

# VeriComm<sup>®</sup> IP Retrofit Kit

## Installation Instructions for VCOM-IP-RETROKIT or VCOM-IP-UPGRADEKIT

### Overview

This document explains how to retrofit or upgrade a VeriComm<sup>®</sup> control panel to allow the panel to communicate by use of high-speed Internet. To perform a retrofit, the control board has to be replaced and an Internet converter device, along with associated cables and wiring, has to be installed. To perform an upgrade on a panel already equipped with an IP-compatible control board, perform Step 1, then skip to Step 5.

Most common types of high-speed Internet connection — such as DSL, cable, or satellite — should work for connecting the VCOM panel to the Internet. However, the high-speed connection to the panel can only be accomplished via an RJ-45 (CAT5) Ethernet cable.

Because the panel will only initiate communication from the homeowner's panel to Orenco, no configuration changes to the homeowner's firewall should be necessary.

The VeriComm IP Retrofit Kit consists of (1) a control board, (2) an Internet adapter unit, (3) an Internet adapter power cord, (4) a serial cable, (5) a resistor and heat shrink material, depending on panel type; (6) a cable tie anchor, and cable ties (ties not shown). The Upgrade Kit includes only items 2, 4, and 6.

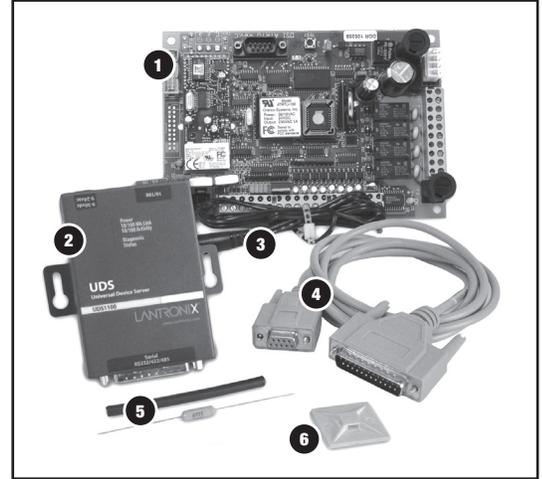
The following tools are needed to perform a retrofit:

- Small standard screwdriver
- Needle-nose pliers
- RJ-45 crimping tool (if connectors need to be installed on the CAT5 wire)

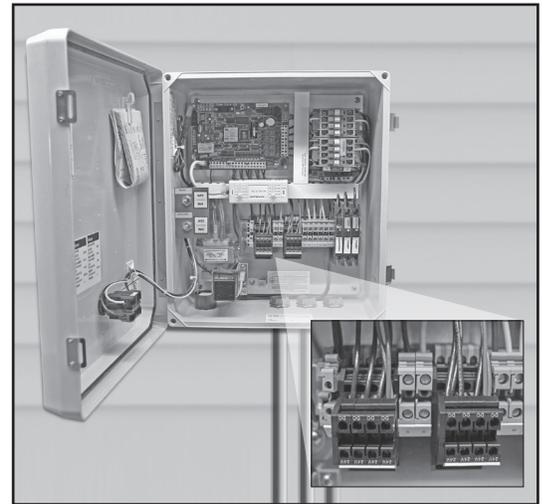
No tools are required for an upgrade, unless an RJ-45 crimping tool is needed for installing connectors on the CAT5 wire.

### Before You Begin

To determine whether your panel requires a retrofit or an upgrade, check the terminal blocks in the control panel. Panels without black, extended terminal blocks (non-IP-compatible panels) require a retrofit to use a high-speed Internet connection. Panels with black, extended terminal blocks (IP-compatible panels) require only an upgrade.



VeriComm IP retrofit kit

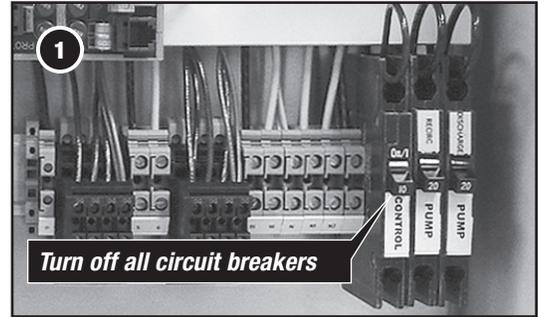


Check terminal blocks (IP-compatible black extended terminal blocks shown)

## Step 1: Turn Off Circuit Breakers

**WARNING:** Failure to disconnect power inside the control panel can result in personal injury or death and damage to the control panel.

Before beginning the retrofit, disconnect power to the control panel by turning off the circuit breakers in the house panel and the control panel! Do not perform work on the control panel with the power on!



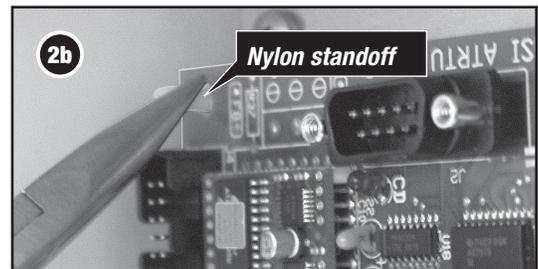
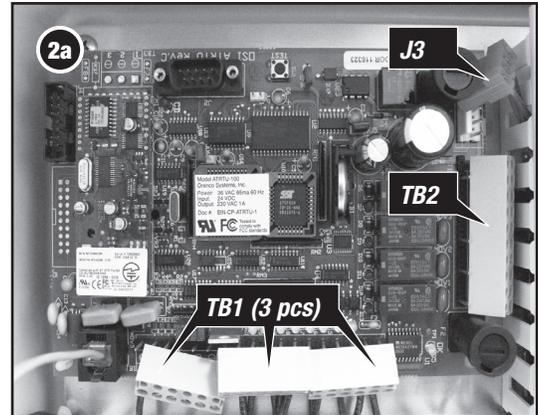
## Step 2: Remove Old Board

**Step 2a:** Remove the input terminal block TB1 (three pieces), output terminal block TB2, and power supply J3 from the control board. Gently pull the terminal blocks straight out from the board to avoid bending the pins. Don't pry the terminal blocks up from the board; prying the terminal blocks may cause damage to the printed circuit board (PCB).

**NOTE:** If TB1 has a resistor installed, be careful not to break the leads on the resistor.

**NOTE:** Be careful not to pull on the power supply wires when removing the power supply connector.

**Step 2b:** Remove the control board from the nylon stand-offs. Do this one corner at a time by compressing the stand-off holding barbs with needle-nose pliers and lifting the corner of the board off of the stand-off.



## Step 3: Install Retrofit Board

Before installing the retrofit control board, inspect the board for the location of the power cord and terminal blocks.

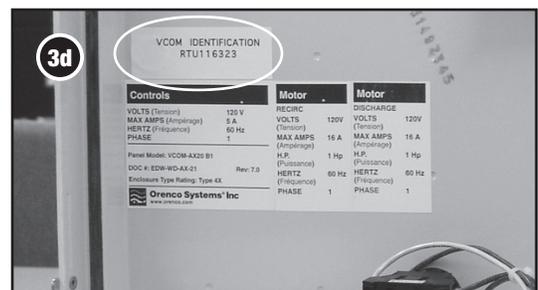
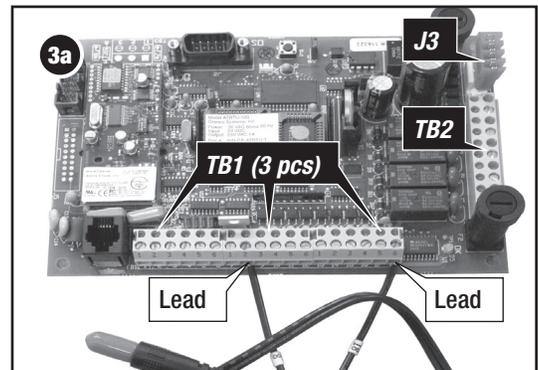
**Step 3a:** Remove the Internet adapter power cord leads from the retrofit board terminal block TB1. Set the adapter power cord aside. Remove the TB1, TB2, and J3 terminal blocks from the retrofit board.

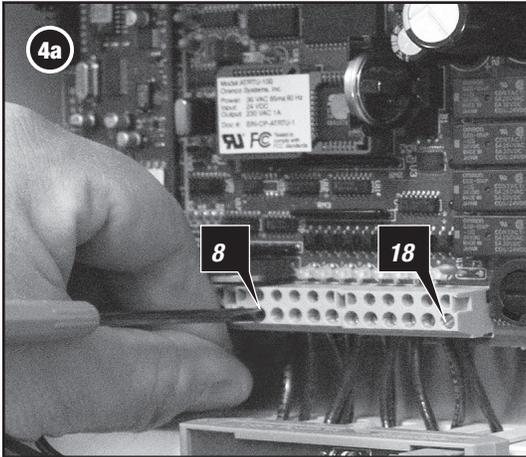
**Step 3b:** Position the retrofit board so that the input terminal block (TB1) on the retrofit board will be in the same orientation as on the old board. Gently but firmly press the board into place on the nylon standoffs.

**Step 3c:** Install the terminal blocks T1 and T2 and power supply connector J3 from the original board onto the retrofit board.

**Step 3d:** Write down the VCOM Identification RTU number, found on a sticker on the inside of the panel door. You will need this number in step 6e.

**Step 3e:** Cover the old VCOM Identification sticker with the retrofit board's VCOM Identification sticker, which includes a new "RTU" number.





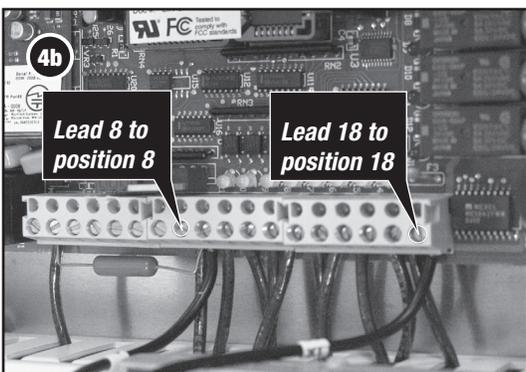
**Step 4: Wire Internet Adapter Power Cord**

Power for the Internet adapter is supplied by the terminal block TB1. Wire the adapter power cord leads into the terminal block.

**NOTE:** Each of the three sets of terminals that make up TB1 have terminal positions labeled “1” through “6.” For the purpose of this document, consider all terminal positions as “1” through “18” when viewed from left to right, facing the control board.

**Step 4a:** Loosen the set screws at the eighth and eighteenth positions from the left on the terminal block TB1.

**NOTE:** Additional wires and resistors in positions eight and eighteen may have to be “doubled up” with the Internet adapter power cord leads in the terminals. If there are wires or resistors already installed at these positions, loosen only one set screw at a time before installing the power cord, and keep the wires and resistors in place while installing the power cord leads.



**Step 4b:** Look at the stripped leads of the Internet adapter power cord. One lead will be labeled “8,” and the other “18.” Place each labeled lead in the corresponding terminal position on TB1 and tighten the set screw for that terminal. If TB1 terminal #17 position is open, it can be used as an alternate to terminal position 18.

**NOTE:** Spare resistors are provided in the retrofit kit in case the original resistors are lost or damaged during the retrofit.



**Step 5: Mount Internet Adapter Unit**

Mount the Internet adapter unit in a suitable location, such as the panel door or the bottom of the enclosure, using the sticky-backed hook-and-loop fastener pieces included in the kit.

**Step 5a:** If the hook-and-loop pieces aren’t already installed on the back of the Internet adapter, cut the adhesive-backed, hook-and-loop fastener material (included in the kit) into two strips and install them on the back of the adapter unit.

**Step 5b:** Install the adapter unit in the control panel. We recommend placing it on the inside of the panel door, as shown, if space permits.

**NOTE:** Be sure that the adapter power cord and the serial cable will reach the adapter unit before securing it. Also be sure that, with the door closed, the power and Ethernet connectors will have enough clearance in the location you choose to mount the Internet adapter.



**Step 5 (continued)**

**Step 5c:** Plug the adapter power cord into the Internet adapter.

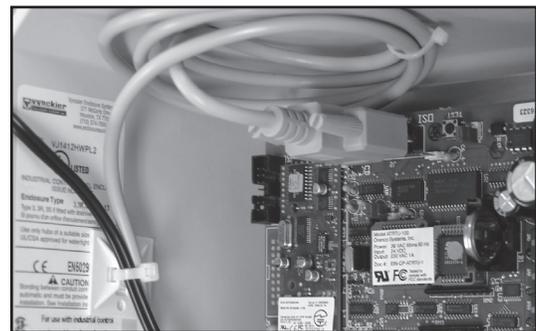
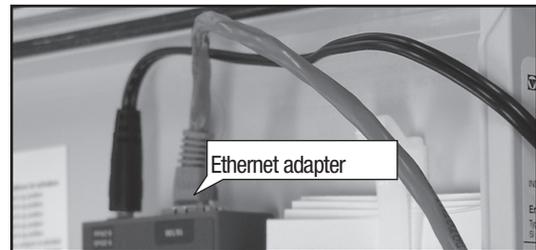
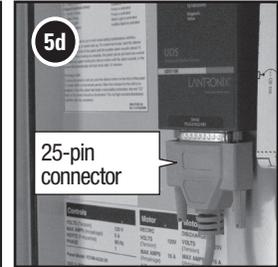
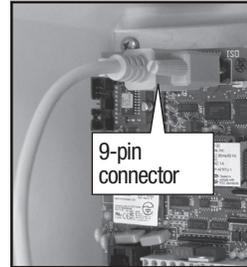
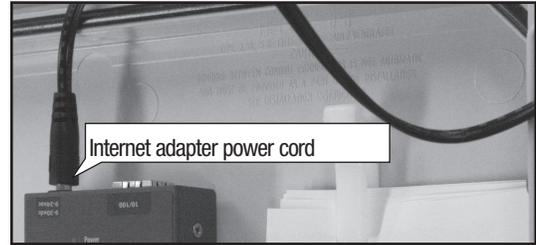
**Step 5d:** Plug the 9-pin end on the serial cable into the 9-pin port on the control board. Plug the 25-pin end of the serial cable into the 25-pin port on the Internet adapter.

**NOTE:** If the CAT5 cable does not have connectors installed, install them now.

**Step 5e:** Plug the Ethernet cable from the house into the RJ-45 jack on the Internet adapter.

**NOTE:** If the original VCOM phone line isn't going to be used, we recommend disconnecting the line in from the house from the DSL filter/surge arrestor.

**5f:** Install the supplied cable anchor in the panel. Neatly coil the excess serial cable, adapter power cord, and Ethernet cable, and secure them in the cable anchor with the supplied cable tie.



**Step 6: Test Connection**

**Step 6a:** Turn on the control panel circuit breakers. Check that the green LED in the lower right corner of the control board is flashing.

**Step 6b:** Check the Internet adapter for the following LED lights:

- “Power” — lit and steady
- “10/100 Mb Link” — lit and steady
- “10/100 Activity” — blinks irregularly with traffic, if any
- “Diagnostic” — unlit
- “Status” — blinks while the panel tries to make contact

**Step 6c:** Press the “Push to Silence” button on the front of the control panel door 15 times in rapid succession to force the panel to make contact. The “Status” LED will blink while the panel tries to make contact, and the “10/100 Activity” LED should blink as the panel communicates.

**Step 6d:** Confirm that the panel has made contact. We recommend doing this in the field to save time.

- If you have a portable device with Internet access in the field, you can visit the Web site to confirm that the panel has made contact.
- If you don't have a portable device with Internet access in the field, you can call Orenco from the field or from your office.

**Step 6e:** In the case of retrofits, once you've forced the panel to make contact, you must call Orenco® VeriComm® Support to transfer the information and history from the old RTU number to the new RTU number, which is on the sticker you applied in step 3d. Be ready to provide the old RTU number at the time you call. Again, we recommend that you do this in the field.

If you need immediate visibility of the site and VeriComm support staff is not available, you can temporarily register the new RTU number as a new site. Use the least amount of information necessary to activate the new site, as the site data from the old RTU number will be transferred to the new RTU number by VeriComm Support when you call.

