

6870C-0502C (V14 TM120 UHD)

# Generic T-CON Board 6870C-0502C (V14 TM120 UHD) Instruction Manual

Brand: Generic

## 1. INTRODUCTION

This instruction manual provides essential information for the proper installation, function, and care of your Generic T-CON (Timing Controller) Board. This board is a critical component responsible for processing video signals and transmitting them to the display panel of compatible televisions. This specific model, 6870C-0502C (V14 TM120 UHD), is designed for use with 42-inch, 49-inch, and 55-inch LG Display televisions.

## 2. SAFETY INFORMATION

Please read and understand all safety precautions before attempting installation or maintenance. Improper handling of electronic components can result in damage to the product, the television, or personal injury.

- **Power Disconnection:** Always ensure the television is completely disconnected from the main power supply before beginning any installation or repair work.
- **Static Electricity:** Electronic components are sensitive to static discharge. Use an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity from your body.
- **Professional Installation:** Installation of internal television components should ideally be performed by a qualified technician. If you are unsure about any step, seek professional assistance.
- **Component Handling:** Handle the T-CON board by its edges. Avoid touching the integrated circuits (ICs) or connectors directly.
- **Tool Usage:** Use appropriate, non-magnetic tools for disassembly and reassembly.

## 3. PACKAGE CONTENTS

Verify that all items are present and undamaged upon opening the package.

- 1 x Generic T-CON Board (Model: 6870C-0502C V14 TM120 UHD)

## 4. SETUP AND INSTALLATION

This section outlines the general procedure for replacing a T-CON board. Specific steps may vary depending on

your television model. Always refer to your television's service manual for detailed disassembly instructions.

## 4.1. Before You Begin

- **Compatibility Check:** Confirm that the model number on your existing T-CON board matches one of the compatible models (6870C-0502A, 6870C-0502B, 6870C-0502C, 6871L-3702D V14 TM120 UHD VER 0.6).
- **Power Off:** Disconnect the television from the power outlet.
- **Work Area:** Prepare a clean, well-lit, and static-free work surface.

## 4.2. Installation Steps

1. Carefully place the television face down on a soft, clean surface to protect the screen.
2. Remove the back cover of the television to access the internal components. Refer to your TV's service manual for specific screw locations and panel removal techniques.
3. Locate the existing T-CON board. It is typically positioned at the top or bottom center of the display panel, often covered by a metal shield.
4. Disconnect the ribbon cables (LVDS cables) connecting the T-CON board to the main board and to the display panel. Gently unlatch the connectors before pulling the cables.
5. Unscrew and carefully remove the old T-CON board.
6. Align the new T-CON board (Model: 6870C-0502C V14 TM120 UHD) into position and secure it with the screws previously removed.
7. Reconnect all ribbon cables. Ensure they are fully seated and the latches are securely closed. Improper connection can lead to display issues.
8. Before reattaching the back cover, temporarily connect the TV to power and test its functionality. Check for a clear picture and proper display.
9. If the display functions correctly, disconnect power again and reattach the television's back cover.



Figure 1: Top view of the T-CON board, illustrating component layout and connector locations.



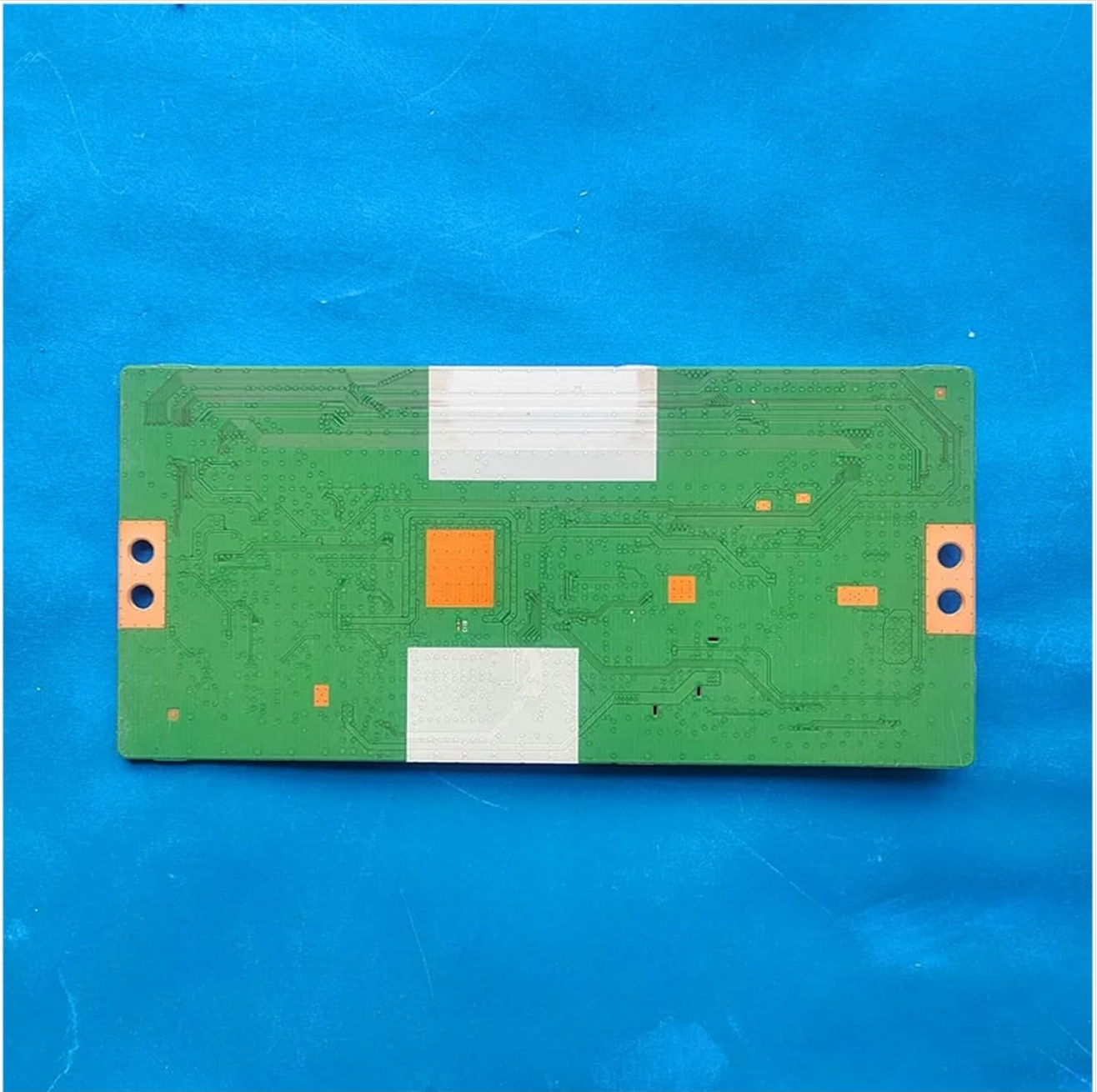


Figure 3: Back view of the T-CON board, showing the reverse side of the circuit board.

## 5. OPERATING INSTRUCTIONS

The T-CON board is an internal component that operates automatically once installed correctly. There are no user-adjustable settings or operational controls on the board itself. Its function is to ensure the correct timing and processing of video signals for the display panel. Proper operation is indicated by a clear, stable image on the television screen.

## 6. MAINTENANCE

The T-CON board requires minimal maintenance. Adhering to the following guidelines can help prolong its lifespan:

- **Keep Dry:** Ensure the television and its internal components are kept away from moisture and liquids.
- **Dust Control:** Periodically clean the interior of the television (when powered off and unplugged) using compressed air to remove dust accumulation, which can lead to overheating.
- **Ventilation:** Ensure the television's ventilation openings are not blocked to allow for proper airflow and heat

dissipation.

## 7. TROUBLESHOOTING

If you experience issues after installing the T-CON board, consult the table below for common problems and potential solutions. If the problem persists, seek professional technical assistance.

Problem	Possible Cause	Solution
No picture, but sound is present.	Faulty T-CON board, loose ribbon cables.	Verify T-CON board is correctly installed. Check all ribbon cable connections for secure seating.
Distorted, flickering, or discolored picture.	Loose or damaged ribbon cables, faulty T-CON board.	Inspect ribbon cables for damage and ensure they are properly connected. Re-seat cables if necessary.
Horizontal or vertical lines on the screen.	Faulty T-CON board, panel issue, or ribbon cable issue.	Check ribbon cable connections. If lines persist, the T-CON board or display panel may be defective.
TV powers on but no backlight.	Backlight inverter issue, power supply issue, or T-CON board issue (less common).	While less likely to be the T-CON, ensure all connections to the T-CON are secure. Further diagnosis may be needed for backlight components.

## 8. SPECIFICATIONS

- **Product Type:** T-CON (Timing Controller) Board
- **Model Numbers:** 6870C-0502A, 6870C-0502B, 6870C-0502C, 6871L-3702D V14 TM120 UHD VER 0.6
- **Primary Model for this Manual:** 6870C-0502C (V14 TM120 UHD)
- **Compatibility:** LG Display TVs (42-inch, 49-inch, 55-inch)
- **Material Quality:** Constructed with high-quality materials and fine workmanship.
- **Item Weight:** Approximately 3.53 ounces (100 grams)
- **Package Dimensions:** Approximately 0.39 x 0.39 x 0.39 inches (1 x 1 x 1 cm) *-Note: This refers to the package, not the board itself.*
- **Manufacturer:** Generic

## 9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the seller or manufacturer from whom you purchased this product. Keep your purchase receipt as proof of purchase.