

**Product Spec. :**

|                       |                                 |
|-----------------------|---------------------------------|
| Model                 |                                 |
| Part No               | 9S7-16R821-254                  |
| SKU Number            |                                 |
| Website Name          | Thin GF63 12VE                  |
| Brand                 | MSI                             |
| Platform              | INTEL                           |
| Series Name           | Gaming                          |
| Segment Name          | GF                              |
| Segment Name2         | ThinGF63                        |
| Segment Name3         | ThinGF63 12VE                   |
| Model                 | 16R8                            |
| MKT Name              | Thin GF63 12VE                  |
| Entity MKT Name       |                                 |
| MKT Spec              | Thin GF63 12VE-254CZ            |
| System/Barebone       | System                          |
| Chassis Color         |                                 |
| Color                 | ID2(BB)/Black-Black-Black-Black |
| Color_Website         | Black                           |
| Chassis Material      |                                 |
| A Side                | Metal                           |
| B Side                | Plastic                         |
| C Side                | Metal                           |
| D Side                | Plastic                         |
| Display               |                                 |
| Screen Size           | 15.6                            |
| Resolution            | IPS-Level FHD                   |
| Pixel                 | 1920x1080                       |
| LCD Features          | ANTI-GLARE                      |
| Screen Touch          | Non-touch                       |
| Frame Rate            | 144Hz                           |
| Response Time         | Tr+Tf 25ms                      |
| Color Range           | 45%                             |
| Screen Size_Website   | 15.6"                           |
| Pixel_Website         | FHD(1920x1080)                  |
| Frame Rate_Website    | 144Hz Refresh Rate              |
| Color Range_Website   | N/A                             |
| Display Type_Website  | IPS-Level                       |
| HDR Value             | N/A                             |
| Touch Feature_Website | NA                              |
| CPU                   |                                 |
| CPU Type              | 8 CORE                          |
| CPU Core Name         | ALDER LAKE-P                    |
| CPU Socket            | BGA-1744pin                     |
| CPU Number            | i5-12450H                       |
| CPU Clock             | 2GHz                            |
| CPU Cores             | 8                               |
| CPU Core Name_Website | 12th Gen Intel® Core™           |

|                                |                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------------------|
| CPU Number_Website             | i5-12450H processor                                                                            |
| CPU Specification_Website      | 8 cores (4 P-cores + 4 E-cores), Max Turbo Frequency 4.4 GHz                                   |
| Chipset                        |                                                                                                |
| Chipsets                       | N/A                                                                                            |
| Chipset SoC_Website            | Integrated SoC                                                                                 |
| Discrete Graphics              |                                                                                                |
| GPU1 Vendor                    | NVIDIA                                                                                         |
| GPU1 MKT Name                  | GeForce RTX 4050                                                                               |
| GPU1 Number                    | RTX 4050                                                                                       |
| GPU1 MKT Name_Website          | NVIDIA® GeForce RTX™ 4050 Laptop GPU                                                           |
| GPU1 Boost Clock_Website       | Up to 1605MHz Boost Clock 45W Maximum Graphics Power with Dynamic Boost. *May vary by scenario |
| GPU1 Remark_Website            | N/A                                                                                            |
| CPU and GPU Combined Power     |                                                                                                |
| Combined Power_Website         | N/A                                                                                            |
| OverBoost Ultra Remark_Website | N/A                                                                                            |
| Scenario Remark_Website        | N/A                                                                                            |
| Cooling                        |                                                                                                |
| Thermal                        | Cooler Boost                                                                                   |
| Fan                            | 1                                                                                              |
| Pipe                           | 3                                                                                              |
| Vapor Chamber                  |                                                                                                |
| Thermal Algorithm              |                                                                                                |
| Video Memory                   |                                                                                                |
| GPU1 VRAM Size                 | 6GB                                                                                            |
| GPU1 VRAM Type                 | GDDR6                                                                                          |
| Integrated Graphics            |                                                                                                |
| GPU1 Graphics_Website          | Intel® UHD Graphics                                                                            |
| Memory                         |                                                                                                |
| Memory Size                    | 8GB*2                                                                                          |
| Memory Type                    | DDR4-3200                                                                                      |
| Memory Speed                   | 1600(3200)MHz                                                                                  |
| Memory Remark_Website          | N/A                                                                                            |
| Memory Slot and Max Capacity   |                                                                                                |
| Memory Slot                    | 2 Slots                                                                                        |
| Memory Max Capacity_Website    | Max 64GB                                                                                       |
| Storage                        |                                                                                                |
| SSD Interface                  | PCIe GEN4x4 w/o DRAM NVMe                                                                      |
| SSD Form Factor                | M.2-2280 M-Key                                                                                 |
| SSD Size                       | 1TB*1                                                                                          |
| HDD1 Interface                 | N/A                                                                                            |
| HDD1 Form Factor               | N/A                                                                                            |
| HDD size                       | N/A                                                                                            |
| HDD1 RPM                       | N/A                                                                                            |
| ODD Type                       | N/A                                                                                            |
| Multi Bay                      | N/A                                                                                            |
| SSD Gen_Website                | NVMe SSD PCIe Gen4                                                                             |
| 2.5" HDD_Website               | N/A                                                                                            |

|                                                            |                                      |
|------------------------------------------------------------|--------------------------------------|
| SSD Remark                                                 |                                      |
| Storage Slot                                               |                                      |
| SSD (NVMe PCIe Gen)_ Website                               | 1x M.2 SSD slot (NVMe PCIe Gen4)     |
| HDD_ Website                                               | 1x 2.5" SATA HDD                     |
| Communications                                             |                                      |
| Accessory Lan_ Website                                     | Gb LAN                               |
| LAN                                                        |                                      |
| LAN_ Website                                               | Gigabit Ethernet                     |
| LAN                                                        | REALTEK/RTL8111H-VB-CG               |
| Wi-Fi/ Bluetooth                                           |                                      |
| WLAN/BT_ Website                                           | Intel® Wi-Fi 6 AX201, Bluetooth v5.2 |
| WLAN Version                                               | Wi-Fi 6+BT                           |
| WLAN/BT                                                    | INTEL/AX201.NGWG.NVW                 |
| I/O Ports                                                  |                                      |
| Audio Line In                                              | N/A                                  |
| Audio Line Out                                             | N/A                                  |
| Digital out SPDIF                                          | N/A                                  |
| RJ45                                                       | 1x                                   |
| USB Ports                                                  |                                      |
| Type-C (USB3.1 Gen2 / DP / Thunderbolt™3 optional)         | NA                                   |
| Type-C (USB3.2 Gen2 / DP / Thunderbolt™3)                  | NA                                   |
| Type-C (USB3.2 Gen1 / DP / Thunderbolt™3)                  | NA                                   |
| Type-C (USB3.2 Gen2 / DP / Thunderbolt™3) with PD charging | NA                                   |
| Type-C (USB3.2 Gen2 / DP)                                  | NA                                   |
| Type-C (USB / DP / Thunderbolt™ 4) with PD charging        | NA                                   |
| Type-C (USB / DP / Thunderbolt™ 4) with PD3.1 charging     |                                      |
| Type-C (USB / DP / Thunderbolt™ 4)                         | NA                                   |
| Type-C (USB / DP / Thunderbolt™) with PD charging          | NA                                   |
| Type-C (USB3.2 Gen2 / DP) with PD charging                 | NA                                   |
| Type-C (USB3.2 Gen2 / DP) with PD3.1 charging              |                                      |
| Type-C (USB3.1 Gen1 / DP)                                  | NA                                   |
| Type-C (USB3.2 Gen1 / DP)                                  | 1x                                   |
| Type-C USB3.1 Gen2                                         | NA                                   |
| Type-C USB3.2 Gen2                                         | NA                                   |
| Type-C USB3.2 Gen2 with PD charging                        | NA                                   |
| Type-C USB3.1 Gen1                                         | NA                                   |
| Type-C USB3.2 Gen1                                         | NA                                   |
| Type-A USB3.1 Gen1                                         | NA                                   |
| Type-A USB3.2 Gen1                                         | 3x                                   |
| Type-A USB3.1 Gen1/ QC3.0                                  | NA                                   |

|                                          |                                              |
|------------------------------------------|----------------------------------------------|
| Type-A USB3.2 Gen1/ QC3.0                | NA                                           |
| Type-A USB3.1 Gen2                       | NA                                           |
| Type-A USB3.2 Gen2                       | NA                                           |
| Type-C USB3.2 Gen2x2                     | NA                                           |
| Type-A USB3.1                            | NA                                           |
| Type-C USB3.0                            | N/A                                          |
| Type-A USB3.0                            | NA                                           |
| Type-A USB2.0                            | NA                                           |
| USB3.2 Gen 2 Type-C(connect to computer) | NA                                           |
| Card Reader                              |                                              |
| CardReader                               | NA                                           |
| Smart Card Reader                        |                                              |
| Video Ports                              |                                              |
| VGA Out                                  | NA                                           |
| HDMI™                                    | 1x HDMI™ (4K @ 30Hz)                         |
| DisplayPort                              | NA                                           |
| Mini Display Port                        | NA                                           |
| Keyboard                                 |                                              |
| Keyboard Types_ Website                  | Single Backlit Keyboard (Red)                |
| Keyboard Keys                            | 84KEYS                                       |
| Keyboard Backlit                         | N/A                                          |
| Keyboard Numeric                         | No                                           |
| Keyboard Color                           | BLACK                                        |
| Keyboard Language                        | CS Wleft                                     |
| Touchpad                                 |                                              |
| Touchpad                                 |                                              |
| WebCam                                   |                                              |
| WebCam                                   | HD type (30fps@720p)                         |
| Webcam Feature                           |                                              |
| Audio Port                               |                                              |
| Audio Jack_ Website                      | 1x Mic-in, 1x Headphone-out                  |
| Audio                                    |                                              |
| Audio Speaker                            | 2x 2W                                        |
| Audio Woofer                             | N/A                                          |
| Audio Mic                                |                                              |
| Audio Solution_ Website                  | Nahimic 3 Audio Enhancer, Hi-Res Audio Ready |
| AC Adapter                               |                                              |
| Adaptor Output                           | 120W adapter                                 |
| Adaptor                                  | 120W                                         |
| Adaptor Input                            | 90-264Vin                                    |
| Adaptor Unit Weight (g)                  | 630                                          |
| Power Cord Unit Weight (g)               | 150                                          |
| Battery                                  |                                              |
| Battery Type                             | 3CELLS/3S1P                                  |
| Battery Cell_ Website                    | 3-Cell                                       |
| Whrs                                     | 52.4 Whrs                                    |
| Battery Unit Weight (g)                  | 211                                          |

|                              |                                                                                                                                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Systems            |                                                                                                                                                      |
| OS                           | MULTI-LANGUAGE(WIN 11 HOME PLUS OLC OA3)                                                                                                             |
| OS Type                      | W11MH                                                                                                                                                |
| OS_Website                   | Windows 11 Home (MSI recommends Windows 11 Pro for business.)                                                                                        |
| Microsoft Office             |                                                                                                                                                      |
| OS-Office_Website            |                                                                                                                                                      |
| Dimension (WXDXH)            |                                                                                                                                                      |
| Dimension                    | 359 x 254 x 21.7 mm                                                                                                                                  |
| Dimension(Inches)_Website    | 14.13" x 10." x 0.85"                                                                                                                                |
| Weight (W/ Battery)          |                                                                                                                                                      |
| Weight                       | 1.86 kg                                                                                                                                              |
| Weight(lbs)_Website          | 4.1 lbs                                                                                                                                              |
| Weight (Docking)             | N/A                                                                                                                                                  |
| Weight (lbs Docking)_Website | N/A                                                                                                                                                  |
| Security                     |                                                                                                                                                      |
| Security Type_Website        | Kensington Lock                                                                                                                                      |
| Certification                |                                                                                                                                                      |
| Certification Type_Website   | NA                                                                                                                                                   |
| Sustainability               |                                                                                                                                                      |
| EPEAT_Website                |                                                                                                                                                      |
| Sensor                       |                                                                                                                                                      |
| Fingerprint_Website          | N/A                                                                                                                                                  |
| Fingerprint (Optional)       |                                                                                                                                                      |
| Ambient Light Sensor_Website | N/A                                                                                                                                                  |
| Gyroscope_Website            | N/A                                                                                                                                                  |
| Accelerometer_Website        | N/A                                                                                                                                                  |
| Magnetometer_Website         | N/A                                                                                                                                                  |
| Proximity Sensor             |                                                                                                                                                      |
| NFC (Optional)               |                                                                                                                                                      |
| Warranty                     |                                                                                                                                                      |
| Warranty                     | 24M                                                                                                                                                  |
| Warranty_Website             | N/A                                                                                                                                                  |
| Accessory                    |                                                                                                                                                      |
| Accessory_Website            |                                                                                                                                                      |
| Extra Bag                    | N/A                                                                                                                                                  |
| Extra Mouse                  | N/A                                                                                                                                                  |
| Remark                       |                                                                                                                                                      |
| I/O Ports Remark             |                                                                                                                                                      |
| Remark 1_Website             |                                                                                                                                                      |
| Remark 2_Website             |                                                                                                                                                      |
| Remark 3_Website             |                                                                                                                                                      |
| Remark 4_Website             |                                                                                                                                                      |
| Remark 5_Website             |                                                                                                                                                      |
| Software                     |                                                                                                                                                      |
| Software                     | Nvidia GeForce Experience, Nahimic 3, Gaming Mode, MSI App Player, Game Highlights, MSI Companion, Crosshair, Battery Master, MSI Center, Smart Auto |
| Model Info                   |                                                                                                                                                      |

|               |               |
|---------------|---------------|
| Series Name   | Gaming        |
| Segment Name  | GF            |
| Segment Name2 | ThinGF63      |
| Segment Name3 | ThinGF63 12VE |
| Barcode Info  |               |
| EAN           | 4711377086448 |
| JAN           |               |
| UPC           |               |
| UCC14         |               |

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