

6-Circuit (3634-80) & 3-Circuit (3634-81) 56/64xN Data Service Unit—Data Port Installation Guide

GENERAL DESCRIPTION

Document Purpose

This document provides general, installation and testing information for the 6-circuit and 3-circuit 56/64xN Data Service Unit—Data Port (DSU-DP). This document covers model numbers 3634-80 (6-circuit) and 3634-81 (3-circuit).

Equipment Function

The 56/64xN DSU-DP is part of the 360-80 Intelligent Channel Bank (ICB). This unit provides a direct DCE interface to allow connection to data equipment.

Equipment Location/Mounting

The 3634-80 plugs in to any full-size slot of the 360-80 ICB. The 3634-81 plugs in to the half-size slot of the ICB.

Control Interface

This unit is managed through the craft port or the Network Management Software (NMS) that controls the provisioning of the unit and obtains status information from the unit. Provisioning is described in the *Optioning* section of this document. For operation, see the craft port or NMS documentation.

This unit will maintain its default provisioning until that provisioning is altered through the control interface. If this unit's provisioning is changed, it will maintain the new provisioning even if power is lost. If replaced with a new unit, the new unit will default to the same provisioning as was set for the prior unit. If this unit is installed in a location that was used by a different type of unit, this unit will use its own default provisioning.

INSPECTION

Inspect for Damages

Inspect the equipment thoroughly upon delivery. If the equipment has been damaged in transit, immediately report the extent of damage to the transportation company.

Equipment Identification

Charles Industries' equipment is identified by a model and issue number imprinted on the front panel or located elsewhere on the equipment. Each time a major engineering design change is made on the equipment, the issue number is advanced by 1 and imprinted on subsequent units manufactured. Therefore, be sure to include both the model number and its issue number when making inquiries about the equipment.



To prevent electrostatic charges from damaging static-sensitive units:

Use approved static-preventive measures (such as static-conductive wrist straps and static-dissipative mats) at all times whenever touching units outside of their original, shipped, protective packaging.

Do not ship or store units near strong electrostatic, electromagnetic, or magnetic fields.

Always use the original static-protective packaging for shipping or storage.

INSTALLATION

Installing a New Unit

Step	Action
1.	If not already installed, install the rear panel, screwing it to the appropriate mounting locations on the shelf using the provided hardware.
2.	Insert the unit into the shelf, making sure that the unit is aligned with the card guides inside the shelf.
3.	Slide the unit fully in to the shelf.
4.	Once the unit is fully inserted, tighten the securing screw on the front panel of the unit. The unit will perform a self-test to ensure that it is compatible with the network management software on the system.

Step	Action
5.	Wire the unit per the wiring information in the wiring section.
6.	After the self-test is performed, check the software provisioning of the card using either the front panel craft interface on the front of the controller unit or the network management interface on the rear of the controller (see the network management documentation for more information on the operation of this interface).

Installing a Replacement Unit

If you are replacing a unit that is already in service, insure that the unit is the same as the unit being replaced.

Step	Action
1.	Remove the wiring connectors from the front and rear of the unit.
2.	Unscrew the front panel securing screw to release the unit from the shelf.
3.	Using the card ejector, remove the unit from the shelf.
4.	Follow the procedure for installing a new unit.

Wiring the Unit

Table 1 shows the standard interface pinouts and designations that are supported by the dataports with V.35 (34 pin), RS-232D (25 pin), and RS-449/422 (37 pin) interface.

Table 1. Interface Pin Numbers

Interface Type	V.35 (34 pin)	RS-232D (25 pin)	RS-449 /422(37 pin)	RS-530	SRC
Protective ground	A	1	1, 37	1	XXX
XMT data (A/B)	P(A) S(B)	2	4(A) 22(B)	2(A) 14(B)	DTE
RCV data (A/B)	R(A) T(B)	3	6(A) 24(B)	3(A) 16(B)	DCE
Request to send (A/B)	C	4	7(A) 25(B)	4(A) 19(B)	DTE

Interface Type	V.35 (34 pin)	RS-232D (25 pin)	RS-449 /422(37 pin)	RS-530	SRC
Clear to send	D	5	9(A) 27(B)	5(A) 13(B)	DCE
Data set ready (A/B)	E	6	11(A) 29(B)	6(A) 22(B)	DCE
Signal ground	B	7	19	7	XXX
RCV line signal detect (A/B)	F	8	13(A) 31(B)	8(A) 10(B)	DCE
Local loop-back	J	18	10	18	DTE
XMT clock (A/B)	Y(A), AA(B)	15	5(A) 23(B)	15(A) 12(B)	DCE
RCV clock (A/B)	V(A), X(B)	17	8(A) 26(B)	17(A) 9(B)	DCE
XMT timing (EXT CLK)	U(A), W(B)	24	17(A) 35(B)	24(A) 11(B)	DTE

Table 2. Cabling for Each Interface Type

Interface Type	Cable Assembly
V.35 DTE/DCE	03-210149-0
RS530 DTE/DCE	03-210150-0
RS232/V.24 DTE/DCE	03-210150-0
V.36/RS449/RS422	03-210151-0

Table 3 shows the maximum permissible cable length versus data rate for each interface. The 24-gauge cable has a capacitance of 50pF/meter.

Table 3. Maximum Cable Length (24-Gauge)

Rate		Cable		
N	Kb/s	449/530 (ft/m)	V.35 (ft/m)	RS-232 (ft/m)
1	56	3900/1188	1300/396	50/15
	64	3900/1188	1300/396	50/15
2	112	3900/1188	1300/396	20/6
	128	3250/991	1080/329	20/6
3	168	2280/878	760/232	N/A
	192	1630/496	540/165	N/A
4	224	1630/496	540/165	N/A
	256	1460/455	490/149	N/A
5	280	1300/396	430/128	N/A
	320	1300/396	430/128	N/A
6	336	1250/381	400/122	N/A
	384	1000/305	330/101	N/A
7	392	950/289	320/98	N/A
	448	820/250	270/82	N/A
8	448	820/250	270/82	N/A
	512	810/247	270/82	N/A
9	504	810/247	270/82	N/A
	576	750/229	230/70	N/A
10	560	750/229	230/70	N/A
	640	620/189	210/64	N/A
11	616	620/189	210/64	N/A
	704	570/174	190/58	N/A
12	672	570/174	190/58	N/A
	768	560/171	190/58	N/A
13	728	560/171	190/58	N/A
	832	490/149	160/49	N/A
14	784	490/149	160/49	N/A
	896	420/128	140/43	N/A
15	840	470/143	150/46	N/A
	960	420/128	140/43	N/A
16	896	420/128	140/43	N/A
	1024	420/128	140/43	N/A
17	952	420/128	140/43	N/A
	1088	360/110	120/37	N/A
18	1008	420/128	140/43	N/A
	1152	330/101	110/34	N/A
19	1064	360/110	120/37	N/A
	1216	330/101	110/34	N/A

Rate		Cable		
N	Kb/s	449/530 (ft/m)	V.35 (ft/m)	RS-232 (ft/m)
20	1120	330/101	110/34	N/A
	1280	300/90	100/30	N/A
21	1176	330/101	110/34	N/A
	1344	260/80	90/27	N/A
22	1232	330/101	110/34	N/A
	1408	250/76	80/24	N/A
23	1288	260/80	90/27	N/A
	1472	250/76	80/24	N/A
24	1344	260/80	90/27	N/A
	1536	250/76	80/24	N/A

PROVISIONING

This unit comes from the factory with default provisioning. This provisioning can be altered through the Network Management interface. When this module is inserted in to a previously provisioned slot, if the card type matches, the module will change its provisioning options to match the previously provisioned module. If the module type does not match the module will assume its default provisioning. The provisioning options are as follows with the default optioning noted:

Option (per channel)	Choices	Default
Starting timeslot	T1=1-24, None E1=1-15, 17-31, None	3634-80: Sequence* 3634-81: T1= None E1=Sequence*
# of timeslots used	T1=1-24, None E1=1-30, None	2
Base rate setting	56K, 64K	64K
Interface type	RS530, V.35, V.36/RS449, RS232	V.35
Idle data pattern	11111111 11111110	11111110
CTS control	Yes, No	No
DRS control	Yes, No	No
DCD control	Yes, No	No
Zero code suppression	Disable, Enable	Disable
PRTS	Disable, Enable	Enable

Option (per channel)	Choices	Default
External DTE clock	Disable, Enable	Disable
V.54 loopback send/detect	Disable, Enable	Disable
DTE local loopback lead	Disable, Enable	Disable
*Sequence indicates that the default circuit uses 2 time slots. Using the 3634-80 as an example, if plugged in to the slot for channels 1-12, circuit 1 would use time slots 1-2, circuit 2 would use time slots 3-4, and so on up to circuit 6 which would use time slots 11-12.		
Note: The maximum number of time slots for an RS-232 is two.		

TECHNICAL ASSISTANCE

If technical assistance is required, contact Charles Technical Service Center at:

847-806-8500
800-607-8500
847-806-8556 (FAX)

techserv@charlesindustries.com (e-mail)