



READ ME FIRST!!

4000XA

MULTIPLE PROTOCOL

“ALL IN ONE”

INTEGRATED ACCESS DEVICE

PRODUCT / RELEASE NOTES

RELEASE 13.1

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Important Safety Instructions



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

When installing, operating, or maintaining this equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read and understand all instructions.
- Follow all warnings and instructions marked on this product.
- For information on proper mounting instructions, consult the User's Manual provided with this product.
- The telecommunications interface should not leave the building premises unless connected to telecommunication devices providing primary and secondary protection.
- This product should only be operated from the type of power source indicated in the User's Manual.
- This unit is intended to be powered from either –48 V DC or AC voltage sources. See User's Manual before connecting to the power source.
- The –48 V DC input terminals are only provided for installations in Restricted Access Areas locations.
- Do not use this product near water, for example, in a wet basement.
- Never touch uninsulated wiring or terminals carrying direct current or leave this wiring exposed. Protect and tape wiring and terminals to avoid risk of fire, electric shock, and injury to service personnel.
- To reduce the risk of electrical shock, do not disassemble this product. Service should be performed by trained personnel only. Opening or removing covers and/or circuit boards may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the unit is subsequently used.
- For a unit intended to be powered from –48 V DC voltage sources, read and understand the following:
 - This equipment must be provided with a readily accessible disconnect device as part of the building installation.
 - Ensure that there is no exposed wire when the input power cables are connected to the unit.
 - Installation must include an independent frame ground drop to building ground. Refer to User's Manual.



This symbol is marked on the 4180, adjacent to the ground (earth) area for the connection of the ground (earth) conductor.

- This Equipment is to be Installed Only in Restricted Access Areas on Business and Customer Premises Applications in Accordance with Articles 110-16, 110-17, and 110-18 of the National Electrical Code, ANSI/NFPA No. 70. Other Installations Exempt from the Enforcement of the National Electrical Code May Be Engineered According to the Accepted Practices of the Local Telecommunications Utility.
- For a unit equipped with an AC Wall Plug-In Unit, read and understand the following:
 - Use only the K'TRON, Model KA-52A Wall Plug-In Unit shipped with this product.
 - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
 - Do not staple or otherwise attach the power supply cord to the building surfaces.
 - Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
 - The socket outlet shall be installed near the equipment and shall be readily accessible.
 - The Wall Plug-In unit may be equipped with a three-wire grounding type plug, a plug having a third (grounding) pin. This plug is intended to fit only into a grounding type power outlet. Do not defeat the safety purpose of the grounding type plug.
 - Do not allow anything to rest on the power cord. Do not locate this product where the cord may be abused by persons walking on it.
 - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a) When the power supply cord or plug is damaged or frayed.
 - b) If liquid has been spilled into the product.
 - c) If the product has been exposed to rain or water.
 - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by qualified technician to restore the product to normal operation.
 - e) If the product has been dropped or the cabinet has been damaged.
 - f) If the product exhibits a distinct change in performance.

Save These Instructions

IMPORTANT !!

USER DOCUMENTATION IS AVAILABLE AT OUR WEB SITE.

Documentation:	http://www.trdcusa.com
Sales:	sales@trdcusa.com

The **4000XA** is factory configured for 48VDC usage. Operation with an AC power adapter to 5VDC requires a different jumper setting on the **4000XA** system board. Refer to the latest **4000XA** User's Manual at <http://www.trdcusa.com> for instructions on changing this factory setting.

1 INTRODUCTION

These release notes highlight the product features, modifications, known caveats and any special considerations for the **4000XA** product. For detailed information on this product, reference the **4000XA** User's Manual.

2 PRODUCT FEATURES

The **4000XA** is a Multiple Protocol Inter-Networking device with enhanced vertical services. It has 16 synchronous, or asynchronous ports that support rates up to 115.2 kbps. Popular protocols such as asynchronous, various Bi-Synchronous variants, HDLC, SDLC, X.25, and E2A are all supported interchangeably on a per port basis. In addition, vertical services for X.25 typically found on Embedded Network Processors have been incorporated. This allows the **4000XA** to directly mediate X.25 to individual circuits over TCP/IP connections.

The **4000XA** supports a Time Slot Router (TSR) on an RJ48C physical interface. The TSR allows transport of proprietary protocols on DS0s, or aggregated on a multiplexed link. T1, E1, and J1 formats are all supported. Each time slot may be uniquely routed on the TCP/IP infrastructure. Individual CODECs may be installed for load optimization. HDLC time slots may be terminated for use by embedded network processor applications, or for routing to any endpoint on the TCP/IP network. The **4000XA** can be used as a min "DACS" or as a Channel Bank replacement with the TSR feature.

Consult the **4000XA** User's manual for a complete enumeration of the features..

3 RELEASE CHANGES

3.1 RELEASE 13.1 ERRATA

- Support for TACACS+ RADIUS servers is added. Two servers are supported, a primary and a secondary. Non-standard TCP ports are fully supported. Each server may be individually enabled. The syntax is as follows:

**Syntax: tac < PRI | SEC > [ipaddr=<IP Address>]
 [port=<TCP Port>]
 [key="Encryption Key" | NONE]
 [ENABLE]
 [DISABLE]**

- The BANNER page has been enhanced up to 24 lines of 80 characters each. Previously it was 10 lines. The syntax is changed as follows:

Syntax: banner [clear] [L#="Line # Message"]

3.2 RELEASE 12.2 ERRATA

- Each Virtual Circuit may have a comment field. The comment is up to 32 characters in length. It may contain spaces, and special characters. The comment may not contain an embedded double quote as this character is used for delimitation.

Syntax:

port x vc=a-b vcom="User Comment"

- Per Port comments are now allowed to have Upper and Lower case characters. This was an oversight found during the per-VC comment testing.
- The TCP implementation has been updated to avoid packet traffic after a connection teardown with some test equipment. This is a pre-emptive correction as the problem has never been seen in the connection teardown of a deployed device.
- The PVCSTLNK option to a X25PAD VC has been enhanced to switch the DCD lead as the BX.25 link layer is controlled. This yields a more effective simulation of a dynamic modem connection. It is required by some legacy devices. This operation is only valid for physical DCE configurations.
- The DBRESET command was not deleting the X25PAD configuration, the TSR configuration, the DNS PDD configuration, and the Banner configuration. All these have been corrected.
- Four forwarding groups were added to the PADFWD option for an X.25 VC. These are:
 - GRP1 --> Forwards on ESC, BEL, ENQ, NAK.
 - GRP2 --> Forwards on DEL, CAN, DC2
 - GRP3 --> Forwards on ETX, EOT
 - GRP4 --> Forwards on HT, LF, VT, FF.

- The PADFWD VC option allows multiple forwarding conditions to be applied. Setting a forwarding condition aggregates into the PADFWD option. In order to clear, the PADFWD, the forwarding condition of NONE is used (e.g. port 1 vc=1-7 padfwd=none).

3.3 RELEASE 11.2 ERRATA

- The **4000XA** has, as its initial offering, release 11.2. The 11.2 release encompasses the entire feature set of the 4180 release 11.2.
- The **4000XA** is not offered as a manufactured product. It is a feature conversion of an existing **4000** hardware to have the personality and feature set of a **4180**.
- Support has been added for the NORTEL XFER protocol when mediated by an VC configured as a PAD.
- The console timeout, previously defined in seconds with a granularity of one second, is now defined in terms of minutes with a granularity of one minute. This allows a timeout range of one to 255 minutes, or approximately 4 hours and 15 minutes.
- The conversion of a 4000 to a 4000XA is fully reversable should the unique features of the 4000 ever be needed in the future.

3.4 RELEASES PRIOR TO 11.2

Contact support@trdcusa.com with specific questions on releases older than 11.2.

4 INSTALLATION ADDENDUM

4.1 OBTAINING INFORMATION FROM TELECOMP R&D

Load modules for all the TeleComp R&D products are obtained by sending email to support@trdcusa.com. All other documentation, including release notes, user manuals, “white-papers”, etc. can be accessed on the TeleComp R&D web site and downloaded for your use.

To insure that the correct version of the binary load modules have been retrieved and has not been corrupted during the transmission process, the UNIX® **sum** command can be used.

On some hosts, the “-s” flag must be used with the **sum** command. On X86 linux hosts, the **-sysv** flag must be used with the **sum** command.

Key-in **sum** < name of load module file >.

The values returned must match the numbers shown below:

For example:

Key-in: **sum -sysv 4000XA.13.1**

Response: **4655 1622 4000XA.13.1**

4.2 INITIAL CONVERSION

When Converting a 4000 to a 4000XA, the following steps should be observed. There is no implied time limit between steps, but they need to be done in the order shown.

- The initial conversion of a 4000 to a 4000XA may be done with release 18.1 of the upgrade utility. Subsequent operations on the 4000XA require release 18.2, or later, of the software utilities. The setinfo / setreg utilities must each be release 1.2 or later.
- The 4000 must be release 26.x or later. This is necessary for the automatic database conversion to the 4000XA’s much different database schema. If the 4000 is operating with 25.x or older software, it must be upgraded to release 26.4 or later. If it is running an older 26.x; it is recommended that it be upgrade to at least 26.4.
- The 4000 must be registered using the getinfo / setreg procedure provided in the user manual. This is done after the upgrade step above. The registration will lock the database. It is **essential**, and **required**, that the database be locked during the conversion. Failure to do will make the unit unusable after the conversion and require a return of the unit to TeleComp R&D for corrective measures.
- The 4000XA load image is downloaded to the 4000 as if it were a 4000 load image, and rebooted. Upon reboot, the 4000 database is converted to the 4000XA format. An archive of the 4000 database is automatically preserved in the event the unit will ever be used as a 4000 again.

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- The 4000XA database must now be locked by registration using the getinfo / setreg procedure found in the user manual. The X.25 mediation feature packages will be added during registration.

Assistance for the conversion is available by telephone.

The unit may be operating during the entire conversion process. Given the steps above, there will be no need to re-configure any parameters on the 4000XA. Connections will drop during the reboot but will be re-established immediately.

4.3 DATABASE CONVERSIONS

When moving from one release or version to the next, the database is usually automatically converted. Therefore, **do not attempt** to perform a **backup** on an earlier release/version and then do a **reload** on the new release/version. The database structures may not be the same. For safety reasons, do a **backup** on the earlier release/version in case you need to revert back to this release/version. Then upgrade to the new release/version, and do a backup again which will now be the converted database for use with this release/version. Backups and restores should only be used with the same release/version, not across releases or versions.

4.4 SOFTWARE REGISTRATION

The **4000XA** must be registered when it is upgraded with new software. The **4000XA** will continue to operate without registration, but **user ports cannot be placed into service until registration is complete**. See the **4000XA** User's Manual for the registration procedure.

4.5 UTILITIES

The current version of the upgrade, backup, and reload utilities are 18.2 respectively. The getinfo, devrep, and setreg utilities have a current version of 1.2. All of the utilities are available by contacting support@trdcusa.com. Please note that the TCP port for the console is 1023.

4.6 POWER

The **4000XA** may be powered via -48VDC or 5VDC via an AC power adapter. Should a new unit not illuminate its power LED, review that the power options are properly configured. Consult the **4000XA** User's Manual for the location of the strap on the system board.

5 DOCUMENTATION

The current version of the **4000XA** User manual, and this release letter, may be downloaded from the support area of <http://www.trdcusa.com>. The **4000XA**, **4180**, **4280**, **4284**, and **9480** now share a common user manual.

6 HARDWARE WARRANTY

The warranty period for hardware shall be ninety (90) days from the date of shipment from TeleComp R&D or a designated manufacturer. Replacements and repairs are guaranteed for the longer of the remaining original warranty period or 30 days.

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7.5 LIMITED WARRANTY

Manufacturer warrants that (a) the SOFTWARE will perform substantially in accordance with the accompanying written materials for a period of ninety (90) days from the date of shipment from TeleComp R&D or a designated manufacturer. Software support is limited to the hours of 9 AM to 5 PM ET Monday through Friday excluding TeleComp R&D observed holidays. Other coverage and extended warranty may be purchased at additional cost. Any implied warranties on the SOFTWARE are limited to ninety (90) days. Some states/jurisdictions do not allow limitations on duration of an implied warranty, so the above limitation may not apply to you.

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9 AUTHOR

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