Dell Edge Gateway 3000 Series

3001 Model
General-Purpose
Automation

3002 Model
Transportation
& Logistics

3003 Model
Media &
Retail Kiosks

Extend your Internet of Things analytics and security even farther to the edge of the network. The 3000 series is compact, low power and ready for challenging field and mobile use cases.

Edge analytics for mobile and field applications

Dell Edge Gateways are intelligent devices designed to aggregate, secure, analyze and relay data from diverse sensors and equipment at the edge of the network. These gateways bridge both legacy systems and modern sensors to the internet, helping you to get business insights from the real-time, pervasive data in your machines and equipment.

Headless, fanless and around 1 kg (2.2lbs), the 3000 Series is our compact gateway for challenging IoT mobile and field situations: single-application processing on manufacturing lines, cargo tracking and other truck/bus/train/marine transportation, retail kiosks, HVAC systems in building automation, managing green energy assets and more. Place them in challenging situations at the network edge.

Small footprint but big connectivity

Engineered with an industrial-grade form factor and solid-state drive, the Dell gateway can reliably run 24x7 with long life at extended temperatures. The right-sized 3000 series offers wide connectivity via Wi-fi, Bluetooth LE, optional cellular mobile broadband 3G or 4G LTE for select countries, or 10/100 Ethernet, including Power over Ethernet (PoE)

Easy on power usage

While designed for 24x7 use for many years, the new 3000 Series offers several features for reducing power usage, especially for transportation uses. By targeting I/O and single-application computing, we reduced power use in the 3000. The 3000 series offers an ignition wake pin and wake on LAN, with Power On/Standby/Hibernate when using DC power and can support power volt fluctuations down to 6 V. Wake-up events can include alarm, LAN, USB, ignition or direct ignition.

I/O and protocols targeted for use case

All models include a GPS, accelerometer and atmospheric pressure sensor for transportation and geo-referenced asset management. They also have 10/100 Ethernet and PoE. Depending on the targeted model, gateways may support wired (serial or USB) and wireless connections, like a GPIO, video/audio, CAN bus, dual Ethernet and zigbee for wireless mesh networks. Plus, all Dell gateways feature a TPM chip for hardware root of trust, secure boot, BIOS-level lock down of unused I/O ports and watchdog timer to provide device-level security.

Flexibility and manageability

Dell edge gateways are designed for the flexible manageability that IT requires. You can choose from Dell Edge Device Manager (EDM) or a third-party on-premise console such as Microsoft System Center, backed by the Dell Command Client Suite for both Linux and Windows.

Dell Services and Support

End-to-end service solutions for the 3000 Series include Deployment Services, Base Hardware Warranty with extensions available up to 5 years, or optional ProSupport with next-day Advanced Exchange (after remote diagnosis) up to 5 years. Other services include custom BIOS settings, OS options and factory installation of your software image. Also talk to us about custom warranties.

OEM-Ready

Specifically designed for original equipment manufacturers, an OEM-Ready version of the gateway is available, or ask us to enable a full IoT system for your specific business need. Ask us about cloud, servers, storage, networking and mobility solutions for IoT. We are experts in manageability, security, data integration, analytics and services for end-to-end IoT solutions.

Model Number	Dell Edge Gateway 3001 Model For: General-Purpose Automation	Dell Edge Gateway 3002 Model For: Transportation/ Logistics	Dell Edge Gateway 3003 Model For: Media/Retail Kiosks
Dimensions	125 mm wide x 125 mm high x 51 mm deep (4.9 x 4.9 x 2 inches).		
Form factor	Fanless and headless (video port on 3003 only). Mounting optimized for 75x75mm VESA, wall (standard) mounting and DIN-rail mounting. Additional mounting options include perpendicular DIN-rail mount, quick-release DIN-rail mount, and cable management control bars for standard mounting		
Weight	1 kg +/- 0.02 kg (2.2lbs +/- 0.04lbs)		
Processor Speed / Cache	Intel® Atom™ E3805 dual core 1.33 GHz / 1 MB	Intel® Atom™ E3805 dual core 1.33 GHz / 1 MB	Intel® Atom™ E3815 + 400 dual core+ MHz GPU 1.46 GHz / 512 KB
Operating system	Ubuntu Core 16, Ubuntu Server 18.04 and Windows 10 IoT Enterprise 2016 LTSB (only with 32GB eMMC).		
Memory	2 GB, DDR3L – 1066 MHz		
Drive/Storage	Industrial-grade Micro-SD card: 8GB / 16GB / 32 GB / 64 GB (Contact Dell OEM Sales for larger options.) Embedded multi-media controller (eMMC): 8GB standard / 32GB option with WWAN.		
I/O (Per Model)	1 x 10/100 Fast Ethernet (RJ-45) with PoE (15.4W) Serial Interfaces: 2 x RS-232/422/485. GPIO Multi-function I/O: 0-5V, 8 channel, independently programmable, DAC, ADC. Optional ZigBee module.	2 x 10/100 Fast Ethernet (RJ-45). Main port supports PoE (15.4W) Wireless PAN: Bluetooth Low Energy and integrated zigbee/802.15.4 module for mesh networking. CANbus / Controller Area Network (CAN2.0 A/B/FD) 1Mbps (CAN2.0), 5Mbps (CAN-FD).	2 x 10/100 Fast Ethernet (RJ-45). Main port supports PoE (15.4W) Video: DisplayPort 1.1; resolution 2560x1600@60Hz) Audio: 3.5mm Line Out/Line In; RealTek codec for data-compressed, multi-channel streaming. Optional ZigBee module.
I/O (All models)	USB: 1x USB 2.0, 1x USB 3.0 Integrated MEMS: Accelerometer, Pressure, Temperature and Humidity Integrated GPS Wireless LAN: 2.4GHz, 802.11b/g/n/Bluetooth Low Energy 4.0 Integrated zigbee module on 3002 model; optional zigbee on 3001 and 3003 models WWAN/Cellular: 3G or 4G LTE for select countries, US/Canada 4G LTE with AT&T or Verizon (WWAN card is factory installed only) Antenna ports for: Wi-Fi/BLE/GPS, 3G or 4G (zigbee antenna port on 3002 model only)		
Power Input	DC-IN or Power over Ethernet (PoE). System power protection. Enables low-power use (ignition wake, wake on LAN). • DC-IN accepts 12/24 V car power system (12V-57V wide DC input); supports transient low-voltage states (battery crank) ≥6 VDC. Ignition input supports power on/standby/hibernate at 9-32 VDC with a 5-sec delay. Wake up events: alarm, LAN, USB, ignition or direct ignition. • PoE is 10/100 Mbps and connects via 8-pin RJ45 port; features full-controller compliance with IEEE 802.3.af standard for maximum 15.4 W, with power up to 48 V over existing Ethernet infrastructure, no modifications required. Standard IEEE 802.3 Ethernet interface provided for 100BASE-TX and 10BASE-T applications (802.3, 802.3u, and 802.3ab, 802.3x) 9014 bytes jumbo frame support. PoE supports wake on LAN.		
Accessories/ Ecosystem	Optional accessories include flexible mounting options; pre-certified Wi-fi, GPS, and WWAN antennas (zigbee antenna on 3002); Phoenix connectors for serial, CANBus and power; industrial uSD storage options up to 64GB.		

Environmental/ Design	Temp without airflow*	Operating: -30°C to 70°C Non-Operating: -40°C to 85°C	Operating: -30°C to 70°C Non-Operating: -40°C to 85°C	Operating: -30°C to 60°C Non-Operating: -40°C to 85°C
	Temp with 0.7 m/s airflow*	Operating: -30°C to 75°C	Operating: -30°C to 75°C	Operating: -30°C to 70°C
	Relative Humidity	Operating: 10% to 90% (non-condensing) @ 40°C Non-operating: 5% to 95% (non-condensing) @ 40°C		
	Vibration	Operating: 0.26 Grms profile (5 Hz with 0.0002 G2/Hz and 350 Hz with 0.0002 G2/Hz) 2 minutes per axis. Non-Operating: 1.54 Grms profile (10 Hz with 0.003 G2/Hz, 20 Hz with 0.01 G2/Hz, and 250 Hz with 0.01 G2/Hz) 60 minutes per axis.		
	Thermal Shock	150 cycles at system level at spec limits (-40, 85C); min. 20C/min ramp and 10 min dwells		
	Shock	Non-Operating: MIL-STD-810G, Method 514.7, Procedure 5 (Shock) - 160G with 2msec pulse duration in all axis Operating: MIL-STD-810G, Method 514.7, Procedure 1 (Shock) - 40G with 2msec pulse duration in all axis		
	EMC	CE,FCC		
	Safety	61010-1, 61010-2-201 & 60950-1. (IEC/EN/UL/CSA61010-1 and IEC/ EN/UL/CSA61010-2-201.)		
	Altitude	Operating: –15.20 m to 5000 m (–50 ft. to 16,404 ft.) [NOTE: maximum operating temperature is derated 1°C/305 m (1000 ft.) above sea level altitude.] Non-Operating: –15.20 m to 10,668 m (–50 ft. to 35,000 ft.)		
	Ingress Protection	IP50, IEC 60529		
Vertical Certification	Marine Use CE DoC MED Directive 96/98/EC IACS E-10 IEC 60945 Class A and Class B, Rail (Rolling Stock) Use CE DoC Rolling Stock Directive 2008/27/EC, Vehicle (eMark Certification) E24, Aircraft RTCA-DO160G (Note: Vertical Certification for system only, additional certification may be required in final production environment (enclosure, power, etc)			
Device-level security	Trusted Platform Module (TPM) 2.0; Secure Boot, BIOS password and I/O port disablement. Intrusion switch connector.			
Manageability	Dell Client Command Suite, Dell Edge Device Manager (EDM) and VMware Pulse IoT Control Center (Ubuntu editions only)			
Warranty	Commercial services vary. Limited hardware warranty[1] with mail in service; Optional ProSupport with Advanced Exchange[2] after remote diagnosis, contracts up to 5 years. Custom warranties available. Restrictions apply.[3]			
Configuration Services	Image load, BIOS customization, Laser Etching, Asset tagging and reporting. Custom configuration services available. Restrictions apply.[3]			
Financing/Leasing	Dell Financial Services offers low rates financing for Dell and non-Dell Technology, and flexible lease-to-own options. Even extend terms to your customers. (Subject to product availability, credit approval, and regional regulations.)			
OEM / Co-branding	OEM-Ready version available: From bezel to BIOS to packaging, your Edge Gateways can look and feel as if they were designed and built by you. Inquire about customized OS, memory, storage options. For more information, visit www.dell.com/oem			

*Notes:
• Ambient temperature specification is based on free air environment and recommended mounting
• 2.5inches (63.5mm) open space around the device is recommended for air circulation
• Actual maximum operating temperature depends on many variables including airflow, mounting, orientation, and software applications.
• Temperature measured at the center of exposed heatsink base surface shall not exceed 83C

Find more online at dell.com/IoTgateway

1. For copy of Limited Hardware Warranty, write Dell USA LP, Attn: Warranties, One Dell Way, Round Rock, TX 7882 or see www.dell.com/warranty
2. Advanced Exchange after Remote Diagnosis: Remote Diagnosis is determination by online/phone technician of cause of issue; may involve customer access to system and multiple or extended sessions. If issue is covered by Limited Hardware Warranty (www.dell.com/warranty) and not resolved remotely, part will be dispatched, usually next business day following completion of Remote Diagnosis. Availability and terms of Dell Services vary by region and product. Other conditions apply.
3. Dell Services: availability and terms of Dell Services vary by region. For more information visit dell.com/servicedescriptions.
4. More detailed specifications can be found at www.dell.com/support

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