



Toshiba TL515U Technical Training Manual

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2011 Toshiba LCD Technical Training

TL515U Chassis Family

TL515U Ch

2011 LCD1111

2011 LCD1111

32, 42, 47, 55TL515U

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Summary of Contents for Toshiba TL515U

[Page 1](#) TOSHIBA TOSHIBA 2011 Toshiba LCD Technical Training TL515U Ch TL515U Chassis Family 2011 LCD1111 2011 LCD1111 32, 42, 47, 55TL515U © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 2](#) Digital Audio Output □ Media Player - USB Capability (JPEG/MP3/MPEG2/MPEG4/H.264) □ □ Built in WLAN Built-in WLAN □ Yahoo! Widgets HDMI HDMI- - CEC Dynamic Dynamic Volume Volume AutoView® AutoView® AutoView® AutoView® Wallpaper Wallpaper © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 3](#) EXPOSED CHASSIS EXPOSED CHASSIS © 2011 TOSHIBA AMERICA INFORMATION

SYSTEMS, INC.

[Page 4: Board Identification](#)

BOARD IDENTIFICATION BOARD IDENTIFICATION LED DR. LED DR. POWER POWER MAIN MAIN
WI- FI FI T T - - CON R R - - SPKR SPKR L L - - SPKR SPKR © 2011 TOSHIBA AMERICA
INFORMATION SYSTEMS, INC.

[Page 5](#) CN91 GOES TO PJ91 ON THE POWER SUPPLY. IT RECEIVES AC DETECT INFO AND 24V
AUDIO B+ FROM THE POWER SUPPLY AND SENDS SWITCHING COMMANDS TO THE POWER
SUPPLY TO THE POWER SUPPLY. © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 6](#) CN90 CN90 GOES TO PJ90 ON THE POWER SUPPLY BOARD. IT RECEIVES 4 - 12V LINES
AND 2 - 24V LINES FROM THE POWER SUPPLY FOR FROM THE POWER SUPPLY FOR OPERATING
VOLTAGES. © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 7](#) CN650 AND CN651 ARE THE LVDS CN650 AND CN651 ARE THE LVDS CONNECTORS.
THEY PROVIDE CN651 CN651 PANEL POWER, CLOCK, DATA, AND LOW VOLTAGE DIFFERENTIAL
SIGNALLING TO THE T-CON AND ULTIMATELY THE LCD PANEL. CN650 CN650 © 2011 TOSHIBA
AMERICA INFORMATION SYSTEMS, INC.

[Page 8](#) TO THE WI-FI BOARD. PIN ONE IS THE 5V B+ SOURCE AND CAN BE CHECKED AT PIN
ONE ON BOTH PLUGS (WHITE AT PIN ONE ON BOTH PLUGS (WHITE WIRE). CN162 CN162 CN162
CN162 © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 9](#) PLUG IDENTIFICATION - - MAIN MAIN CN30 IS THE LEFT AND RIGHT AUDIO OUTPUT TO
THE SPEAKERS LOCATED AT THE BOTTOM LEFT AND RIGHT OF BOTTOM LEFT AND RIGHT OF
THE BEZEL. CN30 CN30 © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 10](#) PLUG IDENTIFICATION - - MAIN MAIN CN740 PROVIDES THE FRONT PANEL "TOUCH
CONTROLS" WITH OPERATING VOLTAGE AND THE FRONT PANEL CONTROLS THE FRONT PANEL
CONTROLS PROVIDE THE MICRO WITH TOUCH COMMANDS. CN740 CN740 © 2011 TOSHIBA
AMERICA INFORMATION SYSTEMS, INC.

[Page 11](#) PLUG IDENTIFICATION PLUG IDENTIFICATION - - MAIN MAIN CN90 CN90 CN91 CN91
CN651 CN651 CN650 CN650 CN26 CN26 CN30 CN30 CN740 CN740 © 2011 TOSHIBA AMERICA
INFORMATION SYSTEMS, INC.

[Page 12](#) PLUG IDENTIFICATION PLUG IDENTIFICATION - - POWER POWER P801A IS THE AC
INPUT TO THE POWER SUPPLY THE POWER SUPPLY. NORMALLY FOUND COMING FROM AN AC
WALL OUTLET OR POWER STRIP. P801A P801A © 2011 TOSHIBA AMERICA INFORMATION
SYSTEMS, INC.

[Page 13](#) PLUG IDENTIFICATION - - POWER POWER PJ91 PROVIDES THE MAIN BOARD WITH 5V
STANDBY BOARD WITH 5V STANDBY, 24V B+, AND AC DETECT INFO. IT ALSO RECEIVES
SWITCHING COMMANDS FROM THE MICRO. PJ91 PJ91 PJ91 PJ91 © 2011 TOSHIBA AMERICA
INFORMATION SYSTEMS, INC.

[Page 14](#) PLUG IDENTIFICATION - - POWER POWER PJ90 PROVIDES THE MAIN BOARD WITH 1
BOARD WITH 1 - 24V AUDIO 24V AUDIO B+ LINE AND 3 - 12V LINES FOR OPERATING VOLTAGE.
PJ90 PJ90 © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 15](#) PJ860 PROVIDES CN2 ON THE LED DRIVER BOARD WITH PJ860 PJ860 OPERATING
VOLTAGES AS OPERATING VOLTAGES AS WELL AS ACTING AS A RELAY FOR COMMANDS
COMING FROM THE MICRO INTENDED FOR THE LED DRIVER BOARD. © 2011 TOSHIBA AMERICA
INFORMATION SYSTEMS, INC.

[Page 16: Led Driver](#)

BOARD RECEIVES OPERATING VOLTAGES AS WELL AS COMMANDS COMING FROM PJ860 ON THE
POWER SUPPLY. THESE COMMANDS ARE FROM THE MICRO, PASSED THOROUGH THE POWER
SUPPLY, INTENDED POWER SUPPLY, INTENDED FOR THE LED DRIVER BOARD. © 2011 TOSHIBA
AMERICA INFORMATION SYSTEMS, INC.

[Page 17](#) PLUG IDENTIFICATION PLUG IDENTIFICATION - - LED DRIVER LED DRIVER CN201

CN201 CN201 ON THE LED DRIVER BOARD OUTPUTS DRIVE VOLTAGES TO THE LED BACKLIGHTS BACKLIGHTS. © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 18](#) THE TWO LVDS CONNECTORS THE TWO LVDS CONNECTORS ON THE T-CON RECEIVE CLOCK, DATA, PANEL VOLTAGE, AND LOW VOLTAGE DIFFERENTIAL SIGNALLING FROM CN650 & CN651 ON THE MAIN BOARD. LVDS LVDS LVDS LVDS © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 19: Led Drive](#)

CN3 ON THE T-CON GOES TO CON902 ON THE LED DRIVER BOARD. THIS IS A RIBBON CABLE THAT PROVIDES A SYNC AND DATA EXCHANGE PATH BETWEEN THE TWO PATH BETWEEN THE TWO BOARDS. CON902 CON902 © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 20](#) MAIN BOARD. THE 5V CAN BE MEASURED AT PIN 1 ON EITHER BOARD. THE 2 SMALL CONNECTORS AT THE TOP OF CONNECTORS AT THE TOP OF THE WI-FI BOARD ARE ANTENNA LEADS. NO # NO # © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 21](#) 1. <~3V AC Det 2. >~3V Pwr Sig 3. >~3V Pwr TV <~5V Standby*** <~5V Standby 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 22](#) 1. <~3V AC Det 2. >~3V Pwr Sig 3. >~3V Pwr TV 4. <~5V Standby <~5V Standby*** 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 23](#) 1. <~3V AC Det 2. >~3V Pwr Sig 3. >~3V Pwr TV 4. <~5V Standby <~5V Standby*** 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 24](#) AC Det 2. >~3V Pwr Sig 3. >~3V Pwr TV 4. <~5V Standby <~5V Standby*** 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 25](#) 1. <~3V AC Det 2. >~3V Pwr Sig 3. >~3V Pwr TV 4. <~5V Standby <~5V Standby*** 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 26](#) 3. >~3V Pwr TV 24V & 12V 24V & 12V 4. <~5V Standby <~5V Standby*** 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 27](#) 24V & 12V 24V & 12V 4. <~5V Standby <~5V Standby*** 5. Gnd. BL ON & PWM 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 28](#) 1. <~3V AC Det 2. >~3V Pwr Sig 3. >~3V Pwr TV <~5V Standby*** <~5V Standby 5. Gnd. 6. <24V LNB 7. Gnd 8. Option 9. >5V BL ON 10. >PWM Data and Clock Exchange © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 29: Troubleshooting](#)

TROUBLESHOOTING TROUBLESHOOTING - - DEAD SET DEAD SET 5V STANDBY ~3V ON-OFF OPERATING VOLTAGE ~3V - MICRO NEEDS THIS © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 30](#) *** Warranty Authorization required if display is replaced in warranty - Go to www7.toshiba.com for instructions. CHECK MAIN 1. <12V BOARD 2. <12V 3. <12V 4. Gnd. 5. Gnd. 6. Gnd. 7. <24V Aud 8. Gnd Aud © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 31](#) *** Warranty Authorization required if display is replaced in warranty - Go to B+ FOR LED www7.toshiba.com for instructions www7.toshiba.com for instructions. UNITS B+ FOR LED DRIVER CHECKING FOR SHORT BL "ON" CN201 © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 32](#) TROUBLESHOOTING TROUBLESHOOTING – – AUDIO AUDIO CUSTOMER ERROR? IF “NO” PWR IF NO PWR SUPPLY IS OK www7.toshiba.com AUDIO B+ © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 33: Led Indications](#)

Fan has Stopped – Reset TV Reset TV Red Solid – Set is currently in 3D Red Blinking – Power On Failed – Mode Reset TV OTHER THAN POWER LED White Solid – Sensor is available © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 34: Entering The Service Mode](#)

Press Mute 3 times and hold down on the third press. While holding the “Mute” button down, Press the “Menu” button on the “Touch Panel” Control on the TV. (done within 4 seconds) © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 35: Firmware Update \(Example\)](#)

FIRMWARE UPDATE (example) FIRMWARE UPDATE (example) © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

[Page 36](#) TOSHIBA TOSHIBA We have just completed the We have just completed the Training Session pertaining to the TL515U Chassis Family. Thank you for your attendance. © 2011 TOSHIBA AMERICA INFORMATION SYSTEMS, INC.

This manual is also suitable for:

32tl515u42tl515u47tl515u55tl515u