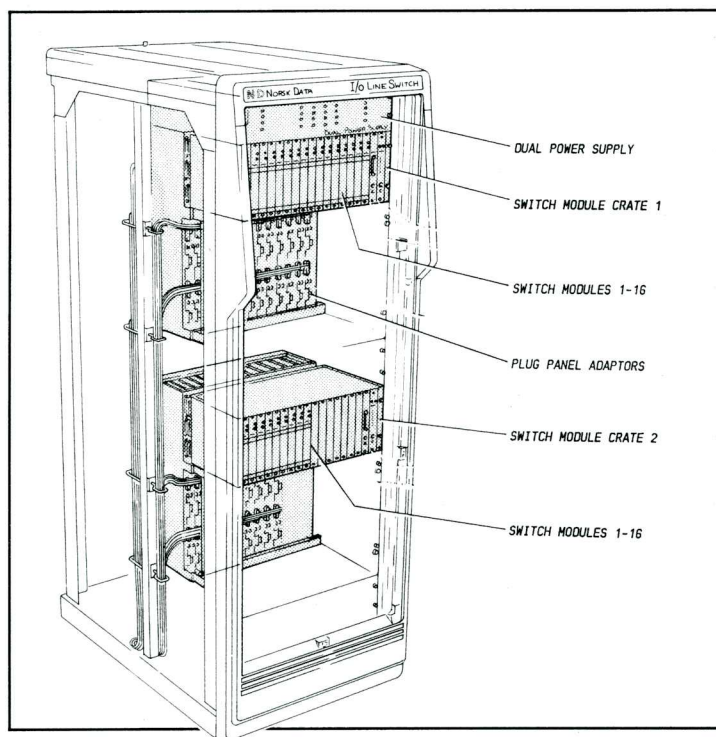


I/O LINE SWITCH

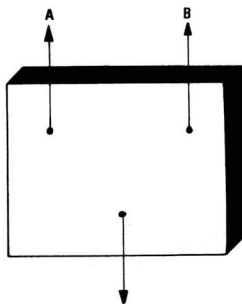
ND 9101/9102/9103/9104



I/O LINE SWITCH

INTRODUCTION

Norsk Data's I/O Line Switch is a two-way switch for RS-232, current-loop or parallel interfaces. This means that in case of computer failure, or if necessary for other reasons, the peripherals and communication lines can be switched from the failing machine to the active one. Switching may be either manual or automatic (software controlled).



Terminal, printer or communication line

FEATURES

- Direct connection to two separate computers
- Possibility for switching the devices individually or in combination
- High availability
- High MTBF
- Dual power supply

PRODUCT DESCRIPTION

The I/O Line Switch system consists both of hardware and of a software module, the Line Switch manager.

The Line Switch manager is the operator's command interface to the I/O Line Switch, and allows for automatic switching of the I/O lines.

The I/O Line Switch takes care of the physical switching, and consists of several switching devices, known as switch modules.

There are three types of switch modules:

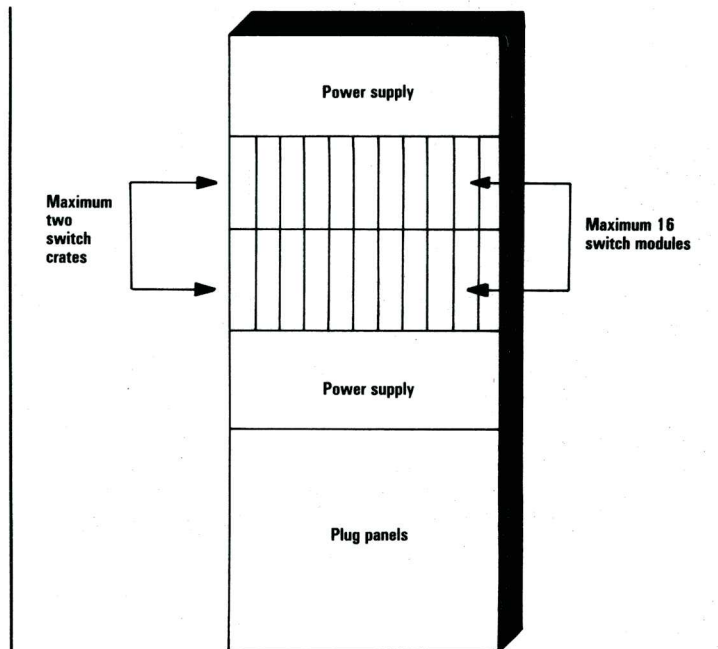
1. Switch module for current-loop lines.
Up to four current-loop lines (e.g. terminals or printers) per module can be connected.
2. Switch module for RS-232 lines.
Up to two RS-232 lines (e.g. terminals, printers or PCs) per module can be connected.
3. Switch module for HDLC or parallel lines.
One HDLC or megalink communication line, or one parallel line (e.g. high speed printer) per module can be connected.

The I/O line switch consists of one or two cabinets containing switch modules that are mounted on one or two crates. There can be a maximum of two switch crates per cabinet. Each crate has room for up to 16 switch modules. This means that the total number of lines per cabinet is maximum:

- For only current-loop : $4 \times 16 \times 2 = 128$ lines
- For only RS-232 : $2 \times 16 \times 2 = 64$ lines
- For only HDLC or parallel : $1 \times 16 \times 2 = 32$ lines

Any combination of these lines is allowed.

I/O LINE SWITCH



CONFIGURATIONS

- ND-9101 I/O line switch, 1 crate, 1 cabinet
(Up to 16 switch modules.)
- ND-9102 I/O line switch, 2 crates, 1 cabinet
(Up to 32 switch modules.)
- ND-9103 I/O line switch, 3 crates, 2 cabinets
(Up to 48 switch modules.)
- ND-9104 I/O line switch, 4 crates, 2 cabinets
(Up to 64 switch modules.)
- ND-210873 I/O line switch manager SW
- ND-106900 Switch module for current loop lines
(Up to 4 lines per module.)
- ND-106930 Switch module for RS-232 lines
(Up to 2 lines per module.)
- ND-106940 Switch module for HDLC or parallel lines
(1 line per module.)

UPGRADING

- ND-9105 Upgrade from 9101/9102 to 9103/9104.
- ND-9106 Upgrade from 9102 to 9103.

REQUIREMENTS

- One RS-232 line from each computer is used to control the switch.

TECHNICAL SPECIFICATIONS

Power Requirements:

Voltage	220-240V Nominal
Frequency	50 ± 5 Hz
Power Input	100W
Operating Temperature	+ 10°C to + 30°C
Operating Humidity	20% - 80%
Weight (approximately)	80 kg.

DOCUMENTATION

FTX Operator Manual	ND-30.051 EN
Dynatech Manual - "DPS" Multifunctional Patchswitch Manual	GML 1000006



**CORPORATE
HEADQUARTERS**

Olaf Helsets vei 5
P.O.Box 25, Bogerud
0621 Oslo 6
Norway
Tel.: +47-2-626000
+47-2-627500
Tlx.: 78284 nd n
Telefax: 47-2-282494 (A)
New wing:
Telefax: 47-2-296796 (A)

NORWAY

Oslo, tel. +47-2-309030
Bergen, tel. +47-5-286150
Sandnes, tel. +47-4-667580
Tromsø, tel. +47-83-71766
Trondheim, tel. +47-7-921222

**ND COMTEC
HEAD OFFICE**

Olaf Helsets vei 5
P.O.Box 25, Bogerud
0621 Oslo 6
Norway
Tel.: +47-2-626000
Tlx.: 74448 nd n
Telefax: 47-2-296796 (A)

Sweden, tel. +46-760-98850
Denmark, tel. +45-9-157440
West Germany, tel. +49-211-666388
United Kingdom, tel. +44-635-35544
Switzerland, tel. +41-1-426142
Austria, tel. +43-2266-5335
Finland, tel. +358-0-848266

FINLAND

OY Norsk Data AB
Vapaalantie 8 (Vanda)
SF01650 Vantaa 65
Finland
Tel.: 095-358-0-845-022
Tlx.: 0057-121 732 papyr sf

SWEDEN

ND Norsk Data AB
Kanalvägen 3
P.O.Box 721
194 27 Upplands Väsby
Sweden
Tel.: +46-760-98400
Tlx.: 15255 nordata s
Telefax: +46-760-86297 (A)

Gothenburg, tel. +46-31-496760
Malmö, tel. +46-40-70510

**ND-SILVIDATA
SWEDEN**

851 83 Sundsvall
Sweden
Tel.: +46-60-154150

Växjö, tel. +46-470-46020
Stockholm, tel. +46-760-92000

DENMARK

Norsk Data A.S
Lautruphøj 1-3
P.O.Box 232
2750 Ballerup
Denmark
Tel.: +45-2-685055
Tlx.: 35567 nd dk
Telefax: +45-2-689614 (A)

Copenhagen, tel. +45-2-685055/681200
Århus, tel. +45-6-161166

SWITZERLAND

Norsk Data (Switzerland) S.A
Chemin du Viaduc 12
1008 Prilly-Lausanne
Switzerland
Tel.: +41-21-250122
Tlx.: 26218 ndl ch
Telefax: +41-21-255594 (A)
Glattbrugg (Zürich), tel. +41-1-8101033

WEST GERMANY

Norsk Data GmbH
Thomasstrasse 10-12
6380
Bad Homburg v.d.H.
West Germany
Tel.: +49-6172-408-0
Tlx.: 004 141-75053 nd d
Telefax: 49-6172-22930 (A)
West-Berlin, tel. +49-30-213-8096
Hamburg, tel. +49-40-2270220
Hannover, tel. +49-511-662062
Mülheim, tel. +49-208-4844-1
Stuttgart, tel. +49-7121-3190-0
Munich, tel. +49-089/92 8007-0
Münster, tel. +49-251-71028
Kiel, tel. +49-431-54399

THE NETHERLANDS

Norsk Data Nederland B.V
Brugwal 5
P.O.Box 500
3430 AM Nieuwegein
The Netherlands
Tel.: +31-3402-72411
Tlx.: 40940 nd nl

FRANCE

Norsk Data s.a.r.l
«Le Brévent»
Avenue du Jura
01 210 Ferney-Voltaire
France
Tel.: +33-50-408576
Tlx.: 385653 nordata fernv
Telefax: +33-50-428845 (A)

REPRESENTED BY AGENT IN:

India: Norsk Data (India) Pty. Ltd., tel. +91-44-419217/419126, tlx. 417620 carbin
Thailand: Norsk Data Thai. Ltd., tel. +66-2-253-6840, tlx. 0086-20581 ndscan th
France and Italy:
Matra Datasystème S.A. Paris, tel. +33-3-0589800, tlx. 699039 matdata f
Lyon, tel. +33-74-944408, tlx. 370472 norlyon
Toulouse, tel. +33-61-342020, tlx. 530980

UNITED KINGDOM

Norsk Data Ltd.
Benham Valence
Newbury
Berks RG16 8LU
United Kingdom
Tel.: +44-635-35544
Tlx.: 849819 norskd g
Telefax: +44-635-33647 (A)
London, tel. +44-1-588-9905
Manchester, tel. +44-61-941-6787
Edinburgh, tel. +44-031-558-1661

USA

Norsk Data N.A., Inc.
55, William Street
Wellesley
Massachusetts 02181
USA
Tel.: +1-617-237-7945
Tlx.: 921740 norsk well
Telefax: +1-617-237-76 13 (A)
Los Angeles, tel. +1-714-752-5081

HONG KONG

Norsk Data International
1902 Wing on Centre
111 Connaught Road
Hong Kong
Tel.: +852-5-411912/412053
Tlx.: 00802-61681 ecshp hx
Telefax: +852-5-81-51095 (A)