



Asus PRIME Z690-P WIFI D4 User Manual

1

2

Table Of Contents

3

4

5

6

7

8

9

10

11

12

13

14

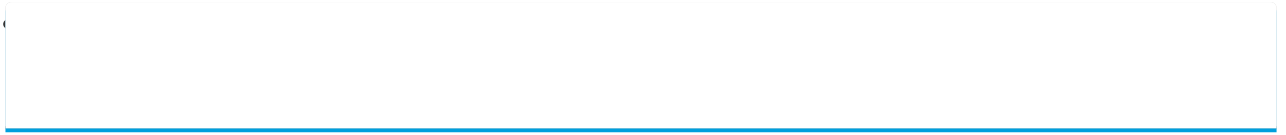
15

16

17

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67

68
69
70



•

Table of Contents

•

Bookmarks

Quick Links

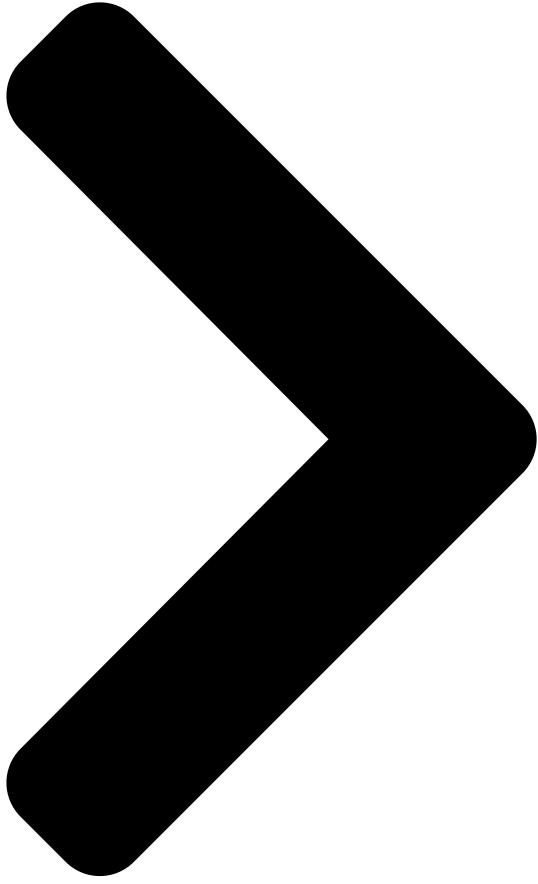
[1 Motherboard Layout](#)

[2 M.2 Installation](#)

[3 Knowing Bios](#)

[4 Bios Setup Program](#)

[Download this manual](#)



PRIME Z690-P
WIFI D4



Table of Contents

[Next Page](#)

1
2
3
4
5

Related Manuals for Asus PRIME Z690-P WIFI D4

[Motherboard Asus PRIME Z690-P WIFI D4 Quick Start Manual](#)

(2 pages)

[Motherboard Asus Prime Z690-P Quick Start Manual](#)

(2 pages)

[Motherboard Asus PRIME Z690-P Quick Start Manual](#)

(2 pages)

[Motherboard Asus ROG MAXIMUS Z690 FORMULA Manual](#)

(96 pages)

[Motherboard Asus PRIME Z690M-PLUS D4 Manual](#)

(68 pages)

[Motherboard Asus ROG STRIX Z690-A GAMING WIFI Manual](#)

(82 pages)

[Motherboard Asus ROG STRIX Z690-G GAMING WIFI Manual](#)

(74 pages)

[Motherboard Asus ROG STRIX Z690-E GAMING WIFI Manual](#)

(90 pages)

[Motherboard Asus TUF GAMING Z690-PLUS WIFI Quick Start Manual](#)

(2 pages)

[Motherboard Asus Z9PE-D8 WS Manual](#)

Dual intel socket 2011 (226 pages)

[Motherboard Asus SABERTOOTH Z77 User Manual](#)

Intel z77 express chipset (178 pages)

[Motherboard Asus Z170-A User Manual](#)

(130 pages)

[Motherboard Asus Z170M-E D3 User Manual](#)

(85 pages)

[Motherboard Asus ROG STRIX Z370-E GAMING User Manual](#)

(104 pages)

[Motherboard Asus TUF Gaming Z490-PLUS Manual](#)

(66 pages)

[Motherboard Asus ROG STRIX Z490-E Manual](#)

(76 pages)

Summary of Contents for Asus PRIME Z690-P WIFI D4

[Page 1](#) PRIME Z690-P WIFI D4...

[Page 2](#) Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification or alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

[Page 3: Table Of Contents](#)

Contents Safety information iv About this guidev PRIME Z690-P WIFI D4 specifications summary vi Package contentsx Installation tools and componentsxi Chapter 1: Product Introduction Before you proceed

1-1 Motherboard layout.....1-2...

[Page 4: Safety Information](#)

Safety information Electrical safety • To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system. • When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.

[Page 5: About This Guide](#)

Refer to the following sources for additional information and for product and software updates. ASUS website The ASUS website (www.asus.com) provides updated information on ASUS hardware and software products. Optional documentation Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer.

[Page 6: Prime Z690-P Wifi D4 Specifications Summary](#)

Extreme Memory Profile (XMP) ® OptiMem II * Actual Memory data rate depends on the CPU types and DRAM modules, for more information refer to www.asus.com for the Memory QVL (Qualified Vendors Lists). 1 x DisplayPort** 1 x HDMI port*** ® ...

[Page 7](#) PRIME Z690-P WIFI D4 specifications summary Ethernet 1 x Realtek 2.5Gb Ethernet Wi-Fi 6 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) Wireless & Bluetooth Supports 2.4/5GHz frequency band Bluetooth v5.2 Rear USB (Total 6 ports) 1 x USB 3.2 Gen 2x2 port (1 x USB Type-C ® ...

[Page 8](#) PRIME Z690-P WIFI D4 specifications summary Fan and Cooling related 1 x 4-pin CPU Fan header 1 x 4-pin CPU OPT Fan header 1 x 4-pin AIO Pump header 3 x 4-pin Chassis Fan headers Power related 1 x 24-pin Main Power connector...

[Page 9](#) Form Factor 12 inch x 9.2 inch (30.5 cm x 23.4 cm) • Specifications are subject to change without notice. Please refer to the ASUS website for the latest specifications. • MyASUS offers a variety of support features such as helping to troubleshoot issues, optimizing product performance, integrating ASUS software, and recovery drive creation.

[Page 10: Package Contents](#)

Package contents Check your motherboard package for the following items. Motherboard 1 x PRIME Z690-P WIFI D4 motherboard Cables 2 x SATA 6Gb/s cables 1 x ASUS Wi-Fi moving antennas 1 x I/O Shield Miscellaneous 1 x M.2 Rubber package 2 x M.2 SSD screw packages...

[Page 11: Installation Tools And Components](#)

Installation tools and components Phillips (cross) screwdriver PC chassis Power supply unit Intel LGA 1700 CPU Intel LGA 1700 compatible CPU Fan ® ® DDR4 DIMM SATA hard disk drive SATA optical disc drive (optional) Graphics card (optional) M.2 SSD module (optional) 1 Bag of screws The tools and components in the table above are not included in the motherboard package.

[Page 13: Chapter 1: Product Introduction](#)

Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, or components. PRIME Z690-P WIFI D4...

[Page 14: Motherboard Layout](#)

Motherboard layout 23.4cm(9.2in) CPU_FAN CPU_OPT KBMS_USB1112 ATX_12V_2 ATX_12V_1 DIGI+ 1442K HDMI_DP U32G2X2_C1 U32G2_3 LAN_U32G1_910 LGA1700 AUDIO M.2(WIFI) M.2_1(SOCKET3) AIO_PUMP PCIE SATA IRST 4.0 X4 2260 2280 22110 2242 Ethernet PCIEX16(G5) PCIEX16(G3)_1 Intel ® Z690 BATTERY 64Mb 128Mb BIOS BIOS 2280 2260 2242 PCIEX16(G4)

[Page 15](#) 12. AURA RGB header 1-15 13. Clear CMOS header 1-16 14. COM Port header 1-17 15. Front Panel Audio header 1-17 16. SPI TPM header (14-1pin) 1-18 17. System Panel header 1-19 18. Thunderbolt header 1-20 PRIME Z690-P WIFI D4...

[Page 16](#) Contact your retailer immediately if the PnP cap is missing, or if you see any damage

to the PnP cap/socket contacts/motherboard components. ASUS will shoulder the cost of repair only if the damage is shipment/ transit-related.

[Page 17](#) A DDR4 memory module is notched differently from a DDR, DDR2, or DDR3 module. DO NOT install a DDR, DDR2, or DDR3 memory module to the DDR4 slot. Recommended memory configurations DIMM_A1 DIMM_A2 DIMM_A2 DIMM_A2 DIMM_B1 DIMM_B2 DIMM_B2 PRIME Z690-P WIFI D4...

[Page 18](#) (D/C) from the same vendor. Check with the vendor to get the correct memory modules. • Visit the ASUS website for the latest QVL, and memory frequency support depends on the CPU types. Chapter 1: Product Introduction...

[Page 19](#) Single VGA Dual VGA Triple VGA PCIe 5.0/4.0/3.0 x16 PCIe 3.0 x16_1 PCIe 4.0/3.0 x16 PCIe 3.0 x16_2 Connect a chassis fan to the chassis fan headers when using multiple graphics cards for better thermal environment. PRIME Z690-P WIFI D4...

[Page 20](#) Fan and Pump headers The Fan and Pump headers allow you to connect fans or pumps to cool the system. CPU_FAN CPU_OPT AIO_PUMP FAN PWM FAN IN FAN PWR CHA_FAN1 CHA_FAN2 CHA_FAN3 • DO NOT forget to connect the fan cables to the fan headers. Insufficient air flow inside the system may damage the motherboard components.

[Page 21](#) • If you want to use two or more high-end PCI Express x16 cards, use a PSU with 1000W power or above to ensure the system stability. PRIME Z690-P WIFI D4...

[Page 22](#) M.2 slots The M.2 slots allow you to install M.2 devices such as M.2 SSD modules. M.2_1(SOCKET3) M.2_2(SOCKET3) M.2_3(SOCKET3) • Intel Gen processors: ® M.2_1 slot (Key M), type 2242/2260/2280/22110 - Intel Gen processors support PCIe 4.0 x4 mode. ® Intel Z690 Chipset: •...

[Page 23](#) Intel Rapid Storage Technology through the onboard Intel Z690 chipset. ® ® Before creating a RAID set, refer to the RAID Configuration Guide. You can • download the RAID Configuration Guide from the ASUS website. PRIME Z690-P WIFI D4 1-11...

[Page 24](#) USB 3.2 Gen 1 Type-C Front Panel connector ® The USB 3.2 Gen 1 Type-C connector allows you to connect a USB 3.2 Gen 1 ® Type-C module for an additional USB 3.2 Gen 1 Type-C port on the front panel. The ®...

[Page 25](#) The USB 2.0 headers provide data transfer speeds of up to 480 Mb/s. USB_E12 USB_E34 PIN 1 DO NOT connect a 1394 cable to the USB connectors. Doing so will damage the motherboard! The USB 2.0 module is purchased separately. PRIME Z690-P WIFI D4 1-13...

[Page 26](#) Addressable Gen 2 headers The Addressable Gen 2 headers allow you to connect individually addressable RGB WS2812B LED strips or WS2812B based LED strips. ADD_GEN 2_1 ADD_GEN 2_3 ADD_GEN 2_2 Ground Data PIN 1 The Addressable Gen 2 headers support WS2812B addressable RGB LED strips (5V/ Data/Ground), with a maximum power rating of 3A (5V) and the addressable headers on this board can handle a combined maximum of 500 LEDs.

[Page 27](#) RGB LED strip is connected in the correct orientation, and the 12V connector is aligned with the 12V header on the motherboard. • The LED strip will only light up when the system is powered on. • The LED strip is purchased separately. PRIME Z690-P WIFI D4 1-15...

[Page 28](#) Clear CMOS header The Clear CMOS header allows you to clear the Real Time Clock (RTC) RAM in the CMOS, which contains the date, time, system passwords, and system setup parameters. CLRRTC PIN 1 To erase the RTC RAM: Turn OFF the computer and unplug the power cord. Use a metal object such as a screwdriver to short the two pins.

[Page 29](#) HD Audio. Connect one end of the front panel audio I/O module cable to this header. AAFP We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability. PRIME Z690-P WIFI D4 1-17...

[Page 30](#) SPI TPM header (14-1pin) This header supports a Trusted Platform Module (TPM) system with a Serial Peripheral Interface (SPI), allowing you to securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protects

digital identities, and ensures platform integrity. PIN 1 VCCSPI S_SPI_TPM_IRQ#...

[Page 31](#) (depending on the operating system settings). • Reset button header (RESET) The 2-pin header allows you to connect the chassis-mounted reset button. Press the reset button to reboot the system. PRIME Z690-P WIFI D4 1-19...

[Page 32](#) Thunderbolt header The Thunderbolt™ header allows you to connect an add-on Thunderbolt™ I/O card that supports Intel®'s Thunderbolt™ Technology, allowing you to connect Thunderbolt™-enabled devices to form a daisy chain-configuration. TB_HEADER PIN 1 • The add-on Thunderbolt™ I/O card and Thunderbolt™ cables are purchased separately.

[Page 33: Chapter 2: Basic Installation](#)

CPU designed for LGA1155, LGA1156, LGA1151, and LGA1200 sockets on the LGA1700 socket. • ASUS will not cover damages resulting from incorrect CPU installation/removal, incorrect CPU orientation/placement, or other damages resulting from negligence by the user. Take caution when lifting the load...

[Page 34](#) Chapter 2: Basic Installation...

[Page 35: Cooling System Installation](#)

2.1.2 Cooling system installation Apply Thermal Interface Material to the CPU cooling system and CPU before you install the cooling system, if necessary. To install a CPU heatsink and fan assembly PRIME Z690-P WIFI D4...

[Page 36](#) Intel 600 series ® motherboard. • Additional holes for LGA1200 compatible cooling systems are also available on ASUS' Intel 600 series motherboards, ® however, we still strongly advise consulting with your cooling system vendor or manufacturer on the compatibility and...

[Page 37](#) • If you wish to install an AIO cooler, we recommend installing the AIO cooler after installing the motherboard into the chassis. AIO_PUMP CPU_FAN CPU_OPT PRIME Z690-P WIFI D4...

[Page 38: Dimm Installation](#)

2.1.3 DIMM installation To remove a DIMM Chapter 2: Basic Installation...

[Page 39: M.2 Installation](#)

Ensure to install the bundled M.2 rubber pad before installing your single sided M.2 storage device. • DO NOT install the bundled M.2 rubber pads when installing a double-sided M.2 storage device. The rubber pad installed by default is compatible with double sided M.2 storage devices. PRIME Z690-P WIFI D4...

[Page 40](#) • The M.2 heatsink can be installed to the M.2_1 slot or to the M.2_3 slot. • The M.2 SSD module is purchased separately. Chapter 2: Basic Installation...

[Page 41: Motherboard Installation](#)

2.1.5 Motherboard installation Install the ASUS I/O Shield to the chassis rear I/O panel. Some sharp edges and points might cause physical injury. We recommend you put on cut or puncture resistant gloves before motherboard and I/O shield installation. Place the motherboard into the chassis, ensuring that its rear I/O ports are aligned to the chassis'...

[Page 42](#) Place six (6) screws into the holes indicated by circles to secure the motherboard to the chassis. DO NOT over tighten the screws! Doing so can damage the motherboard. Chapter 2: Basic Installation 2-10...

[Page 43: Atx Power Connection](#)

2.1.6 ATX power connection Ensure to connect the 8-pin power plug. PRIME Z690-P WIFI D4 2-11...

[Page 44: Sata Device Connection](#)

2.1.7 SATA device connection Chapter 2: Basic Installation 2-12...

[Page 45: Front I/O Connector](#)

This connector will only fit in one orientation. Push the connector until it clicks into place. To install USB 2.0 connector To install USB 3.2 Gen 1 connector USB 2.0 USB 3.2 Gen 1 To install front panel audio connector AAFP PRIME Z690-P WIFI D4 2-13...

[Page 46: Expansion Card Installation](#)

2.1.9 Expansion card installation To install PCIe x16 cards To install PCIe x1 cards Chapter 2: Basic Installation 2-14...

[Page 47](#) 9V devices when the 6-pin PCIe power connector is connected. • The Thunderbolt™ series card is sold separately. • Please visit the official website of your purchased Thunderbolt card for more details on compatibility. PRIME Z690-P WIFI D4 2-15...

[Page 48: Wi-Fi Antenna Installation](#)

2.1.10 Wi-Fi antenna installation Installing the ASUS Wi-Fi moving antenna Connect the bundled ASUS Wi-Fi moving antenna connectors to the Wi-Fi ports at the back of the chassis. • Ensure that the ASUS Wi-Fi moving antenna is securely installed to the Wi-Fi ports.

[Page 49: Motherboard Rear And Audio Connections](#)

Please connect your USB 3.2 Gen 1 devices to USB 3.2 Gen 1 ports and your USB 3.2 Gen 2 devices to USB 3.2 Gen 2 ports for faster and better performance for your devices. PRIME Z690-P WIFI D4 2-17...

[Page 50: Audio I/O Connections](#)

* Ethernet port LED indications Activity Link LED Speed LED ACT/LINK SPEED Status Description
Status Description No link No link 2.5 Gbps connection GREEN Linked GREEN 1 Gbps / 100 Mbps / BLINKING Data activity ORANGE Ethernet port 10 Mbps connection ** Audio 2, 4, 5.1 or 7.1-channel configuration Headset Port...

[Page 51](#) Connect to Stereo Speakers Connect to 2-channel Speakers Connect to 4-channel Speakers PRIME Z690-P WIFI D4 2-19...

[Page 52](#) Connect to 5.1-channel Speakers Connect to 7.1-channel Speakers Chapter 2: Basic Installation 2-20...

[Page 53: Starting Up For The First Time](#)

While the system is ON, press the power button for less than four seconds to put the system on sleep mode or soft-off mode, depending on the BIOS setting. Press the power button for more than four seconds to let the system enter the soft-off mode regardless of the BIOS setting. PRIME Z690-P WIFI D4 2-21...

[Page 54](#) Chapter 2: Basic Installation 2-22...

[Page 55: Chapter 3: Bios And Raid Support](#)

BIOS and RAID Support Knowing BIOS The new ASUS UEFI BIOS is a Unified Extensible Interface that complies with UEFI architecture, offering a user-friendly interface that goes beyond the traditional keyboard- only BIOS controls to enable a more flexible and convenient mouse input. You can easily navigate the new UEFI BIOS with the same smoothness as your operating system.

[Page 56: Bios Setup Program](#)

BIOS Setup program Use the BIOS Setup to update the BIOS or configure its parameters. The BIOS screens include navigation keys and brief onscreen help to guide you in using the BIOS Setup program. Entering BIOS at startup To enter BIOS Setup at startup, press <Delete> or <F2> during the Power-On Self Test (POST).

[Page 57: Asus Ez Flash 3](#)

ASUS EZ Flash 3 The ASUS EZ Flash 3 feature allows you to update the BIOS without using an OS-based utility. Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu or press hotkey <F5>.

[Page 58: Asus Crashfree Bios 3](#)

ASUS CrashFree BIOS 3 The ASUS CrashFree BIOS 3 utility is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using a USB flash drive that contains the BIOS file.

[Page 59: Raid Configurations](#)

For more information on configuring your RAID sets, please refer to the RAID Configuration Guide which you can find at <https://www.asus.com/support>, or by scanning the QR code. RAID definitions RAID 0 (Data striping) optimizes two identical hard disk drives to read and write data in parallel, interleaved stacks.

[Page 60](#) Chapter 3: BIOS and RAID Support...

[Page 61: Appendix](#)

Appendix Notices FCC Compliance Information Responsible Party: Asus Computer International Address: 48720 Kato Rd., Fremont, CA 94538, USA Phone / Fax No: (510)739-3777 / (510)608-4555 This device complies with part 15 of the FCC Rules. 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.

[Page 62](#) Compliance Statement of Innovation, Science and Economic Development Canada (ISED) This device complies with Innovation, Science and Economic Development Canada licence exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

[Page 63](#) Tenez cet appareil à distance du ventre des femmes enceintes et du bas-ventre des adolescents. PRIME Z690-P WIFI D4...

[Page 64](#) ASUS products sold in Vietnam, on or after September 23, 2011, meet the requirements of the Vietnam Circular 30/2011/TT-BCT. Các sản phẩm ASUS bán tại Việt Nam, vào ngày 23 tháng 9 năm 2011 trở về sau, đều phải đáp ứng các yêu cầu của Thông tư 30/2011/TT-BCT của Việt Nam.

[Page 65](#) ASUSTek Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of The Radio Equipment Regulations 2017 (S.I. 2017/1206). Full text of UKCA declaration of conformity is available at <https://www.asus.com/support/>. The WiFi operating in the band 5150-5350MHz shall be restricted to indoor use for the country listed below: UKCA RF Output table (The Radio Equipment Regulations 2017) Intel®...

[Page 66](#) 2014/53/EU. Cijeli di: <https://www.asus.com/support/> tekst EU izjave o sukladnosti dostupan je na <https://www.asus.com/support/> WiFi yang Beroperasi pada 5150-5350 MHz akan terbatas untuk penggunaan WiFi koji radi na opsegu frekvencija 5150-5350 MHz bit će ograničen na...

[Page 67](#) ASUSTek Computer Inc. tukaj izjavlja, da je ta naprava skladna s temeljnimi zahtevami in drugimi relevantnimi določili Direktive 2014/53/EU. Polno besedilo izjave EU o skladnosti je na voljo na <https://www.asus.com/support/> WiFi, ki deluje v pasovnem območju 5150-5350 MHz, mora biti v državah, navedenih v spodnjem seznamu, omejen na notranjo uporabo: Declaración de conformidad simplificada para la UE...

[Page 68: Warranty](#)

• ASUS offers a voluntary manufacturer's Commercial Guarantee. • ASUS dragovoljno nudi komercialno proizvođačko jamstvo. • ASUS reserves the right to interpret the provisions of the ASUS • ASUS zadržava prava na tumačenje odredbi ASUS komercijalnog Commercial

Guarantee. jamstva. •...

[Page 69](#) • ASUS tilbyr som produsent en frivillig kommersiell garanti. • Bảo hành thương mại này của ASUS được cung cấp độc lập và ngoài • ASUS forbeholder seg retten til å tolke bestemmelsene i ASUS sin Bảo đảm pháp lý theo luật định và không có cách nào ảnh hưởng đến kommersielle garanti.

[Page 70: Asus Contact Information](#)

Address: 1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan ASUS COMPUTER INTERNATIONAL (America) Address: 48720 Kato Rd., Fremont, CA 94538, USA ASUS COMPUTER GmbH (Germany and Austria) Address: Harkortstrasse 21-23, 40880 Ratingen, Germany ASUSTeK (UK) LIMITED Address: 1st Floor, Sackville House, 143-149 Fenchurch Street, London, EC3M 6BL,...

This manual is also suitable for:

[Prime z690-p d4](#)[Prime z690-p wifi](#)[Prime z690-p](#)