**Lenovo**

# Lenovo ThinkPad Edge E531 Intel® Core™ i3 i3-2348M Laptop 39.6 cm (15.6") Full HD 2 GB DDR3-SDRAM 320 GB HDD Windows 7 Professional Black

**Brand :** Lenovo          **Product family:** ThinkPad          **Product code:** 68855YU

**Product name :** E531

Intel Core i3-2348M (3M Cache, 2.30 GHz), 2GB DDR3 1600MHz RAM, 320GB 7200RPM SATA HDD, DVD+/-RW, 15.6" LED THT HD 1366x768, Intel HD 3000, 802.11bgn, Bluetooth 4.0, Gigabit Ethernet, USB 3.0, HDMI, Windows 7 Professional 64 /Windows 8 Pro 64 bit
Lenovo ThinkPad Edge E531. Product type: Laptop, Form factor: Clamshell. Processor family: Intel® Core™ i3, Processor model: i3-2348M, Processor frequency: 2.3 GHz. Display diagonal: 39.6 cm (15.6"), HD type: Full HD, Display resolution: 1366 x 768 pixels. Internal memory: 2 GB, Internal memory type: DDR3-SDRAM. Total storage capacity: 320 GB, Storage media: HDD, Optical drive type: DVD±RW. Operating system installed: Windows 7 Professional. Product colour: Black

## Design

| | |
|---|---|
| Product type * | Laptop |
| Product colour * | Black |
| Form factor * | Clamshell |

## Display

| | |
|---|---|
| Display diagonal * | 39.6 cm (15.6") |
| Display resolution * | 1366 x 768 pixels |
| Touchscreen * | ✘ |
| HD type | Full HD |
| LED backlight | ✔ |
| Native aspect ratio | 16:9 |

## Processor

| | |
|---|---|
| Processor manufacturer * | Intel |
| Processor family * | Intel® Core™ i3 |
| Processor generation | 2nd gen Intel® Core™ i3 |
| Processor model * | i3-2348M |
| Processor cores | 2 |
| Processor threads | 4 |
| Processor frequency * | 2.3 GHz |
| System bus rate | 5 GT/s |
| Processor cache | 3 MB |
| Processor cache type | Smart Cache |
| Processor lithography | 32 nm |
| Processor operating modes | 64-bit |
| Processor series | Intel Core i3-2300 Mobile Series |
| Processor codename | Sandy Bridge |
| Bus type | DMI |
| Thermal Design Power (TDP) | 35 W |
| Maximum number of PCI Express lanes | 16 |
| PCI Express slots version | 2.0 |
| PCI Express configurations | 1x16, 1x8+2x4, 2x8 |
| ECC supported by processor | ✘ |

## Memory

| | |
|---|---|
| Internal memory * | 2 GB |
| Internal memory type | DDR3-SDRAM |
| Memory clock speed | 1600 MHz |

## Ports & interfaces

| | |
|---|---|
| Headphone outputs | 1 |
| S/PDIF out port | ✘ |
| Microphone in | ✔ |
| Line-in | ✘ |
| Combo headphone/mic port | ✘ |
| Docking connector | ✔ |
| ExpressCard slot | ✔ |
| CardBus PCMCIA slot type | ✘ |
| SmartCard slot | ✔ |
| Headphone connectivity | 3.5 mm |
| Microphone connectivity | 3.5 mm |

## Performance

| | |
|---|---|
| Motherboard chipset | Intel HM77 Express |

## Keyboard

| | |
|---|---|
| Pointing device | Touchpad |
| Numeric keypad * | ✔ |

## Software

| | |
|---|---|
| Operating system architecture | 64-bit |
| Recovery operating system | Windows 8 Pro |
| Operating system installed * | Windows 7 Professional |

## Processor special features

| | |
|---|---|
| Intel® Wireless Display (Intel® WiDi) | ✔ |
| Intel® My WiFi Technology (Intel® MWT) | ✔ |
| Intel® Anti-Theft Technology (Intel® AT) | ✔ |
| Intel® Identity Protection Technology (Intel® IPT) | ✔ |
| Intel® Hyper Threading Technology (Intel® HT Technology) | ✔ |
| Intel® Turbo Boost Technology | ✘ |
| Intel® Small Business Advantage (Intel® SBA) | ✔ |
| Enhanced Intel SpeedStep Technology | ✔ |

## Memory

| | |
|---|---|
| Memory layout (slots x size) | 1 x 2 GB |
| Memory slots | 2x SO-DIMM |
| Maximum internal memory * | 16 GB |

## Storage

| | |
|---|---|
| Total storage capacity * | 320 GB |
| Storage media * | HDD |
| Number of HDDs installed | 1 |
| HDD capacity | 320 GB |
| HDD interface | SATA II |
| HDD speed | 7200 RPM |
| HDD size | 2.5" |
| Optical drive type * | DVD±RW |
| Card reader integrated | ✔ |
| Compatible memory cards | MMC, SD, SDHC, SDXC |

## Graphics

| | |
|---|---|
| Discrete graphics card model * | Not available |
| On-board graphics card * | ✔ |
| Discrete graphics card * | ✖ |
| On-board graphics card family | Intel® HD Graphics |
| On-board graphics card model * | Intel® HD Graphics 3000 |
| On-board graphics card base frequency | 650 MHz |
| On-board graphics card dynamic frequency (max) | 1150 MHz |

## Audio

| | |
|---|---|
| Audio system | HD |
| Number of built-in speakers | 2 |
| Speaker power | 1.5 W |
| Built-in microphone | ✔ |

## Camera

| | |
|---|---|
| Front camera resolution (numeric) | 1 MP |
| Front camera resolution | 1280 x 720 pixels |

## Network

| | |
|---|---|
| Wi-Fi | ✔ |
| Wi-Fi standards | 802.11b, 802.11g, Wi-Fi 4 (802.11n) |
| Ethernet LAN | ✔ |
| Ethernet LAN data rates | 10,100,1000 Mbit/s |
| Bluetooth | ✔ |
| Bluetooth version | 4.0 |
| Cabling technology | 10/100/1000Base-T(X) |

## Ports & interfaces

| | |
|---|---|
| USB 2.0 ports quantity * | 1 |
| USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity * | 2 |
| Ethernet LAN (RJ-45) ports | 1 |
| HDMI ports quantity * | 1 |
| DVI port | ✖ |
| Mini DisplayPort/Thunderbolt combo port | ✖ |
| VGA (D-Sub) ports quantity | 1 |
| LAN/VGA combo port | ✖ |

## Processor special features

| | |
|---|---|
| Intel® Clear Video HD Technology (Intel® CVT HD) | ✔ |
| Intel® InTru™ 3D Technology | ✔ |
| Intel® Quick Sync Video Technology | ✔ |
| Intel Flex Memory Access | ✔ |
| Intel® AES New Instructions (Intel® AES-NI) | ✖ |
| Intel Trusted Execution Technology | ✖ |
| Intel VT-x with Extended Page Tables (EPT) | ✔ |
| Intel Demand Based Switching | ✖ |
| Intel 64 | ✔ |
| Execute Disable Bit | ✔ |
| Idle States | ✔ |
| Thermal Monitoring Technologies | ✔ |
| Supported instruction sets | AVX |
| CPU configuration (max) | 1 |
| Embedded options available | ✖ |
| Intel Virtualization Technology for Directed I/O (VT-d) | ✖ |
| Intel Virtualization Technology (VT-x) | ✔ |
| Intel FDI Technology | ✔ |
| Intel Fast Memory Access | ✔ |
| Processor ARK ID | 74542 |
| Conflict-Free processor | ✔ |
| Integrated 4G WiMAX | ✔ |

## Battery

| | |
|---|---|
| Battery technology | Lithium-Ion (Li-Ion) |
| Number of battery cells | 6 |
| Battery capacity * | 48 Wh |

## Power

| | |
|---|---|
| AC adapter frequency | 50 - 60 Hz |
| DC-in jack | ✔ |

## Security

| | |
|---|---|
| Cable lock slot | ✔ |
| Cable lock slot type | Kensington |
| Fingerprint reader | ✔ |
| Trusted Platform Module (TPM) | ✖ |

## Weight & dimensions

| | |
|---|---|
| Width | 377 mm |
| Depth | 250 mm |
| Height | 25 mm |
| Weight * | 2.44 kg |

## Other features

| | |
|---|---|
| LightScribe | ✖ |
| Swivel webcam | ✖ |
| Intel segment tagging | Home office, Small Business |

## Catalog Object Cloud