Configuration Guide ComC

General

This guide is an appendix to the computer configuration guides. The guide will aid you in configuring your system for efficient communication. The guide describes the ComC Main Software and the LAN, WAN and synchronous protocols.

Integrated or distributed

ComC can be installed in two ways, depending on computer model and performance requirements. You may use ComC integrated in D-NIX or distributed in KOM-KIT II. Hardware requirements and performance for both alternatives are detailed in this guide.

More than one KOM-KIT II in one computer

The address area of KOM-KIT II in D-NIX 5.3 is 8 MB. Theoretically, this means that the computer can be equipped with

- 8 KOM-KIT II 1 MB, or
- 2 KOM-KIT II 4 MB, or
- 1 KOM-KIT II 4 MB and 4 KOM-KIT II 1 MB.

Practically, the free VME slot space wil limit the number of KOM-KIT IIs that can be installed in one computer for WAN and synchronous communication.

TCP/IP, incoming TELNET and RLOGIN is supported in 4 KOM-KIT IIs per computer. That means a total of 4 x 64 = 256 TELNET and 4 x 64 = 256 RLOGIN sessions per computer.

When using more than one KOM-KIT II in a computer, all KOM-KIT IIs must have the Ethernet option as communication between the KOM-KIT II cards is performed via Ethernet.

Content:

- configuration diagram
- connection possibilities and interfaces
- configuration form

Please note:

Choose a distributed or integrated solution. An integrated solution is recommended when integrating PCs equipped with harddisks. These computers employ the server to store files in a dataless configuration. Diskless PCs should be integrated in an distributed configuration as these computers access data and applications from the server.
KOM-KIT II shall always be installed in the computer, never in an expansion cabinet. Don't forget to estimate memory requirements for the other applictions in the computer.

More information:

- Product data sheets

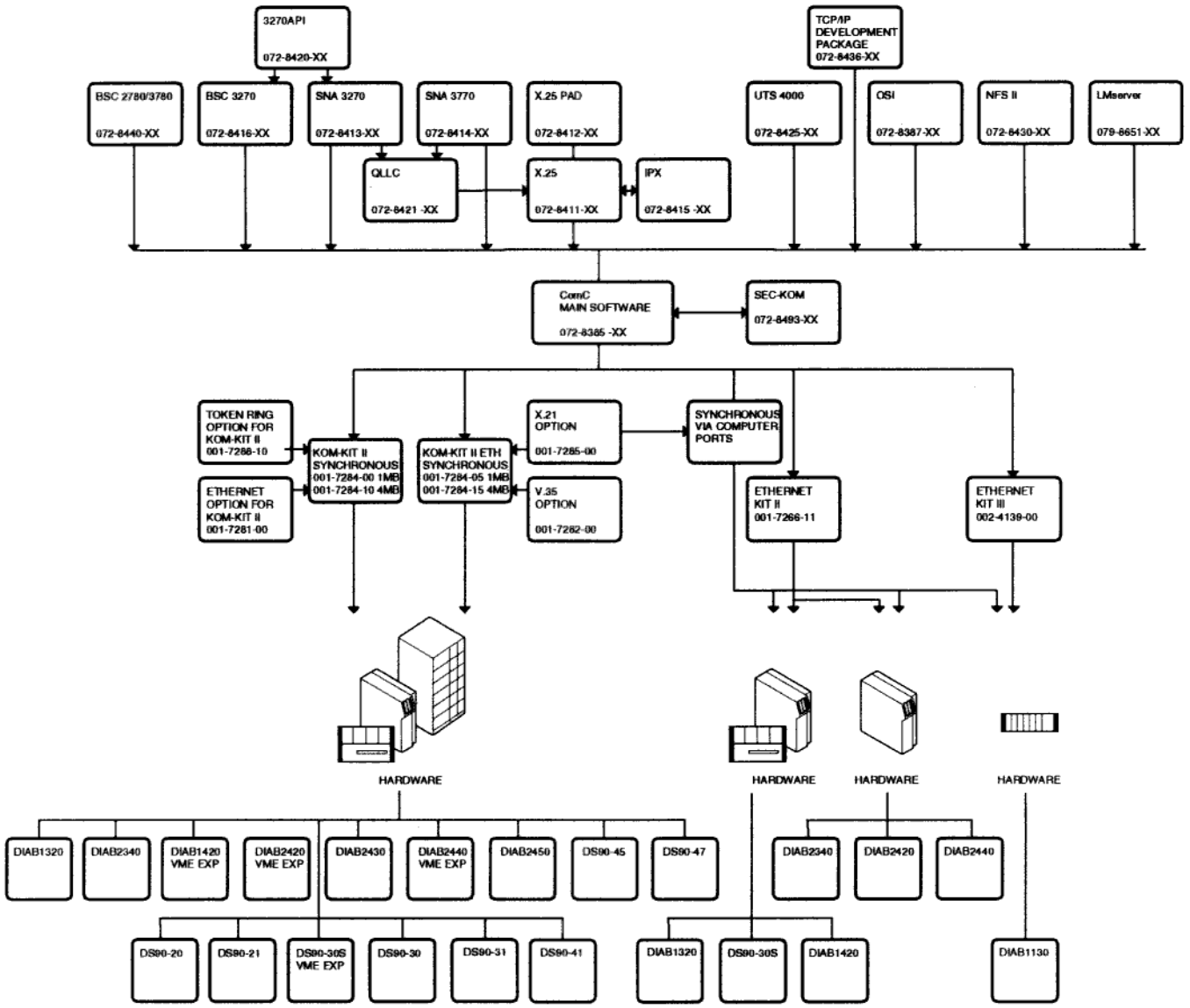
ComC – CONFIGURATION. 035 /234

DIAB DATA
A Bull Company

Diab Data AB. Box 2029, 183 02 Täby. Tel 08-638 94 00. Fax 08-792 05 61.
Diab Data Inc., 323 Vintage Park Drive, Foster City, CA 94404, USA. Tel +1 415 571-1700. Fax +1 415 571-9068.

Configuration chart

DIAB computers



Recommended solutions

Computer Model	Integrated	Distributed	VME expansion required for distributed solution
DIAB1130	X		
DIAB1320	X	(X)	
DIAB1420	X	(X)	X
DIAB2340	X	(X)	
DIAB2420	(X)	X	X
DIAB2430		X	
DIAB2440	(X)	X	X
DIAB2450		X	
DS90-20		X	
DS90-21		X	
DS90-30S	X	(X)	X
DS90-30		X	
DS90-31		X	
DS90-41		X	
DS90-45		X	
DS90-47*	(X)	X	

*Ethernet-kit is always included as standard at delivery. Network connections to 10BASE2 (thin Ethernet) requires ComC Main Software only.

Connection possibilities and interfaces

△ = **Integrated,** that is ComC Main Software running directly under D-NIX with synchronous and LAN communication via the computer's internal ports. LAN communication is performed via ETHERNET-KIT II/III.

■ = **Distributed,** that is ComC Main Software and processing being performed in KOM-KIT II.

Functions & recommendations	TCP/IP [1]	SNA	BSC	UTS	X.25	OSI [2]
V.24 connections/board	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1
X.21 connections/board	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1	■ 2 △ 1
V.35 connections/board		△ 1			△ 1	△ 1
V.24 (leased)	■△	■△	■△	■△	■△	■△
V.24 (switched)	■△	■△	■△	■△	■△	■△
V.35	■△	■			■	
X.21 (Datex)	■△	■△	■△	■△	■△	■△
X.21 bis (switched)	■△	■△	■△	■△	■△	■△
X.25 (Datapak)	■△	■△				■△
X.32 (switched Datapak)	■△	■△				■△
Ethernet between DIAB computers	■△	■△	■△	■△	■△	■△
Ethernet DIAB - other computer	■△					■△
Token-Ring	■	■				■
MPS (Multiple Port Sharing)		■△				
SHM (Short Hold Mode)		■△	■△	■△		
Max transfer speed (Kbps) ■ KOM-KIT II		■ 64	■ 19.2	■ 19.2	■ 64	■ 64
Max no of sessions/control unit ■ KOM-KIT II	64	255	32	32	255 [1]	
Max transfer speed (Kbps) △ DIAB1130		9.6	9.6	9.6	9.6	9.6
Max no of sessions/control unit △ DIAB1130	25	16	16	16	32	
Max transfer speed (Kbps) △ DIAB1320, 1420, DS90-30S		9.6	9.6	9.6	9.6	9.6
Max no of sessions/control unit △ DIAB1320, 1420, DS90-30S	35	16	16	16	32	
Max transfer speed (Kbps) △ DIAB 2340, 2420, 2440, DS90-47		19.2	19.2	19.2	19.2	19.2
Max no of sessions/control unit △ DIAB 2340, 2420, 2440, DS90-47	50	32	32	32	50	
Max no of control units/board		10 ■△	10 ■△	10 ■△	2 ■△	

1 = TCP/IP inkl TELNET, FTP, SMTP, TFTP, Rlogin, Rcp, Remsh, Ruptime, Rwho.
2 = 64 TELNET and/or RLOGIN/KOM-KIT

ComC configuration

Product	Sessions (Sn) Max		No of	KOM-KIT II Memory req			Computer Memory req			Disk req	Note
Main Software		-			615	615		-		2 MB	Compulsory
Ethernet opt		-			50			-		*	
Integr ComC in D-NIX					-			1000			
Telnet in	64	Sn=		Sn x 2.5	+0		Sn x 1	+100		*	
Telnet out	-	Sn=		Sn x 1	+0		Sn x 140	+32		*	
rlogin in	64	Sn=		Sn x 2.5	+0		Sn x 1	+100		*	
rlogin out	-	Sn=		Sn x 1	+0		Sn x 72	+40		*	
rwho	-	Sn=		Sn x 8	+0		Sn x 112	+32		*	
rwho demon[1]	-	Sn=		Sn x 1	+0		Sn x 1	+100		*	Note 1
rcp	-	Sn=		Sn x 4	+0		Sn x 72	+40		*	
ruptime	-	Sn=		Sn x 4	+0		Sn x 56	+24		*	
remsh	-	Sn=		Sn x 4	+0		Sn x 140	+40		*	
remsh demon	-	Sn=		Sn x 1	+0		Sn x 64	+40		*	Note 1
FTP (out)	-	Sn=		Sn x 8	+0		Sn x 96	+72		*	
FTP demon (in)	-	Sn=		Sn x 1	+0		Sn x 56	+80		*	
TFTP (out)	-	Sn=		Sn x 8	+0		Sn x 64	+40		*	
TFTP demon (in)	-	Sn=		Sn x 8	+0		Sn x 1	+100		*	Note 1
SMTP (out)	-	Sn=		Sn x 4	+0		Sn x 80	+56		*	
SMTP demon (in)	-	Sn=		Sn x 1	+0		Sn x 72	+56		*	Note 1
MHS X.400	-	Sn=		Sn x 4	+0		Sn x 350	+400		1 MB+D-POST	Requires D-POST (via Ethernet)
MHS X.400 in (via X.25)	-	Sn=		Sn x 2	+20		Sn x 350	+400		Ing i X.400	
MHS X.400 out (via X.25)	-	Sn=		Sn x 6	+0		Sn x 350	+400		Ing i X.400	
SNA 3270 terminal	255	Sn=		Sn x 5	+20		Sn x 116	+96		0.3 MB	
SNA 3270 printer	255	Sn=		Sn x 5	+20		Sn x 75	+96			Included in SNA 3270 printer
SNA 3770	-	Sn=		Sn x 5	+20		Sn x 105	+11		0.5 MB	Requires 3270
BSC 3270	64	Sn=		Sn x 5	+15		Sn x 112	+96		0.5 MB	
BSC 2780/3780	64	Sn=		Sn x 1	+50		Sn x 200	+150		0.5 MB	
UTS 4000	64	Sn=		Sn x 5	+20		Sn x 150	+96		0.5 MB	
X.25	255	Sn=		Sn x 1	+80		Sn x 1	+0		0.2 MB	
X.25 PAD in	-	Sn=		Sn x 2	+20		Sn x 80	+56		0.2 MB	Requires X.25
X.25 PAD out	-	Sn=		Sn x 6	+0		Sn x 80	+56		Incl in PAD in	
IPX	-	Sn=		Sn x 2	+40		Sn x 1	+0		0.1 MB	Requires X.25
QLLC	255	Sn=		Sn x 2	+20		Sn x 1	+0		0.1 MB	Requires X.25 and SNA 3270
D-LINE/PC Eth		Sn=		Sn x12	+12		Sn x 225	+150		0.5 MB	
D-LINE/PC V24		Sn=		Sn x 0	+0		Sn x 200	+200		0.5 MB	
D-SHARE	120	Sn=		Sn x4	+20		Sn x 150	+150		2.0 MB	
NFS out server		Sn=		Sn x16	+2		Sn x 72	+0			
NFS in client		Sn=		Sn x16	+2		Sn x 48	+50			
X.11 session	55	Sn=		Sn x2	+6		Sn x720	+1300		35[4]+35 MB swap area	
V.35 connection[2]		Sn=		Sn x 1	+300		Sn x 1	+0		0.0 MB	Max 1/KOM-KIT II
Extra V.24, X.21 conn		Sn=		Sn x 1	+10		Sn x 1	+0		0.0 MB	Max 2/KOM-KIT II
Total memory required			**KOM-KIT II[3]: or D-NIX:**			**KB**	**Int memory:**		**KB**	**MB**	

* included in basic package

Note 1: Activated deamon in the DIAB computer is required only if incoming traffic is allowed.

Note 2: KOM-KIT II 1 MB shall be used.

Note 3: When installing ComC in integrated mode, configure D-NIX with 1 MByte internal memory for communication applications. This memory area can not be used by other applications.

Note 4: Inkluding MOTIF

Configuration Charts PC

The following configuration charts should be used when configuring a personal computer for integration with a DIAB computer.
The article numbers refer to software on 5.25" diskettes. Please see the price list for article numbers for 3.5" diakettes.

The DCM solution, the Open Office foundation
Solution 2 & 7 – PC via LanManager + Simple terminal

LanManager client
Suitable wherever the DIAB computer is employed as a PC file and printer server and when the PC acts as a simple VT220 terminal to the DIAB computer, or other computers in the network supporting TCP/IP.
The solution includes:
- LanManager client from Syntax Inc
- NetBIOS from FTP Software
- TCP/IP from FTP Software inkl Telnet, FTP, SMTP, SNMP

Other configuration examples
Solution 1 & 4 – PC via LanManager

LanManager client
Suitable in networks where the DIAB computer is solely used as a PC file and printer server. These configurations also allows for PC client surveillance via SNMP.
The solution includes:
- LanManager client from Syntax Inc
- NetBIOS from FTP Software
- TCP/IP from FTP Software

Solution 3 & 8 – PC via NFS + simple terminal

NFS client, here realized with INTERDRIVE, which is a highly functional and powerful NFS client. The product comes from FTP Software and is an option to PC-TCP from the same company.
Suitable wherever the DIAB computer is employed as a PC file and printer server and when the PC acts as a simple VT220 terminal to the DIAB computer, or other computers in the network supporting TCP/IP.
The solution includes:
- NFS-klient as Interdrive from FTP Software
- TCP/IP from FTP Software inkl Telnet, FTP, SMTP, SNMP

Solution 5 – PC via NFS

The solution is quite like solution 3 but just ncludes NFS client (Interdrive) and a TCP/IP. This is a low cost solution with good expansion potential – for instance a powerful terminal emulator such as Reflection can be added through Telnet Connection.
The solution is suitable in networks where the DIAB computer is solely used as a PC file and printer server, and where there is a need for a powerful terminal emulator running under Windows 3.
The solution includes:
- NFS client as Interdrive from FTP Software
- TCP/IP from FTP Software

Solution 6 – PC via NFS

Functionally, the solution resembles alternative 3, but this one is based on PC-NFS from Sun Micro Systems. PC-NFS has a built-in TCP/IP and cannot be combined with i e LanManager from Syntax. PC-NFS is a proven and stable product costing slightly more than Interdrive. The product includes a simple Telnet VT100, FTP. Reflection via Telnet Connection can be added as a powerful terminal emulator..
The solution includes:
- PC-NFS from Sun Micro Systems

Solution 9 – PC via D-LINE/PC

D-LINE/PC is a cost-effective product designed to be used when integrating a DIAB computer with a PC. The product includes file and printer server functions as well as a VT220/Tek4014 terminal emulator. D-LINE/PC also includes a simple mail feature. D-LINE/PC also works in serial connections, for instance via a modem.
The solution includes:
- D-LINE/PC

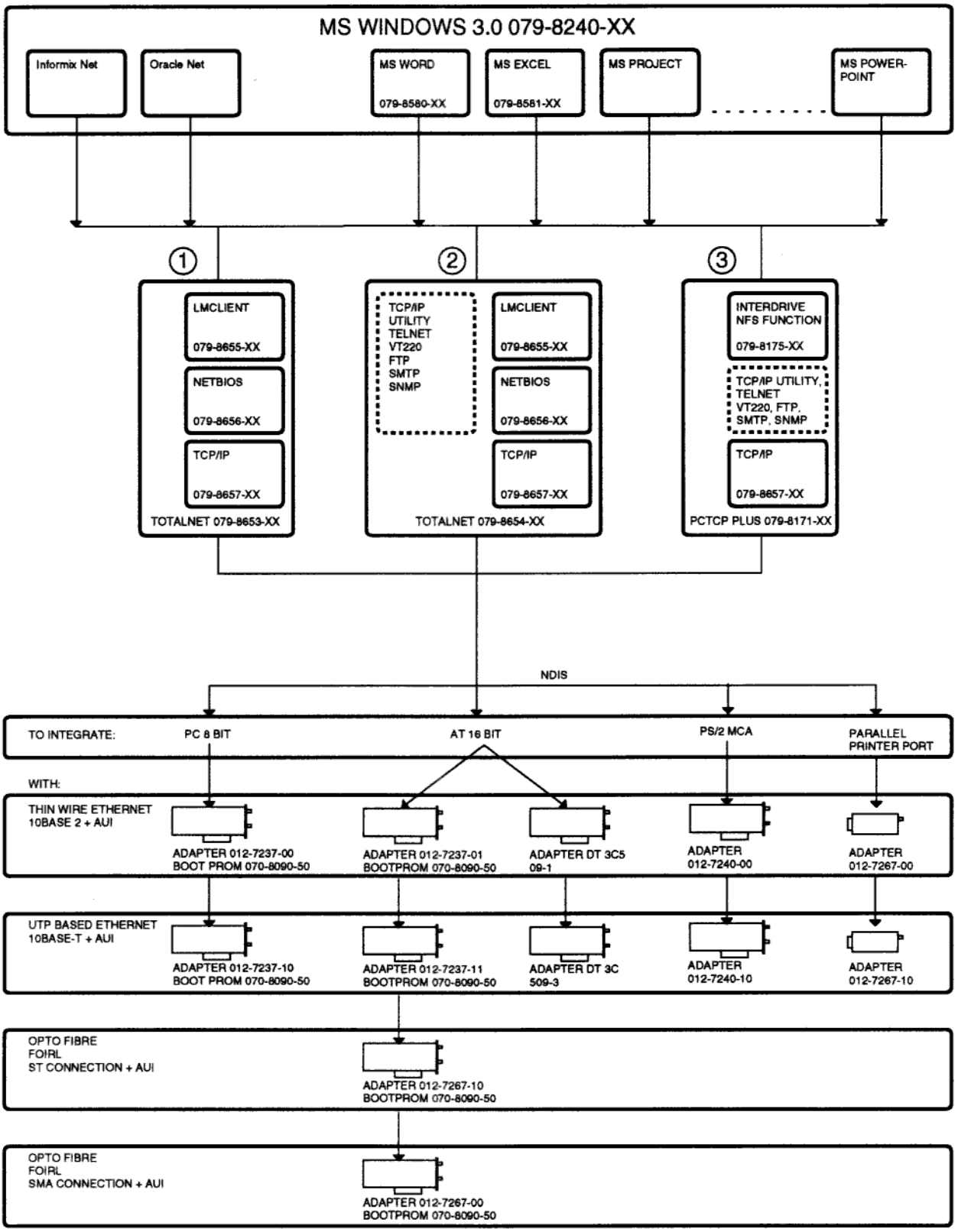
Solution 10 – Macintosh via D-SHARE

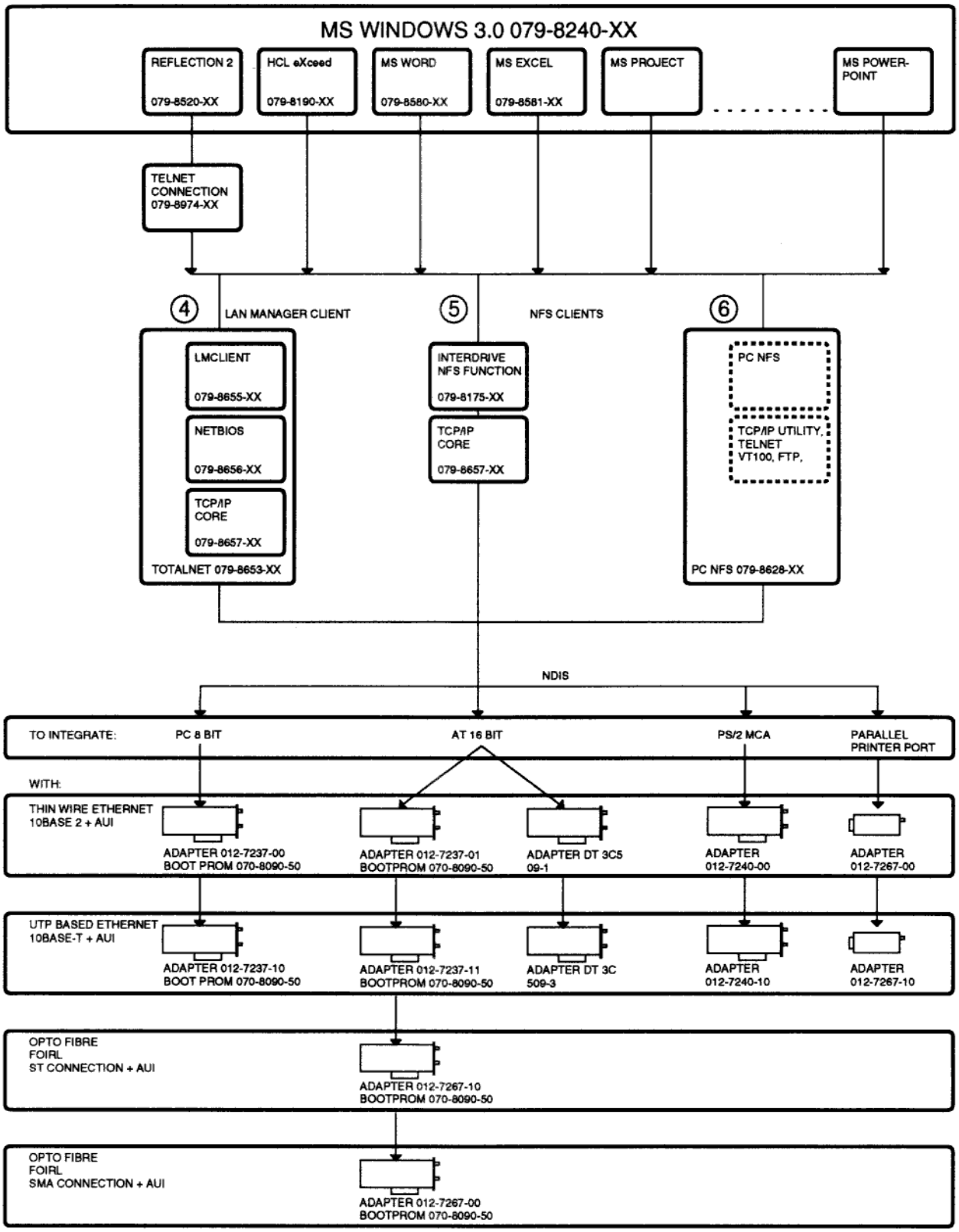
D-SHARE is a cost-effective product designed to be used when integrating a DIAB computer with a Macintosh. The product includes file and printer server functions as well as a VT220/Tek4014 terminal emulator.
Clients may be connected through Ethernet or LocalTalk. In both cases, a Shiva FP-5 must be connected to the network.
D-SHARE supports MAC/TCP, making it possible to combine it with other products supporting MAC/TCP.
The solution includes:
- D-SHARE

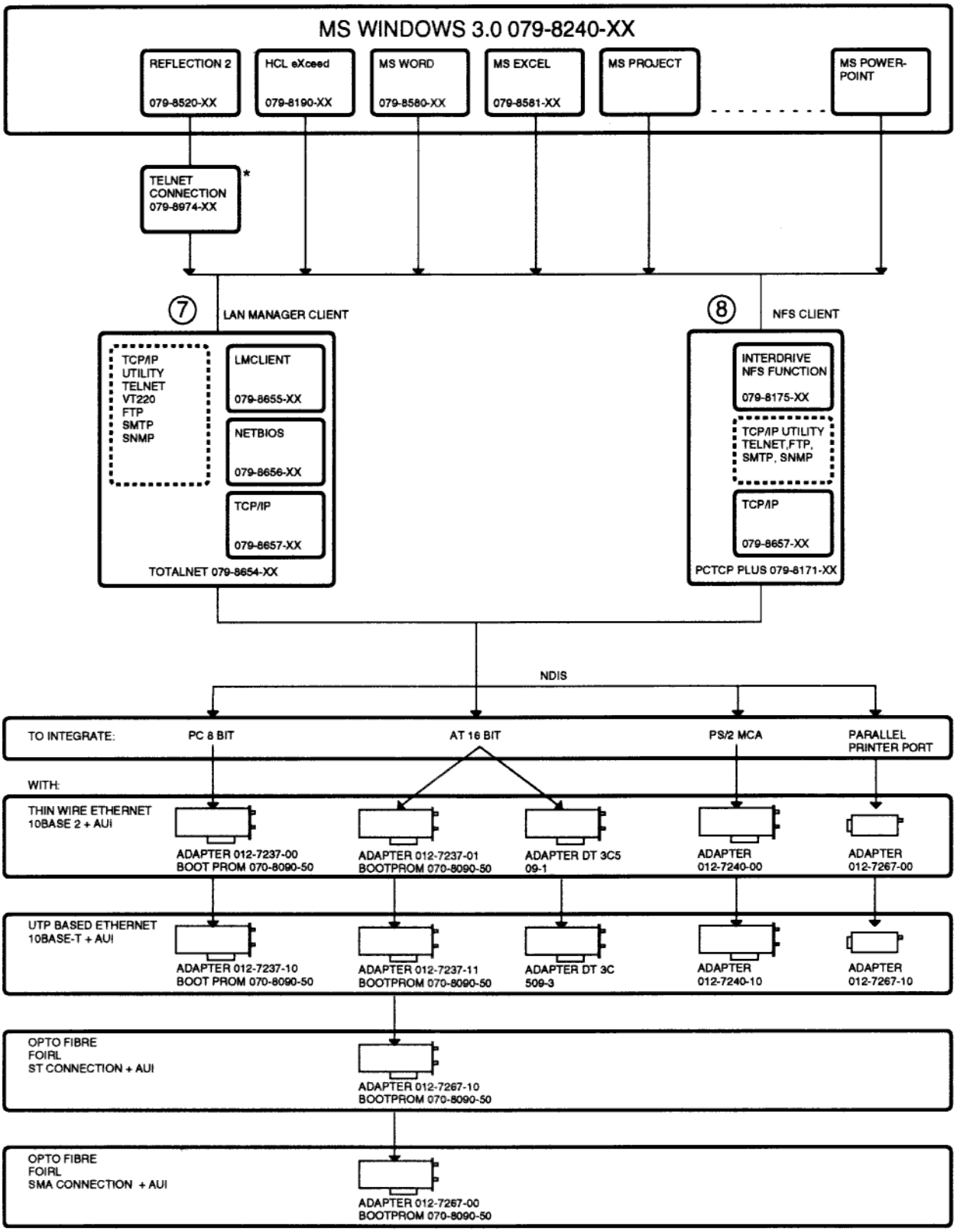
Configuration chart PC

Oracle Net

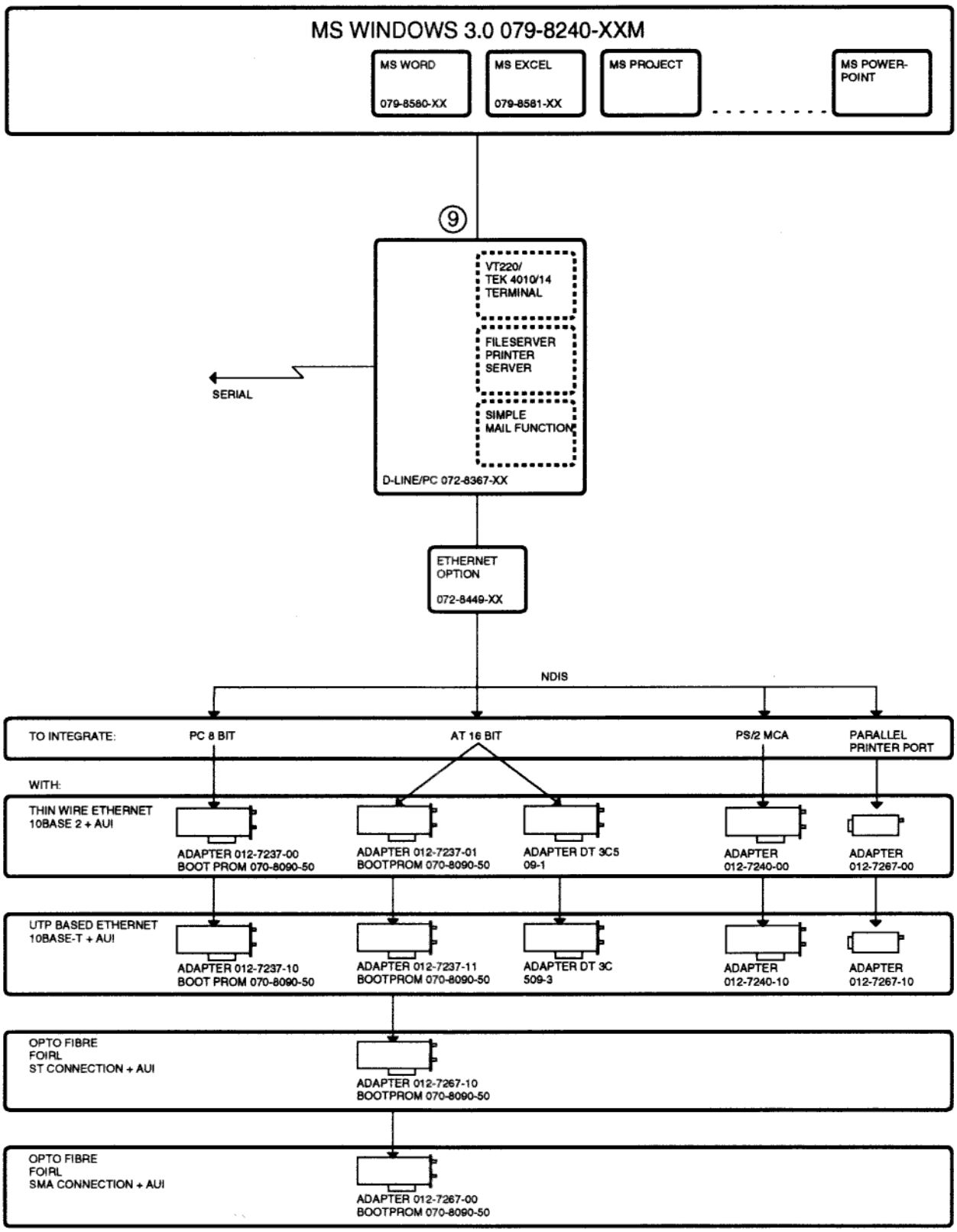
Informix Net

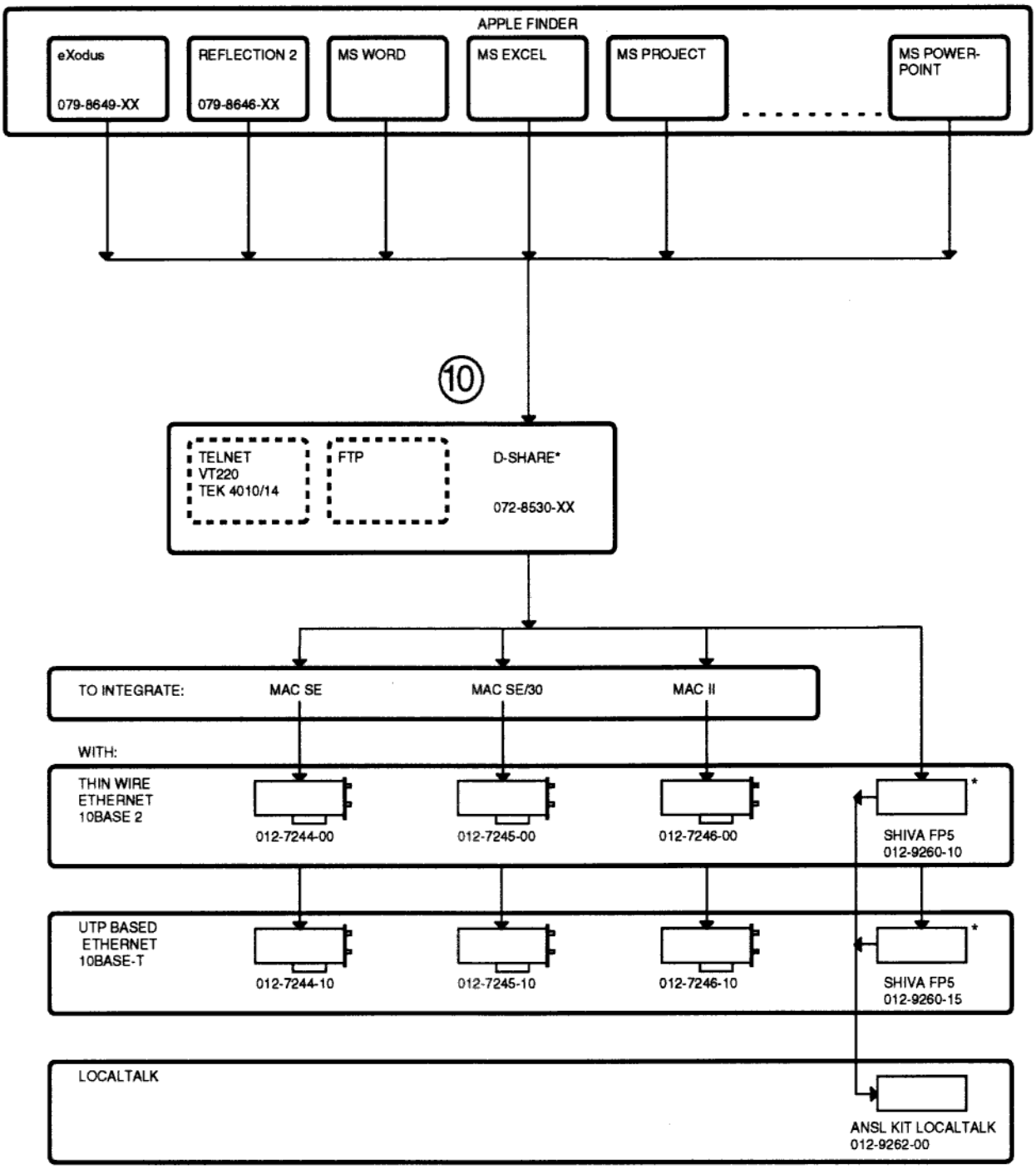



MS WINDOWS 3.0 079-8240-XX
REFLECTION 2
079-8520-XX
HCL eXceed
079-8190-XX
MS WORD
079-8580-XX
MS EXCEL
079-8581-XX
MS PROJECT
MS POWER-POINT
TELNET CONNECTION 079-8974-XX
4
LAN MANAGER CLIENT
5
NFS CLIENTS
6
LMCLIENT
079-8655-XX
NETBIOS
079-8656-XX
TCP/IP CORE
079-8657-XX
TOTALNET 079-8653-XX
INTERDRIVE NFS FUNCTION
079-8175-XX
TCP/IP CORE
079-8657-XX
PC NFS
TCP/IP UTILITY, TELNET VT100, FTP,
PC NFS 079-8628-XX
NDIS
TO INTEGRATE:
PC 8 BIT
AT 16 BIT
PS/2 MCA
PARALLEL PRINTER PORT
WITH:
THIN WIRE ETHERNET 10BASE 2 + AUI
ADAPTER 012-7237-00 BOOT PROM 070-8090-50
ADAPTER 012-7237-01 BOOTPROM 070-8090-50
ADAPTER DT 3C5 09-1
ADAPTER 012-7240-00
ADAPTER 012-7267-00
UTP BASED ETHERNET 10BASE-T + AUI
ADAPTER 012-7237-10 BOOT PROM 070-8090-50
ADAPTER 012-7237-11 BOOTPROM 070-8090-50
ADAPTER DT 3C 509-3
ADAPTER 012-7240-10
ADAPTER 012-7267-10
OPTO FIBRE FOIRL ST CONNECTION + AUI
ADAPTER 012-7267-10 BOOTPROM 070-8090-50
OPTO FIBRE FOIRL SMA CONNECTION + AUI
ADAPTER 012-7267-00 BOOTPROM 070-8090-50



* Required if several simultaneous sessions are performed from the PC. One session works fine witout Telnet Connection.


MS WINDOWS 3.0 079-8240-XXM
MS WORD
079-8580-XX
MS EXCEL
079-8581-XX
MS PROJECT
MS POWER-POINT
9
VT220/
TEK 4010/14
TERMINAL
FILESERVER
PRINTER
SERVER
SIMPLE
MAIL FUNCTION
SERIAL
D-LINE/PC 072-8367-XX
ETHERNET
OPTION
072-8449-XX
NDIS
TO INTEGRATE:
PC 8 BIT
AT 16 BIT
PS/2 MCA
PARALLEL
PRINTER PORT
WITH:
THIN WIRE ETHERNET
10BASE 2 + AUI
ADAPTER 012-7237-00
BOOT PROM 070-8090-50
ADAPTER 012-7237-01
BOOTPROM 070-8090-50
ADAPTER DT 3C5
09-1
ADAPTER
012-7240-00
ADAPTER
012-7267-00
UTP BASED ETHERNET
10BASE-T + AUI
ADAPTER 012-7237-10
BOOT PROM 070-8090-50
ADAPTER 012-7237-11
BOOTPROM 070-8090-50
ADAPTER DT 3C
509-3
ADAPTER
012-7240-10
ADAPTER
012-7267-10
OPTO FIBRE
FOIRL
ST CONNECTION + AUI
ADAPTER 012-7267-10
BOOTPROM 070-8090-50
OPTO FIBRE
FOIRL
SMA CONNECTION + AUI
ADAPTER 012-7267-00
BOOTPROM 070-8090-50



* D-SHARE requires one SHIVA Fastpath in the network, even if the Macintosh is connected through the network.