



BASIC OPERATION GUIDE

LT330

INTRODUCTION

Thank you for acquiring DT Research's LT330 Rugged Laptop. Featuring a flexible, robust enclosure, the Rugged Laptop with a 13.3" convertible display and an LED-backlit keyboard is powered by the Intel® processor, offering optimal combinations of performance and power savings. The LT330 Rugged Laptop is available with Microsoft® Windows® operating system. The software operating system features web browser, client/ server computing software, media player, accessories, and applications support.

PACKAGE CONTENTS

- One LT330 with two Battery Packs
- AC-DC Power Adapter with Power Cord
- Basic Operation Guide



Input/ Output Ports

A Ethernet Port (RJ45)	G COM Port
B USB Type-C Port (for data transmitting, video-out, and charging)	H HDMI Output Port
C USB 3.0 Ports	I Audio Jack
D DC-in Jack	J Smart Card/CAC Reader
	Smart Card/CAC Reader Cap Latch

Button Functions

BUTT ON	ACTION	BUTT ON	ACTION
	Power Button		88 Standard, Full-size Keyboard with Backlight
	Programmable Buttons		Multi-touch Pad
	Brightness Control Buttons		Service Door Switch
	Programmable Buttons		Battery Latches

PRECAUTIONS

- Always exercise care when operating and handling the LT330.
- Do NOT apply excessive pressure to the display screen.
- We recommend using the Digital Pen (optional) to keep the screen clean.
- Avoid prolonged exposure of the display panel to any strong heat source. Wherever possible, the LT330 should face away from direct light to reduce glare.
- If the AC-DC power adapter is used to recharge or power the laptop, do NOT use any AC-DC adapter other than the one provided or acquired from the manufacturer or its partners.
- In the unlikely event that smoke, abnormal noise, or strange odor is present, immediately power off the LT330 and disconnect all power sources. Report the problem to your device provider immediately.
- Never attempt to disassemble the LT330, as this will void the warranty.

NOTE:

To obtain protection consistent with any IP rating for the device, the I/O (audio, power, USB, card reader, etc.) port doors must be closed. If the IP protection is compromised by mishandling or misuse, such as by leaving port doors open or improperly closed, any resulting product damage will not be covered under any DT Research warranty.

BASIC FEATURES

The LT330 rugged laptop integrates a high-brightness touchscreen, USB ports, and embedded networking elements such as wireless LAN or optional 4G LTE/ AWS.

A LT330 typically integrates an 802.11 wireless LAN (WLAN) adapter that may connect to other wireless devices or access points. If your LT330 does not come with such a network adapter, please consult your device provider to establish the desired network connectivity.

OPERATION

Powering ON and OFF

To activate the LT330, push and quickly release the Power Button. The display will come on in a few seconds. To put the LT330 in Standby mode, push and quickly release the Power Button. To turn the LT330 off for extended storage, power off safely using any software function that “shuts down computer” provided in the software operating system.

NOTE:

The battery pack shipped with your laptop may be low in power—please use the AC-DC adapter with the LT330 when setting up for the first time to fully charge the battery pack, or use the optional battery charger kit.

NOTE:

When the battery pack is charging, the blue Battery LED should blink slowly. If plugging in the AC-DC adapter does not trigger this blinking activity and the LED stays dark, the battery pack(s) may have been drained substantially. Try unplugging/ replugging the AC-DC adapter to the LT330 a few times to activate the charging process.

NOTE:

To conserve power, use (push and quick release) the Power Button to put the laptop in “Standby” mode while not in use. Pushing briefly on the same button will wake up the system within seconds.

NOTE:

Avoid using the Power Button (“hold 4+ seconds” feature) to turn off the laptop—this form of hardware shutdown is intended to be a means of recovery from lockups, and not as normal operation.

Start Up

If the power up (from Standby mode or otherwise) is successful, the appropriate interface will be displayed after a launch sequence of several seconds. The wireless LAN connection may take 10-15 seconds to be established.

Configuring the Rugged Laptop

The LT330 may be configured using the utilities and methods dictated by the software operating system. The LT330 should be configurable for various properties such as user profiles, network features, and several system elements.

Convert the LT330

- Unlock the latch to release the keyboard from the screen



- Gently pull out the keyboard



- Rotate the keyboard against the back of the screen



NVIS Mode and Screen Brightness Control (optional)

- When power button is pressed to power on the unit, power LED will flash orange once to indicate the unit is booting. Unit will boot into NVIS mode with zero nit brightness by default and display will be dark. You can press the “Brightness Up” and “Brightness Down” buttons to set NVIS mode display to desired brightness (up to 20 nits).
- To toggle between NVIS and high-brightness display mode, press the “NVIS/Normal Mode Toggle” button. When changed from NVIS mode to high-brightness mode, display brightness percentage will be same as the brightness level set in NVIS mode before toggling.
- Use brightness control buttons to set desired brightness level. When changed from normal display mode to NVIS mode, display brightness will be set to 0 nit (display is dark) and you need to use brightness control buttons to change display to desired brightness.
- Brightness up, Brightness down, NVIS/Normal toggle, Windows Key and Control Center functions are fixed and not user programmable.
- Two programmable buttons can be programmed through Button Manager.

Wireless Networking

The LT330 is often delivered with an embedded (user-inaccessible) 802.11 WLAN adapter equipped with a hidden custom antenna.

- Through the support of typical WLAN adapters, the LT330 should be able to detect all 802.11 access points in the vicinity to select the access point of choice for connection.
- The SSID and WEP/WPA/WPA2 (if enabled) parameters on the LT330 and the access points have to match. The SSID is case-sensitive and it is recommended to enable WEP/WPA/WPA2 encryption (or advanced alternatives) for secure access.
- When WEP/WPA/WPA2 is enabled, you may need to consult your network administrator or your networking equipment literature to properly configure associated settings such as Authentication mode, etc.
- Refer to the access point operating manuals for setting up the 802.11 access points.

USING THE RUGGED LAPTOP

Peripherals Support

Through its USB 3.0 ports, the LT330 supports a wide range of USB-based peripherals. These peripherals are applicable for software installation, applications storage, data storage, and system software recovery and updates.

For More Support

Users can download the Laptop Modules Basic Operation Guides from the DT Research website.

If the LT330 comes with a Mobile broadband module, please contact your product and/or service provider for the SIM Card installation procedures.

Product End-of-Life Notice

For reuse and recycling facilities, please visit the links below to access disassembling instructions:

<http://www.dtresearch.com.tw/zh/About/csr.html> or

http://www.dtresearch.com.tw/EPEAT/LT320_Product_End-of-Life_Disassembly_Instructions.pdf

- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

RF Exposure Information (RED & UKCA)

To be protected against all verified adverse effects, the separation distance of at least **0mm** must be maintained between the antenna of the radio having max. **2.9dB**i antenna and all persons.

Hereby, [DT Research, Inc.] declares that the radio equipment type [LT330] is in compliance with Directive 2014/53/EU and UK Radio Equipment Regulations 2017. The full text of the EU and UK declaration of conformity is available at the following internet address: <http://www.dtresearch.com>.

The functions of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) within the band 5150-5350 MHz for this device are restricted to indoor use only within all European Union countries (BE/BG/CZ/DK/DE/EE/IE/EL/ES/FR/HR/IT/CY/LV/LT/LU/HU/MT/NL/AT/PL/PT/RO/SI/SK/FI/SE/TR/N O/CH/IS/LI/UK(NI).

Maximum EIRP for EU

Bluetooth:2402MHz-2480MHz	11.59dBm
Bluetooth LE:2402MHz-2480MHz	6.66dBm
Wifi: 2412MHz-2472MHz/2422MHz-2462MHz	18.95dBm
Wifi: 5150MHz-5725MHz	18.28dBm
Wifi: 5725MHz-5875MHz	13.03dBm

This equipment complies with Directive 2014/53/EU and UK Radio Equipment Regulations 2017 radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by European Union market(France). These requirements set a SAR limit of 2W/kg averaged over one gram of tissue. The highest SAR value 0.44 W/kg reported under this standard during product certification for use when properly worn on the body.


The equipment has been tested with radios set to their highest transmission levels with following setup:


Mode	use against the head	worn or carried against the torso of the body	Worn on limbs
Separation	/	0 mm	/
SAR Value	/	0.44 W/kg	/
Sar Limit	2W/kg (over 10 g)	2W/kg (over 10 g)	4W/kg (over 10 g)

Body-worn accessories (e.g., carry case, belt clip) containing metallic components which has not been tested or certified may change the RF performance of the device, including its compliance with RF exposure. User shall avoid using such accessories and should operate at least the above stated separation distance to maintain RF exposure compliance.



Operating authorizations must exist to operate the product in the following member states of the European Union, refer to the table below.

			
AT	BE	BG	CH
CZ	DE	DK	EE
ES	FI	FR	HR
IE	IS	IT	LI
LU	LV	MT	NL
PL	PT	RO	SE
SK	TR	UK(NI)	

 UK
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Importer Name: Concept International GmbH

Importer Address: Zweibrückenstr. 5-7 80331 München Germany

Federal Communication Commission Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

RF Exposure Compliance

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by the FCC. These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body, with 0mm separation.

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Unique Identifier Trade Name:

Model No.: LT330



Responsible Party – U.S. Contact Information

DT Research, Inc.

2000 Concourse Drive, San Jose, CA 95131

<http://www.dtresearch.com>

FCC ID Label is in battery compartment, it could be easily found by removing the battery cover.

IC Compliance Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;

(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé.

This Class [B] digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

RF Exposure Compliance

To maintain compliance with RSS's RF Exposure guidelines, this equipment should be installed and operated with minimum distance between 0mm the radiator your body: Use only the supplied antenna.

Pour rester conforme aux directives d'exposition aux radiofréquences de RSS, cet équipement doit être installé et utilisé à une distance minimale de 0mm du radiateur de votre corps : Utilisez uniquement l'antenne fournie.