

# How To Configure the V.35 Data Port in the HSU Card

---

## Table Of Contents

- Scope
- Introduction
- Requirements
- Configuration Steps
  1. Setting the switch to V.35
  2. Connecting the V.35 cable to the HSU card
  3. Configuring the V.35 data port
  4. Testing the V.35 data port
- Troubleshooting

## Scope

This document pertains to IMACS 600, 800, and 900.

## Introduction

This document is a guide on how to configure V.35 in IMACS HSU card. The High Speed Data Unit (HSU) card allows you to connect high-speed data terminal equipment (DTE) or data communication equipment (DCE) at the bandwidth range from 56K to 1.544Mbps or 2.048Mbps.

There are two types of HSU cards, one with two DB25 ports, another with four DB25 ports. Each port supports either RS530 or V.35. This article will walk you through how to configure V.35 portion.

## Requirements

### Hardware:

- 2-port or 4-port HSU 530/35.
- A V.35 cable from either DB25 or DB26 to V.35. Detailed pinouts will be discussed later.

### Software:

- VT-100 terminal software (such as Windows HyperTerminal).

## Configuration Steps

### 1. Setting the switch to V.35

**Note:** To make the V.35 port work, first you need to set the switch (on the board) to V.35, then configure the data port via terminal.

- 1a. The 2-port HSU 530/V35 card has two slide switches that you must set for V.35. To change the card port for V.35 operation, reset its associated switch to the down position (marked V.35 on the board). See Diagram 1.

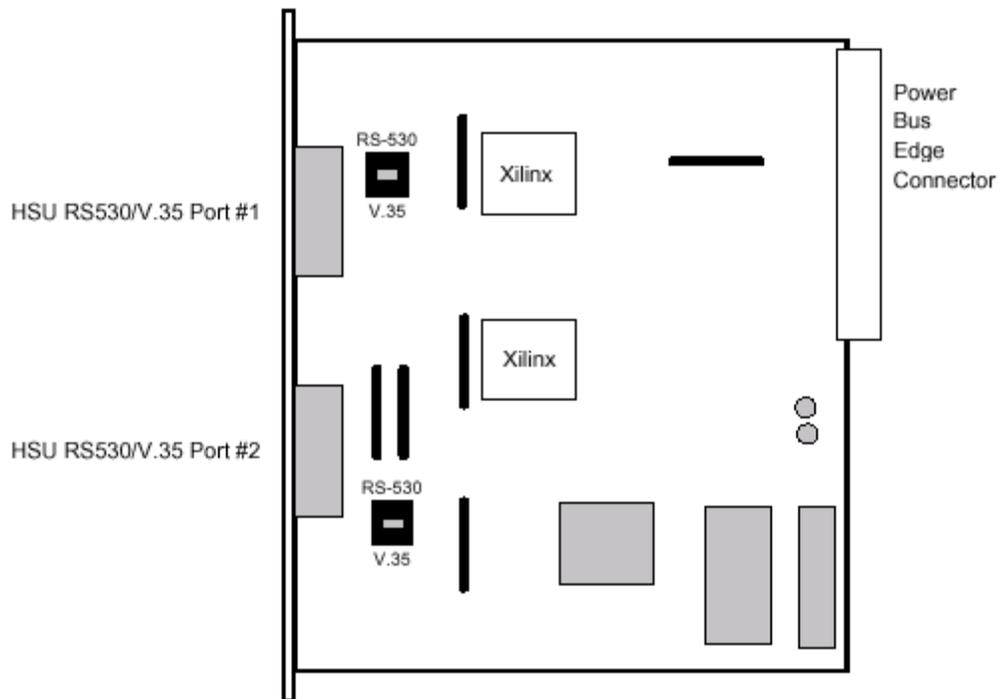


Diagram 1

- 1b.** The 4-port HSU 530/V35 card supports four RS530 or four V.35 data ports. The selection of RS530 or V.35 is made on a port-by-port basis using on-board switches. You must set the switch to the down position (marked V.35 on the board). See Diagram 2.

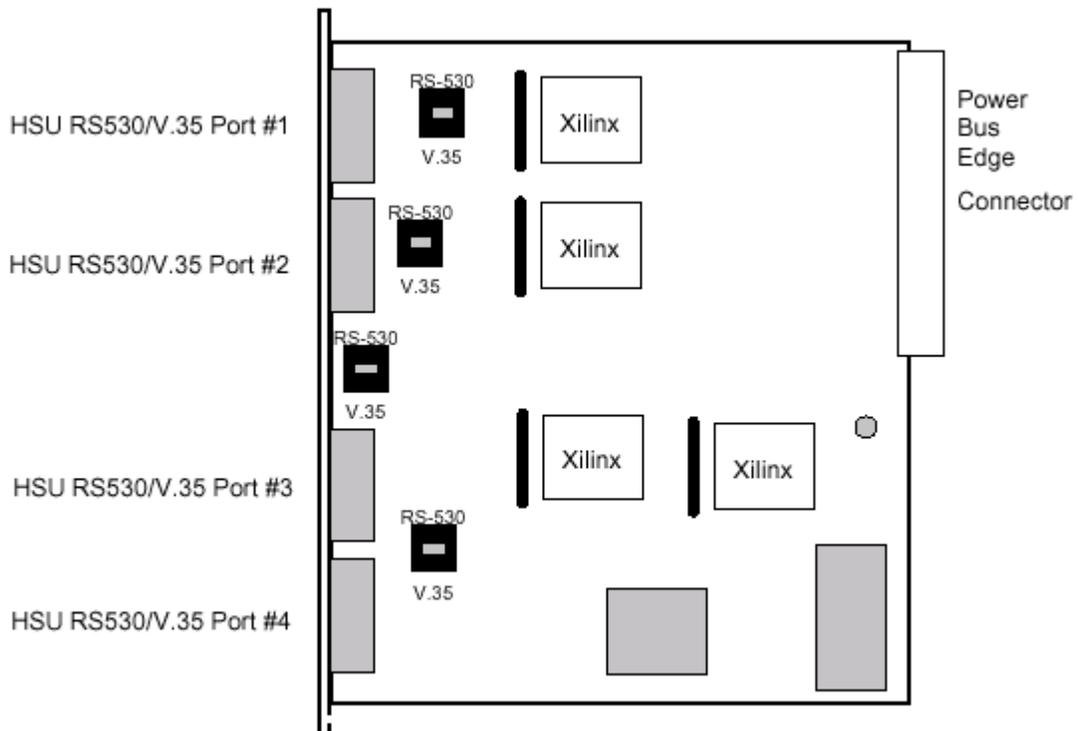


Diagram 2

## 2. Connecting the cable to V.35 port

- 2a. 2-port HSU card comes with two DB-25 jacks for external connections. Cable 1261F can be used for the port (from V.35 DTE to HSU card DCE).
- 2b. The 4-port HSU 530/V35 card has four DB26 female connectors. Cable 1263F can be used for the port. Check the manual for the detailed cable pinouts.

## 3. Configuring the V.35 Data Port

- 3a. From the IMACS main menu, move the cursor to the proper HSU card, hit **Enter**.
- 3b. Set STATE to **ACTV**.
- 3c. Set WAN/SERV to the proper source. For example, if the source is from WAN1-1, set WAN/SERV to **w1-1**.
- 3d. Set MODE to either DCE or DTE. By default, IMACS is DCE, remote device (such as a router) is DTE.
- 3e. Set TS (time slot). Hit **Enter** when cursor highlights the table. 24 time slots will appear on the bottom. Use space bar to select the channels you want to use. Hit **Enter** again when you finish.

```
unknown | P3/U3 HSU-530x2 Rev B3-0 Ser 01201 | 08-09-30 22:59
Version #:1.6
STATE          *1          2
STATE          actv          stdby
WAN/SRV        w1-1          w1-1
MODE           dce          dce
TS             table        table
RATE           56k          56k
Tx CLOCK       int          int
Tx CLOCK PLRTY norm        norm
DATA PLRTY     norm        norm
CTS            perm        perm
CTS DELAY      0           0
LOCAL LB       off         off
LB GEN MODE    dds         dds
LB GEN         off         off
LB DET         w/to        w/to
ISDN CONN      no          no

                1 1 1 1 1 1 1 1 1 2 2 2 2 2
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4
X X X X
Save | Undo | Refresh | Copy | Test | Dial | Perf | Main
```

- 3f. Set the RATE to either 56k or 64k. Normally it's 64k.

## 4. Testing the V.35 Data Port

**Note:** You can use either a loopback test or BERT test to test the V.35 data port. For a loopback test, just turn on LOCAL LB on the configuration menu. Below are the steps to begin a BERT test.

4a. From the HSU configuration screen, press **T** to Test window.

```
unknown | P3/U3 HSU-530x2 Rev B3-0 Ser 01201 | 08-09-30 23:14
      1      2
BERT    qrss  n/a
CTS     norm  norm
RLSD    norm  norm
DSR     norm  norm
SYNC    no    no
BE      0     *****
ES      0     *****
SES     0     *****
CSES    0     *****
OSS     11    *****
BER     0e-9   *****
ELAP    10     *****
RTS     off    *****
DTR     off    *****
LB ST   none   *****
Save | Undo | Refresh | InsertErr | Clear | Main
```

4b. Set a BERT test pattern. **qrss** is the most commonly used. Hit **S** to Save.

4c. Monitor the SYNC field. If the data link is up, you should see SYNC=**yes**.

## Troubleshooting

### Problem:

SYNC field shows NO when I run a BERT test.

### Answer:

- Make sure the cable is correct. Try another cable if possible. It is highly recommended to a cable manufactured by Zhone.
- Make sure both IMACS and remote device (such as routers) are configured to the same bandwidth.

- Make sure one side is configured as DCE, and another as DTE.
- Try different a HSU port in case one port is bad.