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Preface

About this Product Manual

This product manual is divided into four sections, for Hardware, Software, Safety Requirements and Product Support. These are sub-divided to help you easily find the topics and procedures you are looking for. This manual also contains Appendices and a Glossary.

Part 1 – Hardware: This section of the manual contains all the information and instructions on how to assemble your equipment.

Part 2 – Software: This section of the manual contains all the procedures on how to configure your equipment.

Part 3 – Product Support: Thinklogical™ provides the best customer support available. If you have any questions or need to contact the company, please refer to this section of the manual.

Conventions Used in this Manual

As you read this manual you will notice certain conventions that bring your attention to important information. These are Notes and Warnings. Examples are shown below.

⚠️ Note: Important Notes appear in blue text preceded by a yellow exclamation point symbol, like this.

A note is meant to call the reader’s attention to helpful information at a point in the text that is relevant to the subject being discussed.

⚠️ Warning! All Warnings appear in red text, followed by blue text, and preceded by a red stop sign, like this.

A warning is meant to call the reader’s attention to critical information at a point in the text that is relevant to the subject being discussed.

Before starting any procedure, it is recommended that you read the instructions thoroughly before proceeding.
Introduction

The Logical Solution

The Touch Panel allows user-friendly access to the Thinklogical™ GUI for simple actions to be made with the touch of the screen. The unit connects independently to a network and with a one-time configuration, the set-up is easily performed. The Touch Panel displays the Thinklogical™ GUI on a 5.7" LCD which allows control of the switching between source computer or video entities and user display destinations (desktops, theaters, conference rooms, editing suites, control consoles, video walls, biomedical imaging arenas, satellite mapping, etc). The Touch Panel is available in a range of sizes, which allows flexibility and convenience among applications.

Figure 1: Typical Touch Panel Application using VelocityKVM System 24 Extenders
System Features

Each Touch Panel includes the following features:

- 5.7" LCD
- Easy set-up and installation
- Compact Flash and Micro SD slots
- USB 2.0 Ports
- PS/2 Keyboard/Mouse
- +5V Power Supply
- RS232 Serial Interface
- Audio out
- 10/100 Mbps Ethernet

Technical Specifications

Operating Temperature: 0-60°C (32-140°F)

Physical Dimensions:
- Length: 5.98" (15.2 cm)
- Width: 4.41" (11.2 cm)
- Height: 1.3" (3.3 cm)

Power Requirements: +5 VDC

Power Consumption: 1.3A

Weight: <1 lb (374 g)
Part 1: Hardware

Contents

When you receive your Thinklogical™ Touch Panel, you should receive the following items:

- Touch Panel Unit
- Power Supply
- CAT5 Cable Assembly, 20 Feet – CBL000001-020FR
- Product Manual CD
- Product Quick Start Guide

Installation

Connections and installation hardware for the product use industry-standard devices and methods. All wiring connections to the customer equipment are designed to minimize proprietary or customized connectors and cabling. Power connections are made with regionally appropriate power cords and approved methods. Non-supplied cables that may be needed are commercially available.

Figure 2: Touch Panel Diagram
Set-Up

1. Carefully remove the Touch Panel from its shipping package. Inspect the Touch Panel to make certain that no damage occurred during shipment. When the Touch Panel has been inspected and found to be in good condition, the installation process can begin.

2. Connect the Touch Panel to a suitable power source using the power supply provided.

3. Connect the Touch Panel to the network using the CAT5 cable provided.

4. Turn the Power Switch ON.

5. Repeat Steps 1 through 4 for each additional Touch Panel.

Order of Installation Events

Please refer to the Quickstart Guide included in the contents of the shipment for detailed instructions. A copy of the Quickstart is also available in Appendix A.
Part 2: Software

How to configure the server

1. Set up the IP address for the server
   a. System -> Network -> ...

2. Decide on station names and ports

3. Edit stations.csv
   a. Column headings always end with a colon ()
   b. The system ships with default names assigned to every physical port
   c. One row will repeat “Source Category:” across multiple columns, with the category names displayed below
      i. (not all headings need a field below them, but every field requires a header somewhere in the column above it.
      ii. The order of the names decides the order the categories will be displayed in the GUI
d. One row of headers will start with the header “Source Name:”. All rows beneath that row describe source stations.
   i. Each source station requires (insert example):
      1. Source Name:
      2. Chassis Name:
      3. Primary Port: (this is the port that has the back channel)
      4. (Optional) One or more Port: entries (in case of multi-headed image sources)
      5. One or more Category: entries, for organizing stations (more about this later)
      6. One or more Viewable: entries, with a group name in each entry, to define which groups can view this source
      7. One or more Takeable: entries, with a group name in each entry, to define which groups can take control of the keyboard/mouse for this cpu from another user

4. Decide on permissions and group names

5. Edit stations.csv, add group headings to stations

6. Decide on IP addresses for Touch Panels

7. Edit groups.csv

How to configure the Touch Panel

Each Touch Panel must be configured in order for it to talk to the server. The Touch Panels are shipped from the factory configured and ready for set-up. Also, they do not lose their configuration when disconnected or powered off. The only time the Touch Panel may need to be re-configured is if it takes on a different use or is moved to a different network.

The following instructions need to be followed in order to reconfigure the Touch Panel.

A USB Keyboard and the IP address(es) chosen for the Touch Panel(s) during the configuration of the server is(are) necessary to perform the Touch Panel configuration.

⚠️ Note: A USB Keyboard and the IP address chosen during the server configuration is necessary to perform the configuration of each Touch Panel.

**Direct Configuration Set-Up:**
1. Attach the USB keyboard to a USB port on the Touch Panel
2. Press Ctrl - Alt - F1 on the Touch Panel to go into text mode
3. When the login appears, type in the following:
   username: root
   password: emac_inc
Remote Configuration Set-Up: Each Touch Panel is shipped with DHCP enabled by default
1. Attach one or more Touch Panels to a network with a DHCP server

2. Use “ssh” to access each Touch Panel in turn

3. When the login appears, type in the following:
   username: root
   password: emac_inc

To set up the network:
4. Type cd /etc/network

5. Using vi, edit “interfaces”

6. In the section for eth1,
   a. modify dhcp line to say “static”
   b. Insert a line “address 192.168.13.161”
      (with whatever IP address you’ve chosen for this Touch Panel)
   c. Add “netmask 255.255.255.0”
   d. Save and exit

The completed interface file should look something like this after modification:

```bash
# /etc/network/interfaces -- configuration file for ifup(8), ifdown(8)

# The loopback interface
auto lo
iface lo inet loopback

allow-hotplug eth0
iface eth0 inet static
address 192.168.13.171
netmask 255.255.255.0
gateway 192.168.13.1
```

To set the browser to find the server:
7. Type cd/etc/network

8. Using vi, edit “homepage” (a single line file that, by default reads:
   “http://192.168.13.9/touch”)
   a. Change the IP address to match that of the web server machine
   b. Save and exit

The files have now been configured, but the Touch Panel will not use them yet:
9. Type “sync”

10. Type “reboot”
The Touch Panel will blank its screen and reboot with new values.

If you are using the Remote Configuration method on multiple Touch Panels, watch to see which panel blanks and reboots so you can tell which one you’ve just configured and label it with the proper IP address.

**Using the Touch Panel**

**Detail Screen**

The Touch Panel will load the operating system, start the GUI, and get the updates from the server. The following screen should display the GUI:

![Figure 4: Touch Panel displaying the GUI](image)

The Touch Panel starts up in “Detail” mode by default.

**SOURCES** are listed on the right (ex: CPU 01, CPU 02, CPU 03, CPU 04).

**DESTINATIONS** are listed on the left (ex: DESK 01, DESK 02, DESK 03, DESK 04).

The buttons shown at the bottom of the screen are command buttons which perform a task. Connect will connect your destination to a source by pressing, where Take Mouse will ‘take the mouse’ from all other connections and give it to the source/destination combination the user has selected. You can also run Macros by clicking on the Macros button and then run the selected Macro.
How to Make a Connection

When you click a source, it will highlight in a specific color. You can then click destinations (left side) to make connections. If a source is still selected, then additional connections to that source port can still be made by clicking on destination ports. Selections will remain if you need to ‘Page Up’ or ‘Page Down’ to show other sources and/or destinations. You may deselect the source port by simply touching it.

1. Select CPU 01. It will become selected and highlight blue.

2. Select DESK 03. Instead of immediately being connected to CPU 01, it will also become selected and will highlight blue.

3. Press the Connect button at the bottom, left side. The connection is made and is shown by the ‘X’ highlighting blue. By default, the mouse is assigned to this first connection. The mouse is indicated by the Mouse icon to the right of CPU 01.

Figure 5: How to Make a Connection, Steps 1 and 2.
4. Press DESK 04, and it will highlight.
5. Press Connect again, and now it is connected as well, indicated by the highlighted X.

![Diagram showing connection between CPU 01 and DESK 01, CPU 02 and DESK 02, CPU 03 and DESK 03, CPU 01 and DESK 04.]

**Figure 8:** How to Make a Connection, Step 5.

**How to Break a Connection**

From the Detail screen, you can break a connection. Pressing the X between a connected source and its destination will break that connection.

1. Click on the X between the Source and Destination you wish to disconnect. CPU 01 and DESK 04 are no longer connected as shown in the screen in **Figure 8**.
Showing the Active backchannel on the Touch Panel
Unlike video connections, data connections are bidirectional, to and from a source computer. Although there can be many connections from a source computer, there can only be one connection to a source computer. This connection back to the source computer, called the backchannel, allows a keyboard, mouse, and other devices to communicate with the source computer. The GUI interface marks the backchannel by showing a Mouse icon to the right of the source.

How to Move a Backchannel from a Data Port (Take the Mouse)
From the Detail screen, you can move the backchannel to another destination, also known as ‘Take the Mouse’. Figure 9 shows a source (CPU 01) connected to 2 destinations (DESK 03 and DESK 04). DESK 03 has the backchannel to CPU 01. The backchannel is represented by the mouse icon.

1. Click on a destination that already is connected but does not have the mouse (ex: DESK 04). The destination (DESK 04) will highlight.
Figure 10: DESK 03 has the backchannel to CPU 01; it’s represented by the mouse icon. DESK 04 is connected to CPU 01 and is selected.

2. Press ‘Take Mouse’. The mouse icon will move to the new destination (DESK 04) and is now a backchannel.

Figure 11: DESK 04 is now the backchannel.
Scenario (Macro) Screen

A second page available on the Touch Panel is “Scenario”, selected by the tab at the top. From this page, Scenarios (or Macros) can be executed.

Macros can be used to perform multiple functions at the same time. If there is a series of commands that must be performed again and again, a macro can do this with a single click. Macros are small scripts that can be run from the web browser. They can connect ports, connect "stations" (collections of ports, also sometimes known as "groups"), disconnect ports and stations, and even execute other macros. The user is not allowed to create, edit, or delete macros from the Touch Panel.

Pressing the Scenario (Macro) button (top, towards the right) takes the panel to ‘Scenario’ (Macro) mode with the following display:

![Scenario (Macro) Screen](image)

**Figure 12:** The Scenario (Macro) screen

The example in Figure 11 shows two Scenarios (Macros) displayed, named “Macro 1” and “Macro 2”. Each scenario (macro) is executed immediately when its button is pressed.

⚠️ **Note:** The user is not allowed to create, edit, or delete macros from the Touch Panel.
Part 3: Thinklogical™ Support

Customer Support

Thank you for choosing a Thinklogical™ product for your application. We appreciate your business and are dedicated to helping you successfully use our product. Thinklogical™ is here to help you.

Thinklogical™ is an engineering company and you will receive the information you require directly from our most knowledgeable engineers. We believe that the first line of support is the design engineer that developed the product. Therefore, your questions will be handled promptly by our in-house engineers who are most familiar with your products.

To contact Thinklogical™, use the following telephone numbers and internet-based methods.

Website

Check out our website for current product offerings, support information and general information about all of the products we offer.

Our internet website offers product information on all current systems, including technical specification sheets and installation guides (for viewing online or for download), product diagrams showing physical connections and other information you might need.

Internet: www.thinklogical.com

Note: Most online documents are stored as Adobe Acrobat “PDF” files. If you do not have the Adobe Acrobat reader needed to view PDF files, visit www.adobe.com for a download.

Email

Thinklogical™ is staffed Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. We will try to respond to your email inquiries promptly, use the following email addresses for your different needs:

info@thinklogical.com – Information on Thinklogical™ and our products.

sales@thinklogical.com – Sales Department - orders, questions or issues.

support@thinklogical.com – Product support, technical issues or questions, product repairs and request for Return Authorization.
Telephone

Telephone Sales: Contact our expert, technically oriented sales staff via telephone in Milford, CT at (203) 647-8700 or if in the continental US, you may use our toll-free number (800) 291-3211. We are here Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. Ask for their direct dial phone number when you call.

Telephone Product Support: Contact Product Support via telephone in Milford, Connecticut at (203) 647-8700. The support lines are manned Monday through Friday, 8:30am to 5:00pm, Eastern Time Zone.

International Sales: Please contact our US sales staff in Milford, CT at (203) 647-8700. We are here Monday through Friday, 8:30am to 5:00pm, Eastern Time Zone (same as New York City). If leaving a voice message, please provide a “best time to call back” so we may reach you at your convenience.

Our switchboard attendant will direct your call during regular business hours. We have an automated attendant answering our main telephone switchboard after regular business hours and holidays. You can leave voice messages for individuals at any time. Our Sales Representatives have direct numbers to speed up your next call to us.

Fax

Our company facsimile number is (203) 783-9949. Please indicate the nature of the fax on your cover sheet and provide return contact information.

Product Support

Thinklogical’s™ support personnel are available Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. If your application might require assistance at some time outside of our normal business hours, please contact us beforehand and we will do our best to make arrangements to help you with your Thinklogical™ products.

Product Serial Number

Thinklogical™ products have a unique serial number, imprinted on an adhesive label that is fixed to the bottom of the chassis. The serial number includes a date-code. The format for the date-code is 2 digits for the month, 2 digits for the day and 2 digits for the year, plus two or three digits for a unique unit number. This serial number is also found on the original shipping carton.

Warranty

Thinklogical™ warrants this product against defects in materials and workmanship for a period of one year from the date of delivery. Thinklogical™ and its suppliers disclaim any and all other warranties.

Note: Thinklogical™ Inc. products carry a one year warranty, with longer term available at time of purchase on most products. Please refer to your product invoice for your products Warranty Terms & Conditions.
Defect remedy shall be, repair or replacement of the product, provided that the defective product is returned to the authorized dealer within a year from the date of delivery.

If you wish to return your device, contact the Thinklogical™ authorized dealer where you purchased the device, or if you purchased directly, call Thinklogical™ at 1-800-291-3211 (USA).

Return Authorization
In the event you must return a product to Thinklogical™ directly:

Contact Customer Support at 1-800-291-3211 or 203-647-8700.

Customer Support will ask you to describe the problem and will issue you a Return Merchandise Authorization number (RMA#).

Pack the device in its original box, if possible, and return it with the RMA# on the box.

⚠️ Note: Do not return a product to Thinklogical™ without a Return Material Authorization.

Return address for products with Return Material Authorization:

Thinklogical™ Inc.
100 Washington Street
Milford, CT 06460 USA

PH: 800-291-3211 (USA only)

Our Address
If you have any issue with the product, have product questions or need technical assistance with your Thinklogical™ system, please call us at 800-291-3211 (USA only) or (203) 647-8700 and let us help. If you’d like to write us, our mailing address is:

Thinklogical™ Inc.
100 Washington Street
Milford, CT 06460 USA
Appendix A: Quickstart Guide

1. Ensure the Receivers’ Power Switches at each Work Station are in the OFF position. Connect the AC Power Cords to the Receivers and plug each of them into a standard AC source.

2. Turn the Power Switches ON.

3. Connect the fibers of each Downstream ports from each Transmitter to the NETWORK HUB.

4. Connect the source CPU is turned on and operating properly.

5. Connect the source CPU to the Receiver.

6. Ensure each device is turned ON.

7. Connect the Receiver’s power supplies and plug each of them into a standard AC source.

8. Turn each unit ON.

9. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

10. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

11. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

12. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

13. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

14. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

15. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

16. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

17. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

18. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

19. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

20. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

21. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

22. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

23. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

24. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

25. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

26. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

27. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

28. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

29. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.

30. Connect the source Cable 1: L1 Data from Tx to Rx & Video 1, L2 Audio Rx to Tx, L3 DP Video 1.