

Dell Edge Gateway 3002 Specifications

Computer Model: Dell Edge Gateway 3002
Regulatory Model: N03G
Regulatory Type: N03G001



Notes, cautions, and warnings

-  **NOTE:** A NOTE indicates important information that helps you make better use of your product.
-  **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
-  **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Dimensions and weight

Product

Table 1. Product

Height	125 mm (4.92 in)
Width	125 mm (4.92 in)
Depth	51 mm (2 in)
Weight	1 kg (2.20 lb)
Volume	0.80 L

Packaging

 **NOTE: The packaging weight includes the total weight of the Edge Gateway and four antennas.**

Table 2. Packaging

Height	262 mm (10.32 in)
Width	139 mm (5.47 in)
Depth	241 mm (9.49 in)
Shipping weight (includes packaging materials)	1.71 kg (3.77 lb)

Mounting dimensions

 **NOTE: Mounting dimensions includes the dimensions of the Edge Gateway and various mounting options.**

 **NOTE: Each mounting option is sold separately.**

Table 3. Mounting dimensions

	Standard mount	Quick mount	Quick mount and cable control bars	DIN mount	Perpendicular mount	Standard mount and cable control bars
Weight	1.23 kg (2.71 lb)	1.26 kg (2.78 lb)	1.55 kg (3.42 lb)	1.02 kg (2.25 lb)	1.10 kg (2.42 lb)	1.53 kg (3.37 lb)
Height	169.20 mm (6.66 in)	169.20 mm (6.66 in)	222.30 mm (8.75 in)	125 mm (4.92 in)	125 mm (4.92 in)	222.30 mm (8.75 in)
Width	167.20 mm (6.58 in)	167.20 mm (6.58 in)	273.30 mm (10.76 in)	125 mm (4.92 in)	143.50 mm (5.65 in)	273.30 mm (10.76 in)

	Standard mount	Quick mount	Quick mount and cable control bars	DIN mount	Perpendicular mount	Standard mount and cable control bars
Depth	61.90 mm (2.44 in)	64.60 mm (2.54 in)	64.60 mm (2.54 in)	59.20 mm (2.33 in)	55.50 mm (2.18 in)	61.90 mm (2.44 in)

VESA mounting dimensions

The Edge Gateway can be mounted on a standard VESA mount.

Table 4. VESA mounting dimensions

Height	75 mm (2.95 in)
Width	75 mm (2.95 in)



Environmental and operating conditions

Environmental conditions

Table 5. Environmental conditions

Ingress protection rating IP50

 **CAUTION:** Install the Edge Gateway in an area that is not exposed to direct sunlight.

 **NOTE:** For outdoors and rugged environments, install the Edge Gateway in an external enclosure (sold separately).


Operating conditions


Table 6. Operating conditions

Maximum vibration

Operational

- 5 Hz with 0.002 G²/Hz
- 350 Hz with 0.002 G²/Hz

 **NOTE:** Operational values are based on the 0.26 Grms profile. These values are tested for all operational orientations and are retrieved from two minutes per test orientation with IO meter.

 **NOTE:** All screws on the Edge Gateway are embedded with a Nylock seal to resist vibration and loosening.

Maximum shock

Operational

Half sine shock

All operational orientations; 40G ± 5% with pulse duration of 2 msec ± 10% (equivalent to 20 in/sec [51 cm/sec])

Non-operational


Half sine shock

Tested on all six sides; 160 G ± 5% with pulse duration of 2 msec ± 10% (equivalent to 50 in/sec [127 cm/sec])

Maximum altitude

Operational (maximum, unpressurized)

–15.20 m to 5,000 m (–50 ft to 16,404 ft)

 **NOTE:** The maximum temperature is derated 1°C/305 m (1000 ft) above sea level altitude.

Non-operational (maximum, unpressurized)

–15.20 m to 10,668 m (–50 ft to 35,000 ft)

Operating environment

Temperature range (system)

- Operating: –30°C to 70°C (–22°F to 158°F)

- Non-operating (with a maximum temperature gradation of 15°C per hour): -40°C to 70°C (-40°F to 158°F)

⚠ WARNING: The maximum operating temperature of the Edge Gateway is 70°C (158°F). Do not exceed this maximum temperature while operating the Edge Gateway inside an enclosure. Internal heating of the Edge Gateway electronics, other electronics, and the lack of ventilation inside an enclosure can cause the operating temperature of the Edge Gateway to be greater than the outside ambient temperature. Continuous operation of the Edge Gateway at temperatures greater than 70°C (158°F) may result in an increased failure rate and a reduction of the product life. Ensure that the maximum operating temperature of the Edge Gateway when placed inside an enclosure is 70°C (158°F) or less.

Temperature range (with components)

- Operating (SD card): -40°C to 85°C (-40°F to 185°F)
- Operating (eMMC): -40°C to 85°C (-40°F to 185°F)

Maximum relative humidity (with maximum humidity gradation of 10% per hour)

- Operating: 10% to 95% (non-condensing)
- Non-operating: 5% to 95% (non-condensing)

Pollution degree

2

- ▣ **NOTE: The ambient temperature is based on the free-air environment, system mounting, and certain workload assumptions.**
- ▣ **NOTE: An open space of 63.50 mm (2.50 in) is recommended around the Edge Gateway for optimal air circulation.**
- ▣ **NOTE: The maximum operating temperature may vary, depending on factors such as air flow, system mounting, software applications, and so on.**
- ▣ **NOTE: The temperature at the center of the exposed base surface must not exceed 82°C (179.6°F).**
- ▣ **NOTE: For optimal thermal distribution when mounted, ensure that Edge Gateway is installed as instructed in the supplied documentation.**

Power

Power source

The Edge Gateway supports the following power sources, which are isolated to 2.5 KV:

- DC-IN
- Power over Ethernet (PoE)

 **CAUTION: Turn off the Edge Gateway before you change the power source.**

 **NOTE: You can connect either DC-IN and/or PoE.**






 **NOTE: USB power is limited to 0.6 A/3 W for USB 3.0 port and 0.4 A/2 W for USB 2.0 port. Ensure that the Edge Gateway is within the allowed 13 W PoE Class 0 range.**

Table 7. DC parameters

DC parameters	
Supported input voltage	12/24 V vehicle power system (12 V ~ 57 V wide DC input, ISO 7637-2 & SAE J1113 compliant).  NOTE: Supports vehicle cold-crank down to 6 V.
Maximum input current	1.08 A at 12 V/0.23 A at 57 V
Minimum DC supply power requirement	13 W
Power management	System power on, standby, and hibernate management through optional ignition input.
Supported wake up events	<ul style="list-style-type: none"> · Alarm (real-time clock) · WLAN and LAN (Windows OS only) · USB · Ignition and Direct Ignition (DI)
Power protection	System power protection. For example, vehicle battery protection through optional ignition input.  NOTE: Ignition input provides an option to turn off the device or put it into a low-power mode (depending on the OS), whenever the vehicle ignition is turned off to protect from vehicle battery draining.
System idle	4.2 W  NOTE: Operating system is active but no applications are running.
Processor full load	8.1 W  NOTE: Operating system active with 100% processor utilization and 2D/3D load.





DC parameters	
System full load	12.9 W  NOTE: Operating system active with 100% processor utilization and simultaneous access to I/O devices.
Recommended power supply	17 W (20% derating)  NOTE: With consideration of voltage derating under high environmental temperature.

Table 8. PoE parameters

PoE parameters	
Compatibility	IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af  NOTE: Full-controller compliance with IEEE 802.3.af standard for maximum 15.4 W, with power up to 48 V over existing Ethernet infrastructure, with no modifications required.  NOTE: Standard IEEE 802.3 Ethernet interface provided for 100BASE-TX and 10BASE-T applications (802.3, 802.3u, 802.3ab, and 802.3x) 9014-bytes jumbo frame support.
Number of ports	One Fast Ethernet Media Access Control (MAC) port and one physical layer (PHY) port
Speed	10/100 Mbps (supports Wake on LAN and WLAN)
Connector	8-pin RJ45
Protection	Built-in 2.25 KV isolation protection on LAN ports and ESD IEC61000-4-2 ±30 KV
Power input	15.4 W maximum according to IEEE 802.3af-2003 (standard)
Supported input voltage	48 V DC
Supported input current	0.27 A

Ignition

Table 9. Ignition parameters

Parameter	Minimum voltage	Maximum voltage	Default
High-level input voltage (V_{IH})	9 V	32 V	12 V
Low-level input voltage (V_{IL})	0 V	1.2 V	0 V

3 V CMOS coin-cell battery

Table 10. Coin-cell battery

RTC coin-cell battery (lithium-ion)	
Type	BR-2032
Manufacturer	Panasonic Corporation
Nominal voltage	3 V
Nominal capacity	200 mAh



NOTE: Dell recommends that you check or replace the coin-cell battery before operation. Also, check or replace the coin-cell battery if the system has been disconnected from a power source for more than two years.

Operating systems

The Edge Gateway supports the following operating systems:

- Windows 10 IoT Enterprise LTSC 2016
- Ubuntu Core 16

 **NOTE: Windows 10 IoT Enterprise LTSC 2016 is supported only on Edge Gateway models with 32 GB eMMC.**

Processor

Table 11. Processor

Configuration	Processor
Edge Gateway 3002	Intel Atom Processor E3805 (1 MB L2 cache)

Memory

Table 12. Memory type

Type	DDR3L
Memory channel	Single
Minimum memory	2 GB
Maximum system memory	2 GB

Storage

Table 13. Storage specifications

Storage type	Capacity supported
micro-SD	<ul style="list-style-type: none">· 8 GB· 32 GB· 64 GB· 128 GB
eMMC	<ul style="list-style-type: none">· 8 GB· 32 GB

 **NOTE: Windows 10 IoT Enterprise LTSC 2016 is supported only on Edge Gateway models with 32 GB eMMC.**

External ports and connectors

 **NOTE:** For more information about ports and connectors location, see the *Edge Gateway Installation and Operation Manual*.

Table 14. Ports and connectors on Edge Gateway

Ports	Edge Gateway 3002
RS-232/RS-485/RS-422 ports	0
Audio line-out	0
Audio line-in	0
Ethernet port one (with PoE)	1
Ethernet port two (without PoE)	1
WLAN or Bluetooth antenna connector	1
GPS antenna connector	1
Mobile broadband antenna connector (3G)	1
Mobile broadband antenna connector (4G LTE)	1
ZigBee antenna connector	1
Connector for external enclosure chassis intrusion switch (optional)	1
DisplayPort	0
GPIO	0
USB 3.0	1
USB 2.0	1
CANbus	1

 **NOTE:** The connector for wireless antenna () and GPS antenna () is the same.

Communications

Wireless LAN

Table 15. Wireless LAN specifications

WLAN standards supported	802.11b, 802.11g, 802.11n
802.11b data rates supported	1, 2, 5.5, and 11 Mbps
802.11g data rates supported	6, 9, 12, 18, 24, 36, 48, and 54 Mbps
802.11n data rates supported	MCS0 to MCS7 with and without Short GI. Maximum data rate 150 Mbps.
Encryption	WEP 64-bit and 128-bit, TKIP, AES, and WPS

Wireless WAN

Table 16. Wireless WAN specifications

Card	Region
DW5815 (4G LTE)	AT&T and Verizon (North America)
DW5515 (3G)	Rest of the world

DW5815 specifications

Table 17. DW5815 card specifications

Network	LTE/HSPA+
Frequency bands	<ul style="list-style-type: none"> • LTE band: 2, 4, 5, 13, 17 • HSPA+/WCDMA band: 2, 5
Speed (Downlink)	< 150 Mbps
Speed (Uplink)	< 50 Mbps
Fallback network	HSPA+/WCDMA
Fallback speed	<ul style="list-style-type: none"> • Downlink: < 42 Mbps • Uplink: < 5.76 Mbps
SIM	AT&T and Verizon

DW5515 specifications

Table 18. DW5515 card specifications

Network	HSPA+/WCMDA
Frequency bands	<ul style="list-style-type: none"> • HSPA+/WCMDA band: 1, 2, 5, 6, 8, 19 • EDGE/GPRS frequency: 850, 900, 1800, 1900 MHz
Speed (Downlink)	< 21 Mbps
Speed (Uplink)	< 5.76 Mbps
Fallback network	EDGE/GPRS
Fallback speed	<ul style="list-style-type: none"> • Downlink: < 236.8 Kbps • Uplink: < 118.4 Kbps
SIM	All

Bluetooth

Table 19. Bluetooth specifications

Bluetooth standard supported	Dual-mode Bluetooth 4.0 BLE
Bluetooth Classic	Version 2.1+EDR
Bluetooth data rates supported	Up to 3 Mbps
Bluetooth Low Energy	Yes
Encryption	128-bit

CANbus

Table 20. CANbus specifications

General	Bus type/Card interface	USB
	Connector	3-pin terminal block Molex 39532–6503
	Power consumption	162 mA at 3.3 V (controller), 70 mA at 5 V, and 5.6 mA at 3.3 V (transceiver)
Communications	CAN controller	Atmel ATSAME70N19A-CNT
	CAN transceiver	NXP TJA1052i
	Protocol	CAN2.0 A/B/FD
	Speed	Up to 1 Mbps (CAN 2.0), 2 Mbps (CAN-FD)
	Signal support	CAN_H, CAN_L, GND
Protection	Galvanic Isolation	2.5 KV
	ESD	Transceiver IEC-61000-4-2 ± 8KV



Security

Table 21. Security specifications

Trusted Platform Module (TPM)	TPM 2.0
External enclosure chassis intrusion switch	When the chassis is opened, the external enclosure chassis intrusion switch raises an intruder electrical signal to the gateway, triggering an external enclosure chassis intrusion event.

 **NOTE: Depending on your country's regulations, TPM system boards may be unavailable.**

Environmental compliance

Table 22. Environmental compliance

BFR/PVC-free

No



Software

The following software is supported in the Edge Gateway 3000 Series:

- Dell Command | Configure (DCC)
- Dell Command | Monitor (DCM)
- Dell Command | Powershell (DCPP)—For Windows only
- Edge Device Management (EDM)
- Support Assist (includes Dell Data Vault (DDV))

Service and support

Table 23. Service and support

One year base hardware warranty, with mail-in service.	Included
Basic extensions up to five years, with mail-in service.	Available
ProSupport extensions up to five years, with advanced exchange.	Available

 **NOTE: For a copy of our guarantees or limited warranties, write to 'Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, TX 78682'. For more information, visit www.dell.com/warranty.**

Contacting Dell

To contact Dell for sales, technical assistance, or customer service issues:

1. Go to www.dell.com/contactdell.
2. Verify your country or region in the drop-down list at the bottom of the page.
3. Select the appropriate service or support link based on your requirement or choose the method of contacting Dell that is convenient for you.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area.



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