

**DATACOMsystems®  
DS3/E3-PT**

*Quick Installation Guide*



**Copyright**

Copyright © 2003 by Datacom Systems, Inc. All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Datacom Systems, Inc. To obtain this permission, write to the attention of the Datacom Systems legal department at 9 Adler Drive, East Syracuse, New York 13057-1290, or call 315-463-9541.

**Customer Service**

This Quick Installation Guide was written to help you get to know your new DS3/E3-PT quickly and easily. We would welcome any comments or suggestions you may have regarding this Quick Installation Guide. Please send your remarks and recommendations via mail, telephone, facsimile, or Internet E-mail.

Datacom Customer Service personnel are available from 8 AM to 5:30 PM Eastern time, weekdays. Customer Service is available via telephone, facsimile, and Internet E-mail. Outside of support hours, please leave a voice message and our Customer Service Staff will return your call as soon as possible.

**Mail:** Datacom Systems, Inc.  
Customer Service  
9 Adler Drive  
East Syracuse, NY 13057-1290

**Tel:** (315) 463-9541

**FAX:** (315) 463-9557

**E-mail:** support@datacomsystems.com

**World Wide Web**

You can obtain additional information about Datacom Systems, Inc. and its products and services from the World Wide Web at <http://www.datacomsystems.com>.

**OPTICALswitch™**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
1X8SP-OM (S)	8	100FX, OC3, OC12, Gigabit	Dual SC
1X8SY-OM (S)	8	100FX, OC3, OC12, Gigabit	Dual SC

**LANswitch™**

**ATM In-Line**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
2X8SY-ATM-M (S)	2x8	ATM, OC3-OC12	Dual SC

**Ethernet/Token Ring**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
2X16FD-SY	2x16	10/100 BaseT	RJ45
MX8100E/Tsl	2x8	10/100 BaseT or Token	RJ45
MX16100E/Tsl	2x16	10/100 BaseT or Token	RJ45

**Fiber Custom**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
4XSPSY-CM	4	Gigabit	Dual SC
4X8SY-CM	4X8	Gigabit	Dual SC
4X8SP4-CM	4X8	Gigabit	Dual SC
4X16SP-CM	4X16	Gigabit	Dual SC

**Gigabit In-Line**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
1X8SY-SX (LX)	1x8	Gigabit	Dual SC
2X8SY-SX (LX)	2x8	Gigabit	Dual SC

**Gigabit SPAN**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
1X8SP-SX (LX)	1x8	Gigabit	Dual SC
2X4SY-SX (LX)	2x4	Gigabit	Dual SC
2X8SY-SX (LX)	2x8	Gigabit	Dual SC

**Gigabit SPAN + In-Line**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
2X8SP4-SX (LX)	2x8	Gigabit	Dual SC

**Receive Only**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
2X8RX-SX	2x8	Gigabit	Dual SC

**ACCESSORY**

**Software**

MANagents — Multiple Agent Controlling Console Software

**Support**

M3415A — V.35 Connectivity Panel  
RMC-3 — 1U Rack Panel for 3 Small Form DSI Products  
SCS — Switch Control Server

**TAP**

**Ethernet/Token Ring**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
10/100-AT	1	10/100 BaseT	RJ45
1000BT-AT	1	1000 BaseT	RJ45

**Fiber**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
F50/50/62-M	1	100FX, OC3, OC12, Gigabit	Dual SC
F50/50/50-M	1	100FX, OC3, OC12, Gigabit	Dual SC
F50/50/9-S	1	OC3, OC12, Gigabit	Dual SC

**PERMALink™ Tray**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
8SY-M/62	8	100FX, OC3, OC12, Gigabit	Dual SC
8SY-M/50	8	100FX, OC3, OC12, Gigabit	Dual SC
8SY-S/9	8	OC3, OC12, Gigabit	Dual SC

**VERSAtap™**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
4SY-SX+4C	4	Gigabit	Dual SC & LC

**WAN**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
DS3AT1 (4) (8)	1 (4) (8)	DS3	BNC
DS3-AT	1	DS3	BNC
DS3/E3-PT	1	DS3/E3	BNC
E3-AT	1	E3	BNC
T1/E1-PT	1	T1/E1	RJ48

**VERSALink™**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
1X4SY-SX+2C	1X4	Gigabit	Dual SC & LC
1X8SY-SX+2C	1X8	Gigabit	Dual SC & LC
2X4SY-SX+2C	2X4	Gigabit	Dual SC & LC
2X8SY-SX+2C	2X8	Gigabit	Dual SC & LC

**WAN**

MODEL	PORTS	TOPOLOGY	CONNECTIVITY
W2358Dsl	2X8	WAN	DB15
WX8T1/E1sl	2X8	T1/E1	RJ48
WX16T1/E1sl	2X16	T1/E1	RJ48
D28100BTsl	1x8 • 1x8	10/100BaseT and WAN	RJ48 • DB15
DS3-8Csl	2X8	DS3	BNC
2X4SY-DS3/E3	2X4	DS3/E3	BNC

February

Part Number: 541-0073-A.06

No liability for consequential damages. Under no circumstances and under no theory of Liability shall DSI be liable for costs of procurement of substitute products or services, lost profits, lost savings, loss of information or data, or any other special, indirect, consequential or incidental damages, arising in any way out of the sale of, use of, or inability to use, any DSI product or service, even if DSI has been advised of the possibility of such damages.

The warranties set forth above are exclusive and in lieu of all other warranties. Datacom Systems, Inc. (DSI) makes no other warranties, expressed or implied, and DSI expressly disclaims all other warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose. Moreover, the provisions set forth above state DSI's entire responsibility and your sole and exclusive remedy with respect to any breach of warranty or contract.

**Limitation On Liability**

**PLEASE DO NOT ATTEMPT TO RETURN ANY ITEM PRIOR TO RECEIVING A RETURN MATERIAL AUTHORIZATION (RMA) NUMBER FROM DATACOM CUSTOMER SERVICE AT (315) 463-9541**

Datacom Systems, Inc. (DSI) warrants that the hardware which it supplies will be free from significant defects in materials and workmanship for a period of two years from the date of delivery (Warranty Period), under normal use and conditions. In the event of any such defect, you can return an item of defective hardware, freight prepaid, to DSI during the Warranty Period, and DSI will repair or replace the defective equipment and return it to you, freight prepaid. If DSI determines that the equipment is not defective, it will return it to you, freight collect. DSI shall have no responsibility for any deficiency resulting from accidents, misuse, modifications, power disturbances (including use of a power supply not specified by DSI), or various other forms of disaster, e.g., earthquakes, floods, etc.

**Warranty**

## 1 What's in the Package



Instructions



DS3/E3-PT

## 2 Introduction

The DS3/E3-PT is a single port passive device that provides a easy method to passively monitor network traffic flowing between E3, DS3/T3, or STS-1 devices using your network analysis tools. Using your passive tap, your network analysis tools can be quickly and effectively deployed to the point of failure. Typically the passive tap is installed on a critical E3, DS3/T3, or STS-1 link in the network where monitoring and analysis capabilities are important.

DS3/E3-PT features and benefits:

- Optimized E3, DS3/T3, and STS-1 compatible
- Full duplex monitoring
- Non-intrusive passive monitoring device
- Fully isolate Tx and Rx circuitry
- Rack mountable small form factor
- Standard BNC coaxial connectors

## 3 DS3/E3-PT Specifications

Feature	Specification
Channel	One
Cable Type	75 Ohm Coaxial
Line Rate	Supports up to 51.84 Mbps <ul style="list-style-type: none"> <li>• E3 — 34.368 Mbps</li> <li>• DS3/T3 — 44.736 Mbps</li> <li>• STS-1 — 51.84 Mbps</li> </ul>
Line Coding	Supports all E3, DS3/T3, and STS-1 Line Coding
Port Connectivity	A TAP and B TAP A IN and A OUT B IN and B OUT
In-Band Insertion Loss	-3.2 dBm, typical, from input to either output
Distance Limitation	400 Feet maximum length from either network input cable start-point to either output cable end-point
Power Requirements	None
Operating Temperature	0° to 40° C (32° to 104° F)
Storage Temperature	-30° to 65° C (-22° to 149° F)
Humidity	Less than 95° C non-condensing
Dimensions	1.10" (H) x 5.75" (W) x 5.75" (D) (includes rack mount bracket) 28 mm (H) x 146 mm (W) x 146 mm (D)
Weight	Unit - 12 ounces; Shipping - 1¼ pounds

## 4 Installing a DS3/E3-PT in an Equipment Rack

Prior to putting the DS3/E3-PT in a standard 19-inch rack you may want to contact your DS3/E3-PT representative to discuss an optional rack panel or ...



DS3/E3-PT device with thumbscrew bracket to mount in RMC-3 panel



Three devices shown mounted in optional rack panel

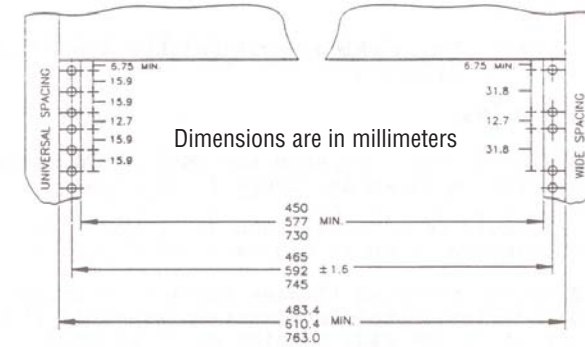
optional single mount rack bracket.



Single device shown with rack mount bracket

In any case, a couple of equipment considerations should be noted:

- Do you have universal or wide spacing flanges?
- The DS3/E3-PT occupies 1 unit of space when properly fastened in a universal flange. The DS3/E3-PT occupies part of 2 adjoining units of space when improperly fastened in a wide spacing hole of a universal or wide-space flange.



ANSI/EIA-310-D-1992 Mounting Flange Dimensional Requirements

## 5 Functional Operation

Refer to **FIGURE 1** for a diagram of the functional operation of the DS3/E3-PT.

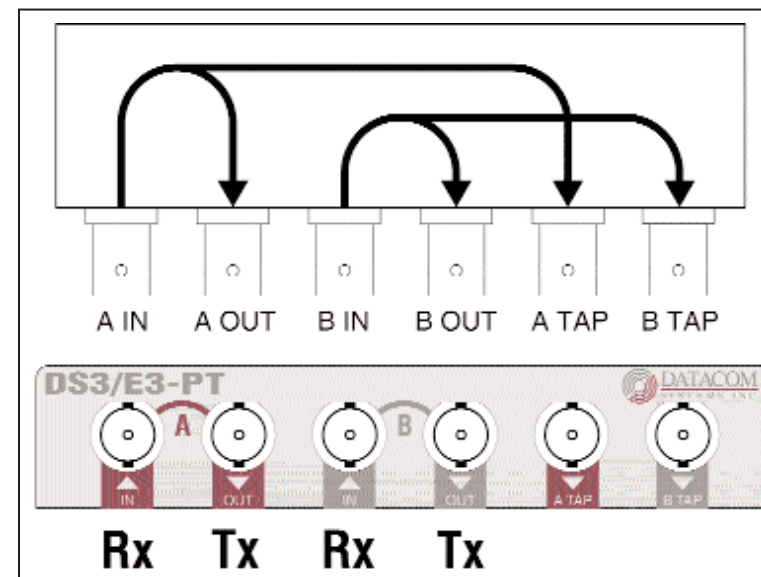


FIGURE 1 — DS3/E3-PT Functional Diagram

## 6 Connecting a DS3/E3-PT to the the Network

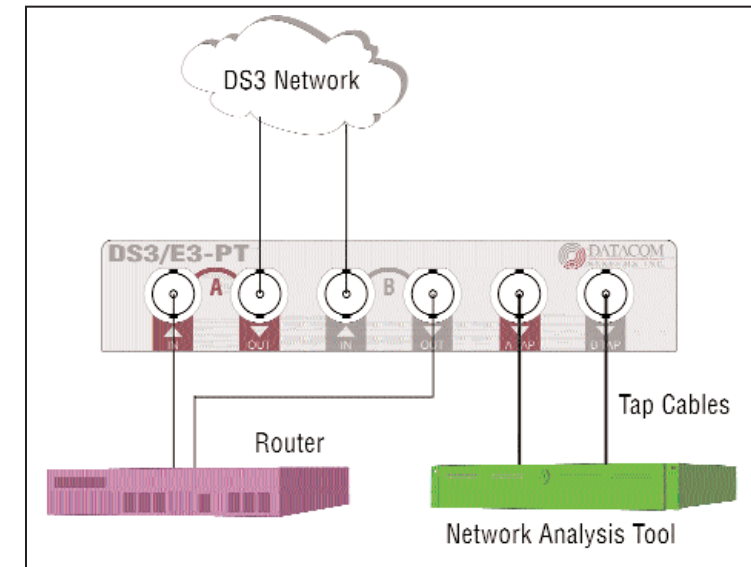


FIGURE 2 — DS3/E3-PT Simple Connectivity Diagram

To connect the DS3/E3-PT into the network, refer to **FIGURE 2** and follow these steps:

**IMPORTANT: The maximum length of 400 feet must not be exceeded between end-points.**

1. Connect one of the network device E3, DS3/T3, or STS-1 75 Ohm coaxial cables to the DS3/E3-PT BNC port **B IN** connector.
2. Connect the other E3, DS3/T3, or STS-1 75 Ohm coaxial cable of the step 1 device to the DS3/E3-PT BNC port **A OUT** connector.
3. Connect the other network device E3, DS3/T3, or STS-1 75 Ohm coaxial cable to the DS3/E3-PT BNC port **A IN** connector.
4. Connect the other E3, DS3/T3, or STS-1 75 Ohm coaxial cable of the step 3 device to the DS3/E3-PT BNC port **B OUT** connector.
5. Connect one Tap Cable from the DS3/E3-PT BNC port **A TAP** connector to one port of the Network Analysis Tool interface card.
6. Connect the other Tap Cable from the DS3/E3-PT BNC port **B TAP** connector to the other port of the Network Analysis Tool interface card.