Gnd.	both	Protective (Shield) ground
B	Sig. Gnd.	both	Signal ground
C	RTS	DTE	Request to Send
D	CTS	DCE	Clear to Send
E	DSR	DCE	Data Set Ready
F	DCD	DCE	Data Carrier Detect
H	DTR	DTE	Data Terminal Ready
L	LLB	DTE	Local Loopback command to user device
N	RLB	DTE	Remote Loopback command to user device
n	TM	DTE	Test Mode indicates user device. ready for test
P/S	TxD	DTE	Transmit Data from DTE
R/T	RxD	DCE	Receive Data to DTE
U/W	XTC	DTE	External Transmitter Clock
V/X	RxC	DCE	Receiver Clock
Y/a	TxC	DCE	Transmitter Clock

Redundancy Cabling

The redundancy cables are a special “Y” cable available from StrataCom. They are required for redundant data and trunk interfaces. Table C-24 lists the Y-cables used for redundancy for various IGX back cards.

Table C-24 Redundancy Y-Cables

Cable	Used On	StrataCom P/N
RS-232C	SDI	5624
RS-232D	SDI	5624
RS-232	LDI	5629
V.35	SDI	5635
V.35	SDI	special DTE/DCE jumper
RS-422/449	SDI	5644
T1	BC-T1	5607
E1	BC-E1	5685

Power Cabling

This section describes AC and DC power cabling between the IGX 8 and the power source. Source-end connector information is not available for all countries, so local codes must be known or obtained by either the customer or installer.

AC Power Cabling

Cable: StrataCom provides a 6-foot (1.8m), 3-conductor cord with an IEC 320 C-19 appliance coupler for mating with the IGX 8 on the system end. The other end of the power cord should be a grounding-type attachment plug as described in the paragraphs that follow.

Connector:

For North America and Japan:	NEMA L6-20 Twist Lock
For Continental Europe:	CEE 7/7 (Schuko)
For Italy:	CEI 23-16/VII (16 Amp plug)
For United Kingdom and Ireland:	BS 1363
For Australia and New Zealand:	AS 3112

For those countries not appearing in the preceding list, use a power cord with an IEC 320 C-19 appliance coupler for the system-end and an appropriate grounding-type attachment plug at the other end in accordance with local standards.

DC Power Cabling

Cable: Customer provides 3-conductor cord. The other end of the cord should be a grounding-type attachment. Gauge is 10 to 12 AWG or 4 sq. mm.

Connector: At the system end, StrataCom provides a pluggable wire block with screw-type clamping for the three conductors. The customer or installer attaches the customer supplied wiring to this block.

SCM Cabling

This cabling connects the Network Management ports on the SCM to StrataView Network Management computers, control terminals, and modems. It is also used for external clock inputs from a clock source.

Auxiliary and Control Port Cabling

Interface: The IGX SCM auxiliary and control ports are configured as an RS-232 DCE port.

Suggested Cable: 24 AWG, 25-pair. A straight-through RS-232 cable is used for a terminal or printer connection. A null modem cable (Figure C-1) is needed when interfacing with modems on either port.

Cable Length: 50 feet (15 m.) max.

Cable Connector: DB-25, subminiature, male. Table C-25 lists port pin assignments.

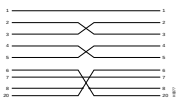
Table C-25 SCM AUX. and CONT. Port Pin Assignments

Pin#	Name	Source	Description
1	FG	both	Frame Ground
2	TxD	DTE	Transmit Data
3	RxD	DCE	Receive Data
4	RTS	DTE	Request to Send
5	CTS	DCE	Clear to Send
6	DSR	DCE	Data Set Ready
7	SG	both	Signal Ground
8	CD	DCE	Carrier Detect
20	DTR	DTE	Data Term Ready

Null Modem Cable

Figure C-1 shows a null modem cable that connects some of the 1200 and 2400 baud modems to the IGX Control and Auxiliary ports.

Figure C-1 Null Modem Cable



External Clock Input Cabling

This cable connects external clock inputs to the SCM EXT. CLK. connector. Its two separate inputs are A and B, for primary and standby clock sources. Either or both of these may be 1.544 Mbps or 2.048 Mbps. The SCM automatically selects clock input A or B.

Table C-26 Ext. Clock Cabling Specification

Cable Parameter	Description
Interface:	Balanced RS 422.
Suggested Cable:	24 AWG, individually shielded, 1 or 2-pair.
Cable Connector:	DB-15, subminiature, male. See Table C-27 for pinouts.
Max. Cable Length:	50 feet (15 m.)

Table C-27 EXT. CLK. Connector Pin Assignments

Pin #	Description
1	Ext. Clk 1-A
9	Ext. Clk 1-A
2	Shield gnd. pair 1
3	Ext. Clk 2-A
11	Ext. Clk 2-B
4	Shield gnd. pair 1
5	8.192 MHz. test output[1]

1. For factory use only.

External Alarm Cabling

This cable connects network alarm outputs to either the DTI Faceplate or just the ARI card Alarm connector alone. Table C-28 lists the pinouts for the network alarm outputs.

Table C-28 External Alarm Interface

Parameter	Description
Interface:	Dry-contact relay closure.
Wire:	24 AWG, shielded, 10-pair.
Connector:	DB-37, Subminiature, male

Table C-29 Network Alarm Pin Assignments

Pin#	Name	Description
1	CHASSIS	Chassis Ground
2		Reserved
3	NWMAJA	Network Major Alarm
4	NWMAJC	Network Major Alarm
5		Reserved
6		Reserved
7		Reserved
8		Reserved
9		Reserved
10	MNVISA	Minor Visual Alarm
11		Reserved
12	MNVISC	Minor Visual Alarm
13		Reserved
14		Unused
15		Unused
16	MJAUDC	Major Audible Alarm
17	MJAUDA	Major Audible Alarm
18		Unused
19		Unused
20		Reserved
21		Reserved
22		Reserved
23	NWMINA	Network Minor Alarm
24		Reserved
25	NWMINC	Network Minor Alarm
26		Reserved
27		Reserved
28		Reserved
29	MNAUDA	Minor Audible Alarm
30		Reserved
31	MNAUDC	Minor Audible Alarm
32		Unused
33		Unused
34		Unused
35	MJVISC	Major Visual Alarm
36	MJVISA	Major Visual Alarm
37		Unused

Note Pins whose names end in A are normally open. Pins whose names end in C are common.

Standard IGX Cables

Table C-30 lists the various cables that may be ordered directly from StrataCom. Cable lengths are specified as a suffix to the IGX model number. For example 5610-50 indicates a 50 foot cable. Cables are generally available in standard lengths of 10 ft (3 m.), 25 ft (7.6 m.), 50 ft (15 m.), 75 ft (22.8 m.) and 100 ft (30 m.) Lengths of 101 ft. (30 m.) to 600 ft. (183 m.) are available on a special order.

When applicable, the connector gender (male-female) will be indicated as well as the number of pins. For example T1/M15-M15 indicates a cable terminated with a male DB15 at both ends.

Table C-30 Standard IGX Cables Available from StrataCom

Model#	Description	Usage
5605	T1, 12 pair, pigtail-pigtail	T1 trunk, general
5608	T1, pigtail to RJ48	CSU to telco demarc
5618	T1, F15 to RJ48	CSU to telco demarc
5619	T1, RJ48 to RJ48	CSU to telco demarc
5609	T1, 2 pair, pigtail-pigtail, Teflon	CSU to DSX; for fire resistance code
5610	T1, 2 pair, pigtail-pigtail	CSU to DSX, echo canceller to chan. bank
5611	T1/M15-pigtail	T1 trunk to CSU, DSX; external echo canceller to PBX, chan. bank.
5612	T1, F15 sliplock-pigtail	same as 5611
5613	T1/F15-pigtail	same as 5611
5614	T1/M15-M15 turnover	E1 trunk to CSU
5615	T1/M15-M15 sliplock	same as 5611
5616	T1/M15-M15	same as 5611
5617	T1/F15 sliplock-RJ48	same as 5610
5618	T1/F15-RJ48	
5619	T1/RJ48-RJ48	CSU to connectorized patch panel
5680	BNC-DB15	E1 trunk
5685	T1/M15-M15 turnover, Y-cable	E1 trunk redundancy
5630	V.35/M34-F34	Subrate trunk or data circuit
5633	V.35/M34-M34	Subrate trunk or data circuit
5636	V.35 Y-cable	Subrate trunk or data circuit redundancy
5640	RS-422/M37-F-37	Subrate trunk or data circuit
5643	RS-422/M37-M-37	Subrate trunk or data circuit
5645	RS-422/X.21 adapter-DTE	IGX is DTE
5646	RS-422/X.21 adapter-DCE	IGX is DCE
5644	RS-422 Y-cable	Subrate trunk or data circuit redundancy
5690	X.21/V.11 DTE-M to DCE-M	Subrate trunk or data circuit

Model#	Description	Usage
5691	X.21/V.11 DTE-M to DCE-F	Subrate trunk or data circuit
5695	X.21/DB15 Y-cable	Subrate trunk or data circuit redundancy
5620	RS-232/M25-F25	Control port to control terminal, StrataView, or ext. window device
5621	RS-232/M25-M25 special	Control or Aux. port to modem
5622	RS-232/M25-M25 special	Aux. port to Okidata 184 printer
5623	RS-232/M25-M25	Aux. port to ext. window device
5625	V.35/M15-F25	LDI8 (DCE) to data device
5626	V.35/M15-M25	LDI8 (DTE) to data device
5628	V.35/M15-F25 adapter	LDI8 (DCE) to data device
5627	V.35/M15-F25 adapter	LDI8 (DTE) to data device
5629	RS 232/M15-M15, Y-cable	LDI redundancy
5651	F50 Amphenol-M50 Amphenol	VF, chan. bank to P66 block
5660	Punch-down block w/F50 Amphenol	VF termination
5601	Ground cable	DC
5670	Molex-pigtail	DC
5671	Spade lug-pigtail	DC

Note Most cables listed as T1 can also be used for E1 service.

TTC JJ-20 (J1) Cabling

Table C-31 Japanese J1 Cabling

Cable Parameter	Description
Cable Type:	110 ohm twisted pair for balanced operation. Two cable pairs (1 transmit, 1 receive) per TTC line.
Cable Connection:	Male DB15 for balanced connection. See Table C-32 for pinouts.
Max. Cable Length:	Maximum cable length is determined by the loss in the cable. The maximum permissible loss is 13 dB.

Table C-32 TTC Connector Pin Assignments (balanced)

Pin #	Description
2	Send Tip S(T)
9	Send Ring S(R)
4	Receive Tip R(T)
11	Receive Ring R(R)
1	Ground

Note Transmit (send) direction is towards the IGX.

"Y" (Y1) Trunk Cabling

Table C-33 Japanese Y1 Cabling

Pin #	Description
Cable Type:	110 ohm twisted pair, balanced operation. Two cable pairs (1 transmit, 1 receive) per Y1 line.
Cable Connection:	Male DB15. SeeTable C-34 for pinouts.
Max. Cable Length:	Maximum cable length is determined by Vp-p (Voltage peak-to-peak). The maximum permissible value is 1 Vp-p.

Table C-34 "Y" Trunk Connector Pin Assignments (balanced)

Pin #	Description
2	Transmit Tip T(A)
9	Transmit Ring T(B)
4	Receive Tip R(A)
11	Receive Ring R(B)
1	Shield

Note Transmit direction is towards the "Y" trunk.