

DTC 16RX Routable Communications Server & DTC 16RX Manager

Technical Data

Product Numbers
HP J2064A, J2496A

DTC 16RX: J2064A

The DTC 16RX LAN-based Data-communications and Terminal Controller provides full routable management capability over high and low-speed links.

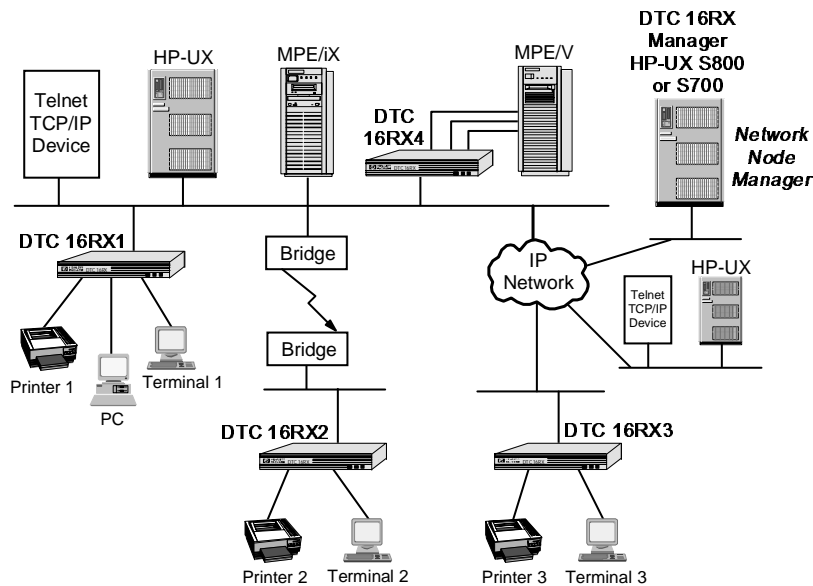
The DTC 16RX is targeted at environments requiring distributed and routable connectivity to HP3000/900*, HP9000 or non-HP systems running the standard Telnet-TCP/IP protocol.

** Routable AFCP will be available as a future enhancement.*

For information on other DTC products, refer to the DTC family datasheet (which presents the DTC family, the target environments, and supported devices) and to the individual product datasheets:

DTC 16MX	J2063A
DTC 16TN	J2060A
DTC 16iX	J2062A
DTC 72MX	J2070A
DTC Management	D2355A
	J2120A
X.25 iX Network Link	J2079A
HP3000 Telnet Access	J2080A

DTC 16RX Routable Communications Server



(also included in the Networking Communications Specification Guide (5091-9389E).

DTC 16RX key features

- Management:
 - over routable TFTP protocol
 - host-based UX (S700 or S800) management platform
 - integratable under OpenView UX
 - supports host back-up manager facility
- Supports an SNMP agent.
- DTC 16 RX microcode in FLASH EEPROM
- Low speed (9600 Bd) extended Lan link support *
- LAN-based communication server supporting the standard Telnet-TCP/IP protocols.
- Systems are accessed directly through system LAN links or through system asynchronous ports (via the extended switching configuration or back-to-back) for systems that do not implement Telnet-TCP/IP or the HP 3000/900 protocol.
- Provides up to 16 RS-232 direct or modem ports, or RS-423 direct ports.
- Provides compatible API with HP 9000 system asynchronous multiplexers.
- Provides printer sharing and multisessions per port.
- Provides comprehensive support tools for increased supportability and uptime.

** Low speed link may significantly impact the terminal or printer response time. For more information, please contact your HP representative who can recommend the appropriate line speed for any specific requirement.*

Product highlights

- High performance built upon a powerful architecture, the DTC 16RX delivers a high throughput to the end-users.
- Supports AFCP, an optimized protocol for OLTP applications running under the HP 3000/900.
- Extended Direct Connect plus Full Modem support

- The DTC 16RX provides either direct connect or modem ports.

The direct connect modem ports support RTS/CTS signals for hardware flow-control eliminating the need for modem ports when printer connectivity is required.

The modem connect ports provide full modem control for operation over leased lines or the telephone network.

- Same application interface as all the other DTCs (DDFA) which is compatible with HP9000 system multiplexers.

- The DTC products use standard system calls to access and control the DTC ports. This presents HP-UX applications with a programmatic interface that is almost identical to the interface to asynchronous systems MUX ports, allowing an easy migration from MUX to networked environment.

This includes:

- DTC port identification
- Host initiated sessions (printing, programmatic access) to DTC ports via standard device files

No migration path is currently provided from DTC 16 TN, iX or MX to DTC 16 RX

Ease of Use

The DTC 16RX is Field installable. The HP representative will:

- connect the DTC 16RX to the network
- configure the basic parameters such as: DTC 16RX IP address, DTC 16RX Manager IP address, Default IP router address and DTC 16 RX name
- verify that a terminal can access at least one system.

The customer specific configuration of the DTC 16RX and the asynchronous ports is the customer's responsibility and can be done via the self explanatory screens of the DTC 16RX Manager (P/N J2496A).

Compact, flexible package

The DTC 16 RX has a standard 19-inch chassis. It can be located on a tabletop or in a rack-mounted configuration such as HP system cabinets. The RJ-45 pin-out is ATT356 compliant to allow future migration from asynchronous devices to 10-Base-T LAN devices without a cabling change.

DTC 16RX management

- Only the DTC 16RX Manager can manage the DTC 16RX.

The DTC 16RX is configured and managed only with the use of the HP DTC 16 RX Manager application that can run on two different platforms: HP 9000/800 or HP 9000/700.

The DTC 16RX Manager configures the DTC 16 RXs for connections to HP3000/900 or HP9000/800 systems and to other systems in multivendor environments. It provides powerful network management features for complex network topologies:

- static and dynamic configuration
- copy and paste configurations of DTC 16 RX
- integrable under OpenView UX
- host manager back-up: if the main DTC 16RX Manager is down or unreachable a configured back-up Manager will be scanned by the DTC 16 RX to get its configuration
- DTC and port status
- DTC and port reset
- DTC 16 RX reprogramming to change the microcode version in the Flash EEPROM

SNMP agent

The DTC 16RX has the standard DTC SNMP agent. Besides the services provided by the DTC management platforms, the DTC-based SNMP agent allows customers to take advantage of SNMP-based management applications such as the HP OpenView Network Node Manager (UX based).

The following features are available with Node Manager:

- Automatic discovery of DTCs
- Status/Color management which automatically polls DTCs on a regular basis and indicates their status by their color on the network map
- A MIB loader/browser which provides display of MIB values in text or graphical form and the ability to modify them if permitted by the DTC
- A MIB application builder which enables users to build applications dealing with DTC MIB objects
- Historical data reporting for troubleshooting and network planning

DTC 16RX Rack installation

The DTC 16RX can be easily installed in industry-standard 19-inch EIA racks. The DTC 16RX chassis (delivered with mounting brackets) is racked at the front of the EIA rack and takes 1 EIA height unit.

Racking the asynchronous distribution panels:

- 8-port direct connect DB-25 distribution panels (DDP):
 - standard 19-inch EIA compliant - takes 1 EIA height unit
 - no rack-mount kit required
 - attached to the rear or front columns of the rack
- 8-port Modem connect DB-25 distribution panels (MDP): NOT 19-inch EIA compliant requires a rack-mount kit
 - for rear side installation:
 - use the C2792A kit to install up to 5 MDPs
 - takes 6 EIA units of height
 - for front side installation:
 - use the J2084A kit to install up to 5 MDPs (including the filler panels) or J2087A for 10 MDPs
 - takes 7 EIA height units
- 16-port direct connect distribution panel RJ45 standard 19-inch (1EIA-rack-mountable) panel and racking hardware.
 - J2064A - option 1AC or
 - J2085A - option 105

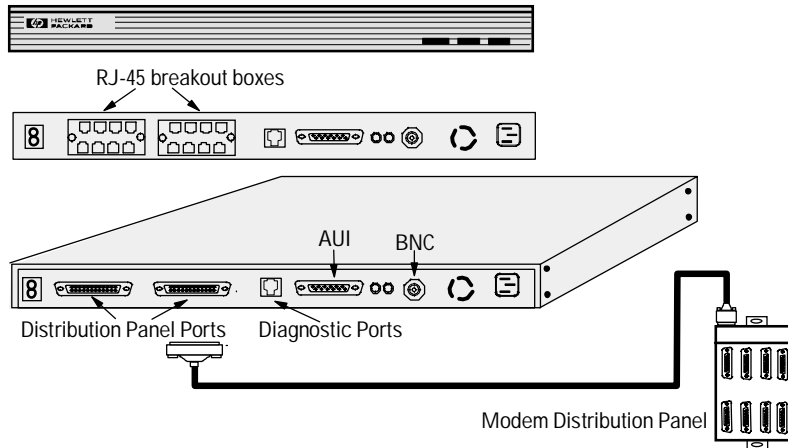
For more details and configuration examples, refer to the DTC Cabling & Racking Guide available with the DTC 16RX installation guide (P/N 5961-0373).

DTC 16RX Product Specifications

The DTC 16RX has a compact chassis compliant with the industry- standard EIA 19-inch size.

It provides a built-in LAN interface and 16 asynchronous ports.

HP DTC 16RX Routable Communications Server



LAN interface

Two standard connectors are provided:

Connector:

BNC

802.3 AUI 15-pin

LAN supported:

ThinLAN (10Base-2)

ThickLAN

EtherTwist

10BaseT,

Fiber Optic

Broadband, FDDI connectivity through IEEE 802.3/Ethernet external adapters

The DTC 72MX automatically recognizes the type of LAN connected (ThinLAN or AUI)

Ordering instructions

Ordering the DTC 16RX products

J2064A Main product - DTC 16RX

- LAN access with BNC connector and standard 15-pin AUI
- 16 RS-232-C direct connect ports and RJ-45 connectors on breakout boxes
- Installation manuals
- A software tape for HP3000/900 systems

Interface options

UG5 Replace 8 DIRECT ports with 8 MODEM ports (can order one or two)

UG4 Replace 16 RS-232-C ports with 16 RS-423 ports (can order one)

1AC Rack kit

J2085A Connection accessory product

The DTC 16RX comes standard with RJ-45 distribution panels (for direct connect) but connection accessories are available for upgrades or to accommodate existing cabling.

#101 8-port MODEM distribution panel: DB-25

- used to upgrade RS-232 direct connect ports to Modem ports.
- includes one panel (MDP) with DB-25 connectors and a link cable for DTC connection.

#102 8-port Direct connect distribution panel: DB-25

- used for DB-25 cabling, compatible with DTC16 (HP 2340A) connectors.
- includes one 19" (1EIA - rack-mountable) panel with DB-25 connectors and a link cable for DTC connection.

#104 8-port multiport cable (3-pin connectors)

- used for compatibility with existing DTC48 (HP 2345A) and ATP connectors.

#105 16-port Direct connect distribution panel: RJ-45

- used for rack installation
- this accessory is the default distribution panel of a 16-port asynchronous processor board
- includes one 19" (1 EIA-rack-mountable) panel with RJ-45 connectors and 2 link cables for DTC connection
- includes rack mounting hardware

Asynchronous Interfaces

The DTC16RX chassis supports one of the following interfaces:

16-port RS-232-C (Direct or Modem or mixed, with a modularity of 8 ports)

– Direct connect with hardware flow-control

Signals: RD, TD, ground, RTS, CTS
Connectors: female RJ-45 (or optional female DB-25)
Line speed: from 300 to 38,400 bps

– Modem connect with FULL-MODEM control

Signals: RD, TD, DCD, DTR, RTS, RI, DSR, CTS, DRS, shield and signal ground
Connectors: female DB-25
Line speed: from 300 to 19,200 bps

16-port RS-423 Direct connect with hardware flow-control

Signals: RXa, RXb, TXa, TXb, CTSa, CTSb, RTSa, RTSb
Connectors: femal RJ-45 (or optional female DB-25)
Line speed: from 300 to 38,400 bps
Cable length: 200 m

Common characteristics

Flow control: Xon/Xoff, HP Enq/Ack, RTS/CTS
Speed sensing : yes
Parity sensing : yes
Sessions/port : 1
Printer sharing : yes

Specific capabilities

- Powerfail recovery
- Typeahead facility
- Field-mode support
- Device type managed by the system

System release requirement

MPE/iX release 4.0 (+PowerPatch #6) or 5.0

DTC 16RX Manager J2496A

The DTC 16RX Manager is the management solution for the DTC 16RX ONLY. It can manage the DTC 16RX over a routed network and can run on either an HP 9000/800 or an HP9000/700 system.

The DTC 16RX Manager provides static and dynamic configuration of a DTC 16RX accessing HP3000/900s, HP9000/800s or non-HP systems running the standard Telnet-TCP/IP protocol. It is easily integrated under Network Node Manager.

Key Features

- Management functions over a routable protocol (TFTP).
- Integratable under HP OpenView Unix (Node Manager, Interconnect Manager)
- Copy/paste facility to configure large number of DTC 16 RXes
- Reprogramming function of DTC 16RX firmware in Flash EEPROM.
- Static and dynamic configuration
- ASCII user interface identical to DTC Manager /UX (J2120A)
- Provide host back-up management facility

- Self explanatory screens
- Online help
- Port and box status and reset.
- Back to back configuration
- Large number of trouble shooting tools (Tracing...)

DTC SNMP agent

Besides the services provided by the DTC 16RX Manager, the DTC 16RX-based SNMP agent allows customers to take advantage of SNMP- based management applications such as the HP OpenView Network Node Manager (HP-UX) or other HP SNMP manager applications.

The following features are available with Node Manager:

- Automatic discovery of DTC 16RXes.
- Status/Colors management. The DTC 16 RXes are automatically polled on a regular basis and the status color is reflected on the map.
- MIB loader/browser. It provides display of MIB values in text or graphical form and the capability to modify them if permitted by the DTC 16RX.
- MIB application builder. It enables users to build applications dealing with DTC

MIB object

Historical data reporting for troubleshooting and network planning. The DTC SNMP agent will be supported on all DTC hardware and is configurable from all the DTC management platforms.

Software requirements

- HP UX 9.00 or later.
- TFTP installed and configured.

Hardware platform

Physical specifications

Height	43.7 mm (1.7 in) = 1 EIA Units
Depth	235 mm (9.3 in)
Width	425 mm (16.8 in) = 19 inch rack compliant
Weight	2.6 kg (6 lbs)

Operating environment

Temperature	0 to 55 Degrees C
Relative humidity	5 to 95% at 40 Degrees C
Altitude	4600 m
Static discharge	15kV - no data loss

Electronic specifications

Current consumption	typical 0.4A/0.2A (115V/220V) maximum 0.5A/0.25A (115V/220V)
Line frequency	50/60Hz
Typical AC Input Voltage	115V/230V

Regulatory classifications

Emissions	FTZ 1046/84, FCC part 15 class A EN55022 Class A VCCI Class 1 SABS
Safety	UL, CSA, EN60950, SASO BS6301

Ordering Information

HP J2496A DTC 16RX Manager

AA0	1/4-inch cartridge tape
AA1	1/2-inch magnetic tape (1600 bpi)
AAH	Software on DAT cartridge tape
AA4	QIC
AAU	CD-ROM certificate only
OCC	Update to latest version

Management tools

Powerfail recovery	YES
Remote Access or IP routers	YES
Backup/restore function	YES
Centralized support of multiple DTC versions Retrieval and identification of a physical port by its name	YES

*Contact your local Response
Center for list of recommended
modems.*

Network Management Table

Network Management:

HP DTC 16RX Manager

Platform: HP 9000/800 and
HP 9000/700

Connectivity: TFTP

User interface: ASCII, JAM

DTC Functions

Support of DTC16, DTC48 and DTC72MX	NO
Support of DTC16TN	NO
Support of DTC16IX	NO
Support of DTC16MX	NO
Access to HP 3000 S900	YES
Access to TCP/IP systems	YES
Access to non-HP systems via extended switching	YES
Access to multiple systems	YES
DTC/X.25 support	NO
Telnet/iX support	YES
Maximum number of DTCs	150
Maximum number of X.25 cards	N/A

Configuration management

Automatic default configuration	YES
Serial ports	YES
System switching	YES
DTC node name, LAN and IP address	YES
User welcome message	YES
Inactivity timer	YES
Domain Name Server (DNS) addressing for DTC traffic	YES
IP router addressing	YES
X.25 system switching	NO
X.25 PAD access	NO
Start/Stop on X.25 card & upload databases	NO
X.25/Padup autorestart	NO
Padup profiles	NO
Telnet Access configuration	NO
Start/Stop on Telnet Card	NO
SNMP agent configuration	YES
Copy/Paste function	YES
Large configurations tools	YES

Fault Management

Reset DTC, ports	YES
Reset LDEV	NO
Reset systems connections (when DTC/card/port reset)	YES
Reset X.25 card and LCI	NO
Reset Telnet Access board	NO
Upload DTC and ports data	YES
Upload X.25	NO
Upload LDEV	NO
Upload Telnet Access board	NO
Self tests Port Loop Back	NO
X.25 card and Loop Back	NO
Status monitoring	YES
Event monitoring & logging	YES
Show connections	NO
IP address checking (Extended ping)	NO
Automatic alarm reporting (SNMP)	YES
DTC polling	NO
Color management (SNMP)	YES
X.25 tracing & logging	NO
X.25 site management	NO
Retransmission timers	YES
Management packet length	NO

Security Management

Password to DTC Manager	YES
Operator security levels	NO
Configuration of terminal switching and multisession per DTC port	YES
PAD security access lists	NO

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Associated files:

The DTC 16 RX Manager product,
Technical Data

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