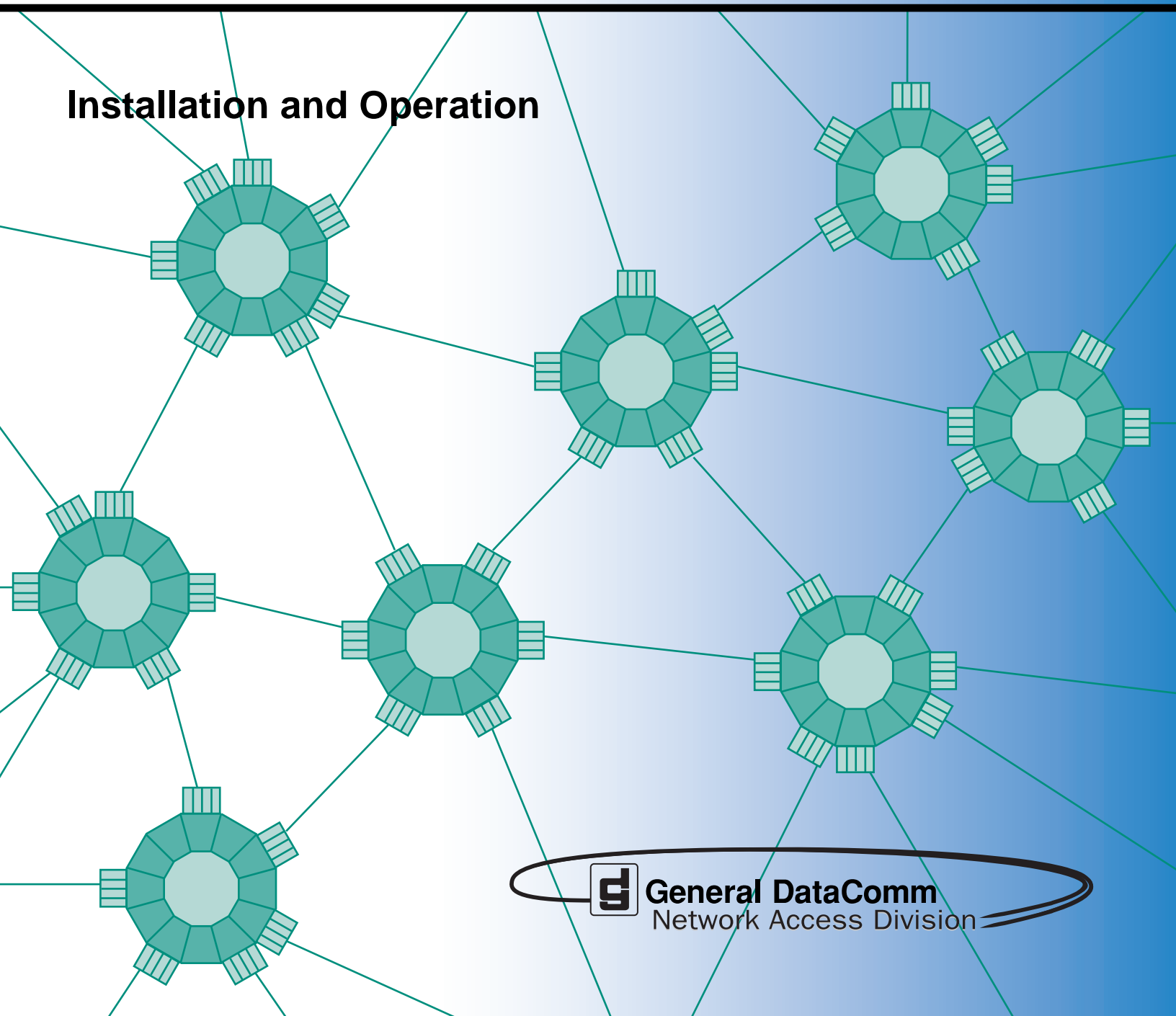


Remote Access 1000 Enclosure

Installation and Operation



® Remote Access 1000 Enclosure

Installation and Operation

Copyright

©2000 General DataComm, Inc. ALL RIGHTS RESERVED.

This publication and the software it describes contain proprietary and confidential information. No part of this document may be copied, photocopied, reproduced, translated or reduced to any electronic or machine-readable format without prior written permission of General DataComm, Inc. The information in this document is subject to change without notice. General DataComm assumes no responsibility for any damages arising from the use of this document, including but not limited to, lost revenue, lost data, claims by third parties, or other damages.

If you have comments or suggestions concerning this manual, please contact:

General DataComm, Inc.
Network Access Division
Technical Publications Department
Park Road Extension
Middlebury, Connecticut USA 06762-1299

Telephone: 1 203 758 1811

Trademarks

All brand or product names are trademarks or registered trademarks of their respective companies or organizations.

Documentation

Revision History

Issue Number	Date	Description of Change
1	Oct./00	First Issue

Related Publications

A listing of related user manuals is provided below. In addition to the hardware and software manuals, always read the software System Release Notes supplied with your product.

Publication Name	Publication Number*
SpectraComm 800T3 DSU Installation and Operation	076R160-REV
SpectraComm 521A Installation and Operation	076R152-REV
SpectraComm 553 Installation and Operation	076R155-REV
SpectraComm 500A Installation and Operation	048R302-REV
SpectraComm 202 Installation and Operation	076R155-REV
SpectraComm Dual V.34 Installation and Operation	060R122-REV
SpectraComm V.F 28.8/33.6 Installation and Operation	060R112-REV
UAS 701-T2 Installation and Operation	073R124-REV
UAS 711-D2 Installation and Operation	073R121-REV

* For publications numbers, **REV** is the hardware manual revision (for example, -000, -001, etc.) **VREF** (if listed) is the software revision (for example, -V120 would read, Version 1.2) and corresponds to the most current revision.

Preface

Scope

This manual describes how to install and operate the Remote Access 1000 Enclosure. The information contained in this manual has been carefully checked and is believed to be entirely reliable. However, as General DataComm improves the reliability, function, and design of their products, it is possible that information may not be current. Contact General DataComm if you require updated information for this or other General DataComm products.

General DataComm, Inc.
Network Access Division
Technical Publications Department
Park Road Extension
Middlebury, Connecticut, USA 06762-1299
Tel: 1 203 758 1811 Toll Free: 1 800 794 8246

Manual Organization

The online (web-based) manual uses active areas which allow you to navigate through portions of the manual by clicking on any *blue* text.

This manual is divided into the following chapters:

[*Chapter 1, Introduction and Specifications*](#)

[*Chapter 2, Installation and Setup*](#)

Safety Information

This manual should be read in its entirety and all procedures completely understood before installing or operating the unit. The notes that appear throughout this manual must be read prior to any installation or operating procedure. Examples of notes used in this manual are shown below.

Note *Indicates a note. It is something you should be particularly aware of; something not readily apparent. A note is typically used as a suggestion.*

Important *Indicates an emphasized note. It is something you should be particularly aware of; something not readily apparent. Important is typically used to prevent equipment damage.*

The CAUTION, WARNING, and DANGER statements that appear throughout this manual are intended to provide critical information for the safety of both the service engineer and operator. These statements also enhance equipment reliability. The following definitions and symbols for CAUTION, WARNING, and DANGER as they are used comply with ANSI Z535.2, American National Standard for Environmental and Facility Safety Signs, and ANSI Z535.4, Product Safety Signs and Labels, issued by the American National Standards Institute.



CAUTION *Indicates a potentially hazardous situation which, if not avoided, may result in minor to moderate injury. It may also be used to alert against unsafe practices.*



WARNING *indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.*



DANGER *indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.*

Safety Guidelines

Always use the following guidelines when unsafe conditions exist or when potentially hazardous voltages are present:

- Always use caution and common sense.
- Repairs must be performed by qualified service personnel only.
- To reduce the risk of electrical shock, do not operate equipment with the cover removed.
- Never install telephone jacks in a wet location unless the jack is designed for that location.
- Never touch uninsulated telephone wires or terminals unless the telephone line is disconnected at the network interface.
- Never install telephone wiring during an electrical storm.

Antistatic Precautions

Electrostatic discharge (ESD) results from the buildup of static electricity and can cause computer components to fail. Electrostatic discharge occurs when a person whose body contains a static buildup touches a computer component. This product may contain static-sensitive devices that are easily damaged. Proper handling, grounding and precautionary ESD measures are essential when installing parts or cards. Keep parts and cards in antistatic packaging when not in use or during transport. If possible, use antistatic floorpads and workbench pads.

When handling components, always use an antistatic wrist strap connected to a grounded equipment frame or chassis. *If a wrist strap is not available, periodically touch an unpainted metal surface on the equipment.* Never use a conductive tool, like a screwdriver or a paper clip, to set switches.

FCC and Canada Compliance

Refer to the individual product card manuals for Compliance information.

Part 15 Compliance

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

Electromagnetic Compatibility

This Class A digital apparatus complies with Canadian ICES-003.

La Compatibilité d'Électro-magnétique

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Safety

UL 1950 - 3rd Edition

Service Support and Training

VITAL Network Services, a General DataComm company, is committed to providing the service support and training needed to install, manage, and maintain your GDC equipment. VITAL Network Services provides hands-on training courses through **VITAL Network Services Global Technology Training Services**. Courses range from basic data communications, modems and multiplexers, to complex network and ATM systems. Training courses are available at our centers in the US, UK, France, Singapore and Mexico, as well as at a customer's site.

For more information on VITAL Network Services or for technical support assistance, contact VITAL Network Services at:

VITAL Network Services World Headquarters

6 Rubber Avenue
 Naugatuck, Connecticut 06770 USA

<http://www.vitalnetsvc.com>

Telephones:	Faxes:
1 800 243 1030	1 203 723 5012
1 888 248 4825	1 203 729 7611
1 203 729 2461	

VITAL Network Services Regional Sales and Service Offices:	
<p>North American Region Office 6 Rubber Avenue Naugatuck, Connecticut 06770 USA Telephones: 1 800 243 1030 1 888 248 4825 1 203 729 2461 1 800 361 2552 (French Canadian) Training: 1 203 729 2461 Faxes: 1 203 723 5012 1 203 729 7611</p>	<p>Central America, Latin America VITAL Network Services Periferico Sur 4225, Desp. 306 C.P. 14210, Mexico D.F., Mexico Telephone: 52 5 645 2238 Training: 52 5 645 2238 Fax: 52 5 645 5976</p>
<p>Europe, Middle East, Africa VITAL Network Services Molly Millars Close Molly Millars Lane Wokingham, Berkshire RG41 2QF UK Telephone: 44 1189 657200 Training: 44 1189 657240 Fax: 44 1189 657279</p>	<p>Asia Pacific VITAL Network Services 501 Orchard Road 05-05 Wheelock Place, Singapore 238880 Telephone: 65 735 2123 Training: 65 735 2123 Fax: 65 735 6889</p>

Table of Contents

Service Support and Training	viii
<u>Chapter 1: Introduction and Specifications</u>	
Introduction to the Remote Access 1000 Enclosure	1-1
Features	1-2
RA1000 Rear Panel	1-2
Product Cards	1-3
Technical Specifications	1-3
Equipment List	1-4
<u>Chapter 2: Installation and Setup</u>	
Unpacking Instructions	2-1
Installation Procedures	2-1
Installing the Product Cards	2-1
Removing the Product Cards	2-2
Wall Mounting	2-2
AC Power Connection	2-3
Operation	2-4
Pin-Outs and Interface Connections	2-4
Network Connection (NTWK A and NTWK B)	2-4
Craft Port Connection (TERM)	2-5
Power Supply Connector	2-5
DTE Port (BUSINESS EQUIP.)	2-6

Table of Contents

Chapter 1: Introduction and Specifications

Introduction to the Remote Access 1000 Enclosure

The Remote Access (RA) 1000 (see [Figure 1-1](#)) is a stand-alone enclosure that may be installed horizontally, or mounted on a wall.

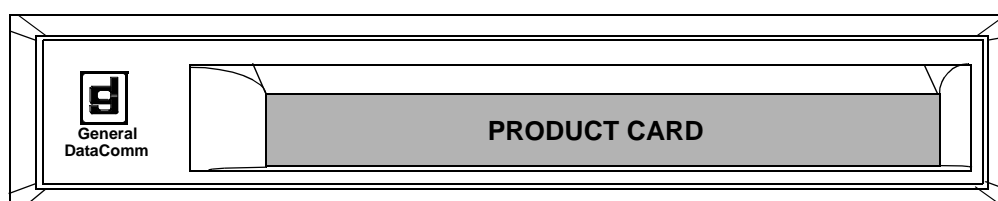


Figure 1-1 Remote Access (RA) 1000 Enclosure

The RA 1000 is constructed of molded plastic and formed sheet metal components measuring 2.0 inches (50.8 mm) high by 10.0 inches (254 mm) wide by 10.5 inches (266.7 mm) deep.

The enclosure is AC powered using a replaceable internal power supply module and a removable power cord. It accepts one General DataComm SpectraComm (SC) or Universal Access System (UAS) card listed below:

- SC 800T3
- SC 500A
- SC 521A
- SC 553
- SC Dual V.34
- SC V.34 DBU
- SC V.F 28.8/33.6
- SC 202
- UAS 701
- UAS 711

Refer to the individual product manuals listed in [Related Publications on page ii](#) for product-specific instructions and cabling.

Features

- Low profile, compact design for desktop use.
- sheet metal enclosure with plastic front bezel.
- horizontal, or wall-mounted.
- internal universal (100-250VAC) power supply.
- output power 11 watts maximum.
- internal harness card for power and signal interface to plug-in card, and I/O.
- Input/Outputs - three 8-pin modular jacks for two line interfaces and one craft port, and one DB25F (DTE) connector, supporting TIA/EIA-232F, V.35, RS-530 or X.21 as determined by the SpectraComm plug in product.
- single plug-in card installed with cover removed.

RA1000 Rear Panel

The RA 1000 rear panel includes three 8-pin modular jacks which provide two network (NTWK A and NTWK B) interfaces and a craft (TERM) port. The DTE interface (BUSINESS EQUIP.) is a DB25 connector. Internal power supply connects to the power source using IEC 320 inlet on the back panel. See [Figure 1-2](#) and refer to [Table 1-1](#) for a description of the rear panel connections.

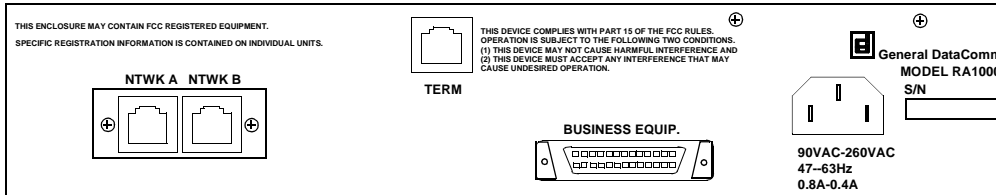


Figure 1-2 The Remote Access 1000 Rear Panel

Table 1-1 Description of Rear Panel Connections

Line Connections	
NTWK A and NTWK B (Network A and Network B)	Two 8-pin modular jacks compatible with all SpectraComm 2000 Enclosure and SpectraComm/UAS Shelf configurations. NTWK A - primary network access port or private line. NTWK B - secondary network access port or switched network.
TERM (Craft Port)	8-pin modular jack compatible with products that support a rear craft port; for example, the SpectraComm 2000 Enclosure.
Digital Interface	
BUSINESS EQUIP.	Business Equipment DTE port DB25 female connector. Refer to specific SpectraComm product card manual for DTE and network port operation instructions.
Note: When products are installed in the RA1000 and have a craft port, the VT100 screen may report that they are in a SC2000 shelf. If the RA1000 is a remote off of a TEAM-managed product, TEAM software may report the RA1000 as a SC2000 with redundant power supplies.	

Product Cards

A variety of product cards are available for this enclosure (Refer to [Table 1-3](#).) The SpectraComm/UAS product family uses a standard size printed circuit card and front panel format, and has standardized edge connectors that carry the signals required for business equipment interface, network connections, and power. The product cards are operated independently of each other and they are installed and removed easily from the enclosure with the top cover removed.

Technical Specifications

[Table 1-2](#) supplies the physical, operational, and environmental specifications of the unit.

Table 1-2 Technical Characteristics

Item	Characteristic
Physical	
Height	2.0 inches (50.8 mm)
Width	10.0 inches (254 mm)
Depth	10.5 inches (266.7 mm)
Weight (without product card)	4 lbs. 10.4oz. (2.1kg)
Environmental	
Operating Temperature	32° to 104°F (0° to 40°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)
Relative Humidity	5% to 90% without condensation
Altitude: Operating	0 ft. to 10,000 ft. (0 m to 3,047 m). Derate by 1°C/1000 ft. above sea level.
Altitude: Non-operating	0 ft. to 40,000 ft. (0 m to 12,191 m)
Input Voltage/Frequency	
Input	90-260 Vac
Frequency	47-63Hz.
Output Voltage/Current	
+5 volts	1.0A max.
+12 volts	0.25A max.
-12 volts	0.25A max.

Equipment List

The Equipment List for the RA 1000 Enclosure are found in [Table 1-3](#).

Table 1-3 Equipment List

Description	GDC Part No.	
Remote Access 1000 Enclosure 115Vac	010B236-001 010B236-005	- Includes: manual and power cord
Power Supply	750-017-010	
Power Cord	830-024-003	
Products available in RA1000 enclosure		Cables/Adapters
SC 500A	048A050-115	S-078H010-010 - Cable, CAT patch 568B S/T 209-036-025 - Adapter, DB25M/34pos V.35 shielded
SC 500A/DRA	048A054-115	S-078H010-010 - Cable, CAT patch 568B S/T
SC 500A/530	048A054-125	S-078H010-010 - Cable, CAT patch 568B S/T
SC 521A	076A018-015	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 209-036-025 - Adapter, DB25M/34pos V.35 shielded 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 521A/DRA	076A018-135	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 521A/530	076A018-115	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 553	076A016-005	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 209-036-025 - Adapter, DB25M/34pos V.35 shielded 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 553/Cascade	076A016-105	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 209-036-025 - Adapter, DB25M/34pos V.35 shielded 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 553/530	076A016-115	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 553/530/Cascade	076A016-125	S-078H010-010 - Cable, CAT patch 568B S/T 830-128-807 - Cable, 8/8 plug RJ/NOR UF 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC 202	053A006-005	830-028-814 - Cable, 8plug/8plug UF
SC Dual V.34	060A027-105	830-027-414 - Cable, 6plug/6plug UF (2)
SC V.34 DBU	060A012-415	830-027-414 - Cable, 6plug/6plug UF
SC 800T3	076A015-000	026H004-010 - Cable, DS3 75 ohm coax W/BNC (2) 830-128-807 - Cable, 8/8 plug RJ/NOR UF 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45
SC V.F 28.8/33.6 ADR	060A012-005	830-027-414 - Cable, 6plug/6plug UF
SC V.F 28.8/33.6 Dial	060A012-015	830-027-414 - Cable, 6plug/6plug UF 830-028-814 - Cable, 8plug/8plug UF

Table 1-3 Equipment List (Continued)

UAS 701-T2	073A300-005	830-028-814 - Cable, 8plug/8plug UF 830-128-807 - Cable - 8/8 plug RJ/NOR UF 029H211-001 - Adapter - IBM PC-RS561 DB9F-RJ45
UAS 711-D2	073A215-005	830-028-814 - Cable, 8plug/8plug UF 830-128-807 - Cable, 8/8 plug RJ/NOR UF 029H211-001 - Adapter, IBM PC-RS561 DB9F-RJ45 209-036-025 - Adapter, DB25M/34pos V.35F shielded
Note: The above RA 1000's are shipped with a power cord, the product associated network interface cable(s), adapter(s) - (when applicable), product manual and the RA1000 manual.		

Chapter 2: Installation and Setup

Overview

The Remote Access 1000 Enclosure is pre-assembled, tested, and ready for use. This chapter provides procedures for installing the unit, power connections, the product cards, and finally, making system connections. If this is your first installation, you should be familiar with [Chapter 1, Introduction and Specifications](#), for a better understanding of the features and use of the unit in your network.

Unpacking Instructions

The unit components are shipped in shock-absorbent packing within a corrugated box. Remove each component from the box and perform a thorough visual inspection.

If damage has occurred to any component, contact the shipper immediately. All damaged components must be retained until an inspection by the shipper has been completed. If it is necessary to re-package and return the unit, use the original packing materials and box.

Installation Procedures

This section describes the installation of the RA 1000 Enclosure and its standard equipment. It does not describe the configuration or other details of specific plug-in product cards for the SpectraComm or UAS family products that it houses; for that information, refer to [Related Publications on page ii](#).

- All external devices are connected to the RA 1000 through standard connectors which are located on the back panel of the enclosure. For connector pin assignments, refer to [Table 2-1](#) through [Table 2-4](#) or the product manual for the card installed.
- Place the unit in a ventilated area where the ambient temperature does not exceed 104°F (40°C).
- Do not install the unit directly above equipment that generates a large amount of heat (such as power supplies).

Installing the Product Cards

See [Figure 2-1](#)

1. Check that all hard options on the product cards have been selected as required. Refer to the applicable manual for the product card being installed.
2. Line up the product card with the front opening in the base, component side up. Gently align the product card into the connectors located at the inside rear of the enclosure and push the card into the connectors.
3. Fasten card to enclosure base standoffs with two screws at the front of the card.
4. Attach top cover using two screws at each side of the cover.

Removing the Product Cards

See [Figure 2-1](#)

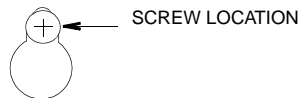
1. Disconnect power.
2. Remove four screws (two at each side of cover) holding the cover to the base and remove the cover.
3. Remove the two hold-down screws at the front of the product card, and gently slide out the card from the connectors and through the opening in the base.

Wall Mounting

See [Figure 2-1](#)

You may wall mount the RA 1000 Enclosure by referring to the following instructions:

1. Disconnect power, and remove all cables if necessary.
2. Remove the rubber feet.
3. Remove top cover exposing the keyed wall-mounting hole tabs located at one end of the RA 1000 base.
4. Knock out the tabs and discard. This exposes the keyhole slots for the wallmount screw head.
5. Place the unit at the desired position on the wall with the front panel facing to the right - **Tip: Use a level at the top of the unit** - then mark the keyed slots for the securing screws.



6. Remove the unit from the wall after marking the screw locations.
7. If you install the screws in drywall, use anchors to secure the screws.

Note *If the screws are not properly anchored, the weight of the cables could pull the unit from the wall!*

8. Install two (2) screws leaving a 1/8" gap between the wall and the bottom of the screw head.
9. Place the enclosure base over the screws and slide it down to the end of the keyhole slot.
10. Tighten the screws.
11. Replace the cover and fasten it to the base with four (4) screws.
12. Install the power cord and cables.

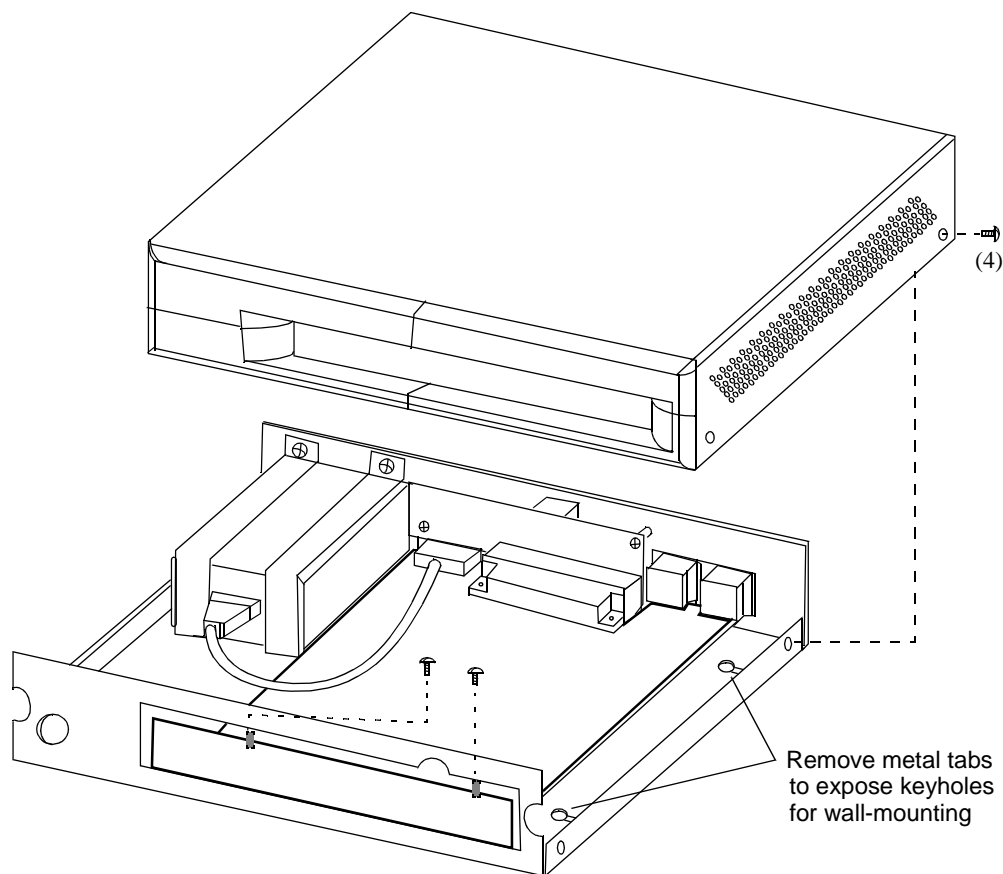


Figure 2-1 Remote Access 1000 Enclosure

AC Power Connection

Before making connections, determine whether the unit can be powered from the same AC circuit as the Business Equipment it will be communicating with. Having the unit and the Business Equipment on the same AC circuit prevents large circulating currents caused by differences in ground potential.

Note *If you cannot determine whether both devices are on the same circuit, verify that the potential difference between the grounding circuits of the respective power outlets is no more than 0.25V rms.*

To connect the unit to power, perform the following steps:

1. Install desired product card. Some SpectraComm products must be specifically hard optioned before you install them in the RA 1000 Enclosure. Optioning information is covered in the latest issues of the product manuals.
2. Attach the power cord (P/N 830-024-003) to the rear panel IEC connector and to a wall receptacle that supplies the required AC power.
3. Verify that the product card front panel ON LED illuminates to indicate the RA 1000 is supplying power to the card.

- Follow the pre-operational check instructions included in the product card’s manual.

Operation

The operation of the RA 1000 Enclosure is limited to the operating procedures of the individual SpectraComm/UAS plug-in product cards installed in the enclosure. For information concerning operation of these product cards, refer to the appropriate manuals for the products installed.


Pin-Outs and Interface Connections

[Table 2-1](#) through [Table 2-4](#) identify and describe the Network, Craft port, power supply module connector, and the DTE business connector. Other connector pin-outs are described in the associated product manuals.

Network Connection (NTWK A and NTWK B)

The Network port interface is an 8-pin modular jack which supports 2 or 4-wire connectivity. The active pins will vary among applications as detailed in [Table 2-1](#).

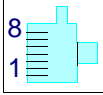
Table 2-1 Network Interface Assignments by Product Type

Pin No.	SN Modem (Dual)	PL Modem	T1 DS1	T1/DSX-1 Cascade and Station Clock	DDS	HDSL
Private Line Network Connections - NETWORK A Connector						
8	PC	R1			R1	
7	PR	T1			T1	
6	MIC	TEK6				
5	T		T			T
4	R		R			R
3	MI	TEK5				
2		T	T1		T	T1
1		R	R1		R	R1
Switched Network Connections - NETWORK B Connector						
8	PC					
7	PR					
6	MIC			STB		
5	T			T1		HDSL1-T
4	R			R1		HDSL1-R
3	MI			STA		
2				T		HDSL2-T
1				R		HDSL2-R
Note: T-R is 4W Transmit (toward network) or 2W, T1-R1 is a 4W Receive (from network).						
						

Craft Port Connection (TERM)

[Table 2-2](#) displays the Craft port pin-outs.

Table 2-2 Craft Port Pin-Outs

P/N	Function
1	
2	
3	
4	SIG GND
5	TXD (from external terminal)
6	RXD (to external terminal)
7	
8	
	

RJ48 C/X Jack

Power Supply Connector

[Table 2-3](#) displays the power supply connector that may be used to test the output of the internal power supply.

Table 2-3

Pin No.	Description
1	Ground
2	Common
3	+5 Vdc
4	-12 Vdc
5	KEY
6	+12 Vdc

DTE Port (BUSINESS EQUIP.)

[Table 2-4](#) display the DTE interface signals for the business equipment connectors.

Table 2-4 Business Equipment Interface TIA/EIA-232-F, ITU-T V.24)

Circuit					
Pin	232-F	V.24	Name	Function	Description
2	BA	103	SD	Transmitted data	Transfers data signals from DTE for modulation and transmission over communications line.
3	BB	104	RD	Received data	Transfers data signals to DTE that were received over communications line and demodulated by DCE.
4	CA	105	RS	Request to send	Indicates to DCE that DTE is prepared to transmit.
5	CB	106	CS	Clear to send	Indicates to DTE that DCE is prepared to transmit.
6	CC	107	DSR	Data set ready	Indicates to DTE that DCE is prepared for data communications.
7	AB	102	SIG GND	Signal ground	Establishes a common ground reference for all interface circuits except protective ground.
8	CF	109	CO	Received line signal detector	Indicates to DTE that DCE is receiving data.
9			+12 V	+12 volts	+12 V supply
10			-12 V	-12 volts	-12 V supply
15	DB	114	SC	DCE transmitter signal element timing	Transfers transmitter signal timing information from DCE to DTE.
17	DD	115	RC	Receiver signal element timing	Transfers receiver signal timing information from DCE to DTE.
18	LL		ALE	Analog Loopback enable	Transfers signal from DTE to control Analog Loopback test.
20	CD	108.2	TR	Data terminal ready	Indicates to DCE that DTE is prepared for data communications.
21	RL		RLE	Remote Digital Loopback enable	Transfers signal from DTE to control Remote Digital Loopback test mode.
24	DA	113	TC	DTE transmitter signal element timing	Transfers transmitter signal timing information from DTE to DCE (external clock).
25	TM		TMI	Test mode indicator	Indicates to DTE that DCE is in a test mode.

Index

A	Product Cards 1-3
AC Power Connection 2-3	R
Antistatic Precautions vii	RA1000 Rear Panel 1-2
C	Removing the Product Cards 2-2
Craft 2-5	S
Craft Port Connection 2-5	Safety Guidelines vi
Craft Port Connection (TERM) 2-5	Safety Information vi
D	Scope v
DTE Port (BUSINESS EQUIP.) 2-6	Service Support and Training viii
E	T
Electromagnetic Compatibility vii	Technical Specifications 1-3
Equipment List 1-4	The Remote Access 1000 Enclosure Unit 1-2
F	Typical Application 1-3
Features 1-2	U
I	Unpacking Instructions 2-1
Installation Procedures 2-1	W
Installing the Product Cards 2-1	Wall Mounting 2-2
Introduction to the Remote Access 1000 Enclosure 1-1	
M	
Manual Organization v	
N	
Network Connection (NTWK A and NTWK B) 2-4	
O	
Operation 2-4	
Overview 2-1	
P	
Part 15 Compliance vii	
Power Supply Connector 2-5	

