

Engineering Quality Bulletin

Quality Bulletin Number: 03-04

To: All Engineering Suppliers / Planning & Design Engineering
Representatives / Field Engineering / Engineering & Installation
Quality Auditors /AMC Representatives

Date: October 27, 2003
From: QWEST Engineering Quality Assurance

Subject: DATU-EXP Engineering Guidelines

Action Required:

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| YES: | <input checked="" type="checkbox"/> | NO: | <input type="checkbox"/> |
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Description of Bulletin:

In order to support the TechFOCUS Program and TechTAD Project the Harris DATU-EXP shelf is a critical piece of equipment requiring placement within the Central offices. This bulletin will attempt to provide Planning, Field and Design Engineering the engineering requirements needed for the placement of the DATU-EXP shelf within the Central Office.

Please forward this Engineering Quality Bulletin as needed within you respective organizations.

Acknowledgements to Elizabeth Hogan for her contribution to this Bulletin. Inquiries can be directed to her at (303) 707-7523.

If you have any questions please feel free to call.

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**DATU-EXP
ENGINEERING GUIDELINES
10-24-03**

Relay Rack & Physical Shelf Locating Requirements

1. DATU-EXP Shelf placement shall be within an existing or new Relay Rack Framework located in the DLC, Toll, or IOF equipment environment.
 - This equipment cannot be placed in Relay Rack Frameworks of technologies having preplanned growth space such as CO-LAN Bays, Power Bays, etc.
2. Physical dimensions and cabling requirements require the DATU-EXP Shelf be located in a standard 15' (5-5-5) Network type framework, 19" or 23" inch wide rack.
 - The DATU-EXP Shelf requires two 1 3/4" vertical rack mount spaces (3 1/2").
 - When a Standard 15' Network Framework is not available within the Central Office, the DATU-EXP shelf may be placed in a 12' framework with the appropriate guardrail extension to 15". **Minimum front and rear aisle spacing cannot be violated.** Toll equipment frames with heat dissipation up to 1200 watts can have a Minimum Front Aisle space of 2'6" and Minimum Rear Aisle space of 2'.
 - When neither of the above requirements can be met, the field engineer, planner, design engineer and AMC Common Systems engineers must be consulted to determine an appropriate alternative for placement of the equipment.
3. Towel Bar
 - DATU-EXP Shelf requires a Newton (NNIT) tie bar (Part #2205440131) across the bottom of the backplane, for cable management. The tie bar needs to clear the third DB9 connection on the right hand side of the backplane.
4. Heat Baffle

- DATU-EXP shelf is sensitive to heat. When engineering the placement of the shelf or shelves keep this in consideration. Do not place shelf in a relay rack with RC28D's or other high heat generating equipment unless you engineer adequate space above and below or provide an appropriate heat baffle below the shelf.

Power Requirements

DATU-EXP Shelf requires a single -48V battery and ground source fused at 5 AMPS. Power connection shall be made on TB2, PWR B terminal with 14 or 16 AWG Red & Black solid wire.

Grounding Requirements

DATU-EXP Shelf requires three separate ground terminations.

1. One 14 AWG solid green ground lead from TB2, PWR B SIG GRD terminal to Framework Ground.
2. One 14 AWG solid green ground lead from DATU-EXP chassis to Framework Ground.
 - The **installer shall remove** the Manufacture provided Fargo Chassis Ground connection. Grounding of the shelf chassis shall be accomplished by adding a 14 AWG Solid Green Ground lead to the Framework and connecting it to the DATU-EXP shelf chassis with the appropriate sized ring connector. The screw used to secure the Fargo Chassis Ground Connection shall be reused, with the addition of a Star Washer, to secure the ring connector to the shelf.
3. One 14 AWG solid green ground lead from TB4 Pin 6 to Framework Ground.
4. Refer to Standard Configuration Package C-RTA-DTAU-EXP / Power and Grounding Drawing of DATU-EXP Shelf:

COLAN Requirements

DATU-EXP Shelf requires a single 10 Base T Ethernet connection to the COLAN Bay located within the Central Office. This Cable shall not exceed 100 Meters or 320 Ft.

Distributing Frame Requirements

The initial DATU-EXP Shelf installed requires a new terminal block installed on the MDF or equivalent frame. This terminal block shall be designated (DATU-EXP) and will provide MDF termination for DATU-EXP shelves.

1. Each DATU-EXP Shelf requires six (6) terminal punchings.
 - Refer to Standard Configuration Package C-RTA-DTAU-EXP / Cabling / Block Layout and Labeling for block labeling and stenciling requirements.
2. Cabling from the DATU-EXP Shelf to the MDF is accomplished via a 6 Pair cable, USW-365-XXX, described in Standard Configuration Package C-RTA-DATU-24AWG-6PR-TWSTD. This cable is not to exceed the distance of 450'.

PGTC Requirements

1. The first DATU-EXP shelf cross connects to an existing PGTC (Pair Gain Test Controller) Trunk card through the termination provided to the distributing frame. Refer to Standard Configuration Package C-RTA-DTAU-EXP for DATU-EXP MDF Block to PGTC MDF Block Diagram.
2. When a second and/or third DATU-EXP is added an additional SM94C Trunk card needs to be ordered and placed within the PGTC shelf. Refer to Standard Configuration Package C-DLCCOT-PGTC-PLG-TRUNK or contact the Standard Configuration Author responsible for details.

DWP Package Requirements

The Design Engineer shall place the following Installer Note in the Narrative Section of the DWP Package under Grounding;

1. The **installer shall remove** the Manufacture provided Fargo Chassis Ground connection. Grounding of the shelf chassis shall be accomplished by adding a 14 AWG Solid Green Ground lead to the Framework and connecting it to the DATU-EXP shelf chassis with the appropriate sized ring connector. The screw used to secure the Fargo Chassis Ground Connection shall be reused, with the addition of a Star Washer, to secure the ring connector to the shelf.

The Design Engineer shall place the following Installer Note in the Narrative Section of the DWP Package under Power;

1. The **installer shall assure** that all stranded power wire connections to the DATU-EXP shelf are tinned per Tec Pub 77350 Chapter 7.1.3.