

### Overview

#### HPE GL10 IoT Gateway (Formerly HPE EL10 Intelligent Gateway)



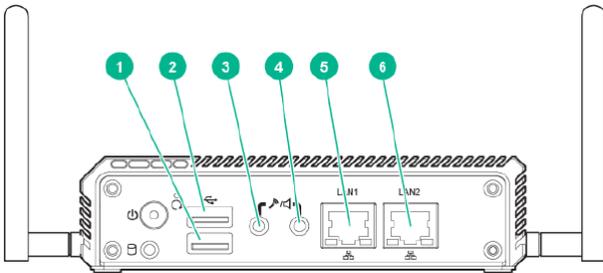
Is your company struggling with moving analytics to the edge of your network?

HPE IoT Gateways enable organizations to rapidly acquire, analyze and take action on real-time data as it's being collected for additional analysis at a later stage. Bringing computing and analytics close to the edge accelerates the speed of your decision-making and reduces the chance of lost opportunities or a missed red flag. HPE IoT Gateways are a perfect complement to the industry's first HPE Edgeline Converged Edge Systems for expanding your Internet of Things (IoT) infrastructure beyond traditional data center confines and to enable true edge computing.

The HPE GL10 IoT Gateway is an entry-level ruggedized compute solution designed for data aggregation and light analysis at the edge itself. It is optimally configured with CPU, memory, connectivity and an expansion I/O selection to address a host of IoT needs. HPE IoT Gateways are designed to operate in harsh edge environments, such as manufacturing plants, oil and gas facilities and power stations, where wide operating temperature ranges, tolerance for high levels of shock/vibration and resilience against ingress are the norm.

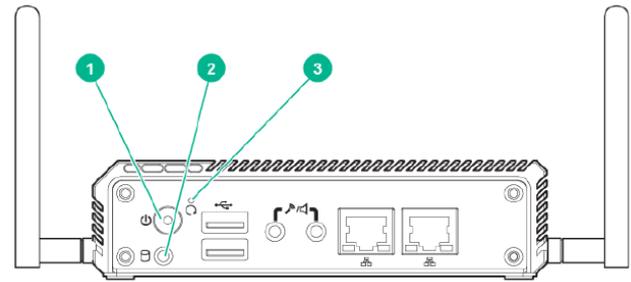
These IoT Gateways are complete solutions out-of-the-box, designed to be easy-to-use and quick-to-deploy. Standard in box are a universal power kit and universal mounting kits enabling these systems to be placed in a wide range of locations.

## Standard Features



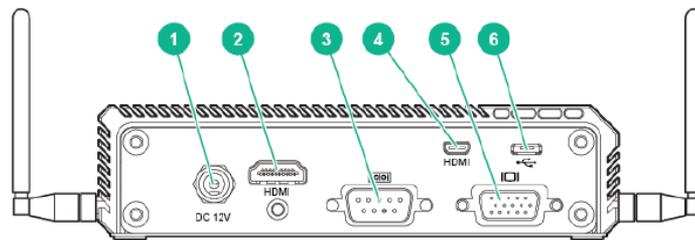
**Front Panel Components**

1. USB 2.0 standard (Type A) port
2. USB 3.0 standard (Type A) port
3. Mic
4. Audio Out
5. LAN 1 connector (10/100/1000 Mbps)
6. LAN 2 connector (10/100/1000 Mbps)



**Front Panel LEDs and Buttons**

1. Power On/Off Button & LED
2. Drive LED
3. Reset Button (recessed)



**Rear Panel Components**

1. Power connector
2. HDMI standard (Type A) port
3. Serial port connector (RS-232 or RS-422/485 via jumper change)
4. HDMI micro (Type D)
5. VGA connector
6. Micro-USB 2.0 (Micro-AB) port

## Configuration Information – Factory Integrated Models

### Key features of HPE IoT Gateways

- **Purpose Built:** HPE IoT Gateways are ruggedized compute solutions designed to operate in a variety of edge environments – Industrial, Manufacturing, Smart Infrastructure, Oil & Gas etc.
- **Optimum Configuration:** Optimum CPU, memory, connectivity and expansive I/O selection addresses a host of IoT needs.
- **Designed for Future Capabilities:** Product designed to support a host of modular connectivity options that are customer upgradeable providing a strong foundation for future growth.
- **Secure Platform:** I/O Port Disablement, BIOS Password, Secure Boot. HPE Aruba software such as ClearPass to authenticate edge devices and secure VPN to protect remote connections
- **Industrial Grade:** Extended operating temperature -20°C to 60°C, Passively cooled, Shock and Vibration Tested, IP40 Certified
- **Complete Solution:** Easy-to-use and quick-to-deploy including a universal power kit (USA, UK, EURO and JPN) as well as universal mounting kit in support of DIN rail and wall mount applications are standard in box.

The HPE GL10 IoT Gateway offers the following unique benefits:

- **Price/performance-optimized:** IoT Gateway designed for entry level deployments
- **Optimally configured:** Intel Atom CPU, 4GB RAM, 32 GB SDD Storage and an expansive I/O selection.
- **Low power solution:** 12 Volts DC with locking connector (typical total power consumption of 10.5 Watts)
- **Designed for Future Capabilities:** 2 mini-PCIe card slots enable a host of connectivity options that are customer upgradeable providing a strong foundation for future growth requirements.

## Technical Specifications

### Processor

Intel® Atom™ Model	SoC HFM Frequency	SoC LFM Frequency	Cores	L2 Cache	Power	DDR3 MHz
E3826	1.46 GHz	533 MHz	2	1 MB	7W	1067

**NOTE:** For more information regarding Intel® Atom, please see the following URL:

<http://www.intel.com/content/www/us/en/processors/atom/atom-processor.html>

### Chipset

Integrated with SoC

### Graphics

Intel® HD Graphics (integrated with SoC)

Base: 533 MHz

Burst: 667 MHz

### Memory

Type	DDR3 Small-Outline (SO-DIMM)	
Supported DIMMs	DDR3L-1067 4GB (1R x 8)	
DIMM Slots Available	1	(1 DIMM slots per processor, 1 channels per processor, 1 DIMMs per channel)
Maximum Capacity (SO-DIMM)	4GB	(1 x 4GB SO-DIMM)

#### NOTES:

- The SoC supports 2 memory channels but a DIMM slot is available on only 1 channel
- Only 4GB SO-DIMMs are currently offered with this model, but it's compatible with 2GB/8GB SO-DIMMS.
- Registered DIMMs (RDIMMs), Load Reduced DIMMs (LRDIMMs) and Non-Volatile DIMMs (NVDIMMs) are not supported.

### Expansion slots

One (1) PCI Express Full-Mini Card Expansion Slot – Slot #1

One (1) PCI Express Half-Mini Card Expansion Slot – Slot #2

- Slot#1 can also be used for mSATA
- Slot#1 and Slot#2 support PCIe and USB signaling

**NOTE:** This system model is pre-wired with 4 antenna attach points for use with wireless module options.

### Network

#### Controller

Intel® i210AT - One (1) 10/100/1000Mbps Ethernet Port

Realtek 8111G – One (1) 10/100/1000Mbps Ethernet Port

**NOTE:** This system model does not support Power-over-Ethernet (PoE).

### Storage Controller and Devices

SATA controllers are Integrated in the Intel® Atom™ SoC

Slot #	Technology	Bus Width	Connector Width	Form Factor	Supported Sizes
SFF Drive Bay	SATA 3GB/s	x1	x1	2.5" SFF	32 GB
mSATA Slot (shared with slot #1)	SATA 3GB/s	x1	x1	mSATA	N/A (Third-party)

**NOTE:** The SFF drive in this system model is not hot-swappable.

### Maximum Internal Storage

Drive Bay 32 GB 1 x 32 GB

mSATA Slot N/A (Third Party) -

**NOTE:** This system is compatible with any SFF or mSATA drive, but only selected SSDs are currently offered.

### Power Supply

External AC 36W (12V, 3A) universal power supply kit (USA, UK, EURO and JPN)

### System Fans

None. Passively cooled fan less product

## Technical Specifications

<b>Interfaces</b>	<p>Power Input - IEC 60130-10 Type A (5.5mm x 2.5mm) w/ threaded locking ring support</p> <p>One (1) RS-232 Serial Port – switchable to RS-422/485 4-wire by internal ribbon cable changes</p> <p>Two (2) USB 2.0 Ports – 1 standard (Type-A) and 1 Micro-AB</p> <p>One (1) USB 3.0 Port - 1 standard (Type-A)</p> <p>One (1) VGA Port – supports 2560 x 1600 @ 60 Hz</p> <p>Two (2) HDMI Port – 1 standard (Type A) and 1 micro (Type D), supporting 1920 x 1080 @ 60 Hz</p> <p>One (1) Mic In and One (1) Audio Out</p> <p>Power On/Off Button &amp; LED</p> <p>Drive LED</p> <p>System Reset Button</p> <p>Four (4) pre-wired antenna attach points for wireless module options</p> <ul style="list-style-type: none"> <li>• 2 x WWAN SMA Female</li> <li>• 2 x Wi-Fi RP-SMA Female</li> </ul>
<b>Operating System Support</b>	<p>For more information on Hewlett Packard Enterprise's Certified and Supported systems for the OS' available for your system, please visit our OS Support Site: <a href="http://www.hpe.com/info/ossupport">http://www.hpe.com/info/ossupport</a></p> <p><b>ROM, BIOS and Driver Support</b></p> <p>For more information on Hewlett Packard Enterprise's Certified and Supported systems for the latest software ROM, BIOS and drivers available for your system, please visit our Support Center Site: <b>NOTE :</b> <a href="http://www.hp.com/go/ossupport">http://www.hp.com/go/ossupport</a> and our <a href="#">driver download page</a> which can be found from the <a href="#">HPE Support Center</a>: <a href="http://www.hpe.com/support/hpesc">http://www.hpe.com/support/hpesc</a></p>
<b>Industry Standard Compliance</b>	<p>Microsoft® Logo certifications</p> <p>USB 2.0 and 3.0 Support</p> <p>ACPI 2.0 Compliant</p> <p>International/Ingress Protection (IP): IP40 Rated</p> <p><b>NOTE:</b> IP40 – protected against ingress of objects such as tools and small wires &gt;1mm, but not liquids.</p>
<b>Security</b>	<p>I/O Port Disablement</p> <p>BIOS Password</p> <p>UEFI Secure Boot</p> <p>HPE Aruba Secure VPN (for protecting remote connections)</p> <p>HPE Aruba ClearPass (for authenticating edge devices)</p>
<b>Trusted Platform Module</b>	<p>Trusted Platform Module 1.2 (Infineon SLB9635) is embedded on the system, and can be enabled and disabled using the BIOS</p> <p><b>NOTE:</b> The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the system. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008, 2012/2012 R2. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM). The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: <a href="https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04939549">https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04939549</a></p> <p><b>NOTE:</b> The TPM key is unique to every TPM deployed system and must be retained. Misplacing or losing the key could result in data loss.</p>
<b>Form Factor</b>	<p>HPE GL10 IoT Gateway is a standalone product.</p> <p>Universal mounting kit allows for wall or DIN rail mounting. Optional VESA kit is available.</p>
<b>Warranty</b>	<p>This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through customized service agreements.</p> <p><b>NOTE:</b> System Warranty includes 3-Year Parts, 0-Year Labor, 0-Year Onsite support with next business day response. Additional information regarding worldwide limited warranty and technical support is available at: <a href="http://h20564.www2.hpe.com/hpsc/wc/public/home">http://h20564.www2.hpe.com/hpsc/wc/public/home</a></p>

## Technical Specifications

### NOTE:

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

### Step 1: Base Configuration (Choose System)

**HPE IoT Gateway System** HPE EL10 Intel® Atom Dual Core 1.46GHz 4GB 32GB w/o Operating System 847976-B21  
Intelligent Gateway

### NOTES:

- HPE Part Number and ordering systems will maintain “EL10” nomenclature in support of maintaining all necessary and required safety and regulatory certifications

### Step 2: Choose Option Kits (End User Installation)

#### GL10 supports 1 FMC and 1 HMC

- One (1) PCI Express Full-Mini Card Expansion Slot #1
- One (1) PCI Express Half-Mini Card Expansion Slot #2

#### GL10 does not support HPE LTE Option Kits due to user inaccessible SIM location on the GL10

**Connectivity Modules** HPE Edgeline Wide Temperature Wi-Fi Option Kit (FMC) 845779-B21

(Min:0, Max:1 – 1 x Full-Mini Card or 1 x Half-Mini Card)

### NOTES:

- PCI Express Full-Mini Card (FMC) with PCIe interface to system
- Supports wide operating temperature of -20°C to 60°C
- Wi-Fi Module supporting 802.11 a/b/g/n, 2.4/5.0 GHz, and 2x2 MIMO.
- Speeds up to 300 Mbps.
- Includes 2 Wi-Fi Antennae that attach to chassis

Min:0 Max:2 – 1 x Half-Mini and 1 x Full-Mini Card)

HPE Edgeline Wide Temperature WWAN 3G Option Kit (FMC) 845788-B21

### NOTES:

- PCI Express Full-Mini Card (FMC) with USB 2.0 interface to system
- SIM slot is located on the underside of the module
- Supports wide operating temperature of -20°C to 60°C
- 3G/3.75G (HSPA+) WWAN module. Speeds up to 21.0 Mbps Download and 5.76 Mbps Upload.
- Supported frequencies: GSM | GPRS | EDGE: 850, 900, 1800, 1900 MHz, UMTS | HSPA: 800 / 850\*, 900, AWS 1700,1900, 2100 MHz, \* includes Bands B6 and B19 (800 MHz) as a subset of B5 (850 MHz)
- Includes 2 WWAN Antennae that attach to chassis

HPE Edgeline Wi-Fi/BT Option Kit (HMC) 874669-B21

### NOTES:

- PCI Express Half-Mini Card (HMC) with Wi-Fi PCIe and BT USB interfaces to system
- IEEE 802.11a/b/g/n/ac 2.4/5.0 GHz, and 2x2 MIMO.
- Dual-Mode Bluetooth 2.1 (+EDR), 3.0 (+HS), 4.0 (BLE)
- Wi-Fi speeds of up to 867 Mbps
- Non Wide Temp -20 - 45 o C
- Includes 2 Wi-Fi Antennae that attach to chassis

### Step 3: Choose Additional Options

**Mounting Accessories** HPE EL10 Intelligent Gateway VESA Mounting Kit 848461-B21

## Technical Specifications

### Antenna Options

HPE Edgeline Wide HPE IP67 3G LTE and Wi-Fi Ant w 2m cbl

876592-B21

**NOTES:**

- WWAN - 2x MIMO 698-960/1710-2690MHz
- Wi-Fi - 2X MIMO 2400-2500/4900-5900MHz
- Size - 145 x 135 x 25mm with 2m cable length
- IP 67 suitable for outdoor use
- 3G / LTE WWAN and Wi-Fi Support

## Technical Specifications

### HPE GL10 IoT Gateway

#### Chassis Dimensions

##### (H x W x D)

Aluminum Housing  
35.98 mm (1.4") x 138.5 mm (5.5") x 116.4 mm (4.6")

#### Weight

0.68 KG (1.5 lbs)

#### Power

Typical: 5.9W  
Maximum: 10.6W

#### Shock and Vibration

**Operational Shock** 30 G, IEC 60068-2-27, half sine, 11 ms duration  
**Operational Vibration** 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis

**NOTE:** Shock and Vibration testing conducted on a system configured with SSDs

#### System Inlet Temperature

**Extended Operating** -20° to 60°C (-4° to 140°F) at sea level with extended temperature peripherals

**NOTE:** Operating temperature range can be reduced if any non-wide temperature options are configured in the system.

**Non-Operating** -40° to 60°C (-40° to 140°F)

#### Relative Humidity

**Operating** 5 to 95% relative humidity (Rh), 40°C (104°F) maximum wet bulb temperature, non-condensing

**Non-Operating** 5 to 95% relative humidity (Rh), 40°C (104°F) maximum wet bulb temperature, non-condensing

#### Acoustic Noise

**None - Passively cooled solution with solid state drives**

#### Emissions Classification

**FCC Rating** Class B

#### (EMC)

**Normative Standards** CE/FCC Class B (w/o RF) with base model only  
CE/FCC Class B (RF), PTCRB, GCF with Intel AC7260 WI-FI Card and Telit HE910G 3G module

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

## Summary of Changes

Date	Version History	Action	Description of Change
18-Dec-2017	From version 7 to 8	Updated	In mid-2017 Hewlett-Packard Enterprise elected to rebrand the EL10 and EL20 to the below: HPE GL10 IoT Gateway HPE GL20 IoT Gateway Some documentation and / or labeling may reference the below as HPE continues to evaluate the rebrand of the HPE IoT Gateway product line: Edgeline Edgeline EL10 EL20 Edgeline EL20 EL20
2-Oct-2017	From version 6 to 7	Updated	Update sections, SKUs and update the name of the QuickSpecs
7-Aug-2017	From version 5 to 6	Updated	Update Overview, Standard Features and Technical Specifications
16-Dec-2016	From version 4 to 5	Update	Comprehensive updates to introduction, features and ordering menus
10-Jun-2016	From version 3 to 4	Update	Updates overall QuickSpecs information
22-Jan-2016	From version 2 to 3	Update	Update the overview and technical specifications section
11-Dec-2015	From version 1 to 2	Update	Update messaging for the HPE Edgeline EL10 Intelligent Gateway Series
1-Dec-2015	Version 1	Created	Create the QS for the HPE Edgeline EL10 Intelligent Gateway Series



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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.

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