

### Overview

### Introduction

Wireless Wide Area Network (WWAN) is an optional feature sold separately or as an add-on feature on select HP notebooks, Ultrabooks and tablets

HP Mobile Broadband modules provide integrated WWAN technology such as LTE\*\*, DC-HSPA+, HSPA+, HSDPA, HSUPA, WCDMA, GSM, GPRS, EDGE, CDMA, and GNSS connectivity over several radio frequency bands. (Select modules also supports 2G / 3G roaming). HP Mobile Broadband modules use this integrated WWAN technology to connect to wireless networks operated by mobile network operators in many countries worldwide. (Separately purchased mobile operator service required.)

\*\* 4G LTE not available on all products or in all countries.

A WWAN connection requires wireless data service contract, network operator support, and is not available in all areas. Contact a service provider (e.g. Mobile Network Operator) to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors.

Selected HP Mobile Broadband Wireless notebooks support Wireless WAN (WWAN) as an after-market option if ordered as a Wireless WAN (WWAN) ready configuration option. This provides customers the opportunity of adding Wireless WAN (WWAN) as an after-market option providing cost-efficient solution of adding WWAN post purchase.

By offering customers this WWAN ready configuration option; HP can offer customers and integrated wireless wide area network (WWAN) option by way of after-market option kit.

If the notebook is ordered with a WWAN Ready Configuration the HP production process allows for the customers to order a notebook without a HP Broadband module but receive a system that has:

- WWAN antennae built into assembly
- Supports aftermarket WWAN option (user accessible / upgradeable)
- Subscriber identity module (SIM) user-accessible

Select HP Mobile Broadband Wireless notebooks support Wireless Wide Area Network (WWAN) only if ordered from the factory (Select systems are not WWAN upgradeable post purchase)

## HP Mobile Broadband Modules

### Overview

#### Models

HP lt4132 LTE/HSPA+ 4G WWAN <b>New!</b>	1HC91AA
HP hs3210 HSPA+ Mobile Module <b>New!</b>	1HC90AA
HP hs2350 HSPA+ Mobile Broadband	H4X00AA
HP hs3110 HSPA+ Mobile Module	E5M76AA
HP hs3110 HSPA+ W8.1 WWAN	J8F05AA
HP lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module	E5M75AA
HP lt4211 LTE/EV-DO/HSPA+ WWAN	J8F06AA
HP lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module	E5M74AA
HP lt4112 LTE/HSPA+ W8.1 WWAN	J8F07AA
HP lt4111b LTE/EV-DO/HSPA+ WWAN (NA only)	M0U02AA
HP lt4112 LTE/HSPA+ W10 WWAN	T0E33AA
HP hs3110 HSPA+ W10 WWAN	T0E35AA
HP lt4211 LTE/EV-DO/HSPA+ W10 WWAN	T0E34AA
HP lt4120 LTE/EV-DO/HSPA+ WWAN	N8T16AA

#### Key Benefits

- With an HP Mobile Broadband-enabled notebook and wireless carrier service, you can check e-mail, browse the Internet, and connect to corporate networks from anywhere within your mobile operators coverage area, whether you are stationary or on the go. Enjoy the freedom of connecting in more places, the speed of broadband, the coverage of 3G or 4G networks, and the security, reliability, and ease of use of HP Business Notebooks that are Mobile Broadband enabled today!
- Your HP WWAN Notebook comes preinstalled with HP Connection that enables the user to use this this generic connection manager with any SIM card from any mobile operator to set up this WWAN connection.
- Convenience of having mobile wireless connectivity already set up as soon as you get your notebook, less obtrusive than a USB 3G or 4G notebook stick.
- Enhance security by avoiding connections at hotels, airports, and hotspots with built-in support for VPN applications
- Integrated 3G and / or 4G WWAN technology from Intel, Ericsson or Qualcomm enables high-speed Internet access via HP Mobile Broadband modules.
- HP Mobile Broadband Modules allow international roaming in many countries\*\* through support for multiple LTE /UMTS/HSPA /CDMA frequency bands and five GPRS/EDGE bands commonly used worldwide. (support varies by card, see table below)
- Integrated GPS can help you accurately identify your location around the world and permit personal navigation to guide you where you need to go.\*\*\*

\*\* Broadband connection requires a separately purchased wireless data service contract, mobile network service and support is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

\*\*\* GPS access requires an unobstructed path to multiple satellites. Performance may be affected if / when used inside of buildings, bridges or heavily congested metropolitan areas. Requires separately purchased GPS navigation software available from multiple third party GPS application vendor.

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### Compatibility

#### Broadband card

HP hs3210 HSPA+ Mobile Module

#### Compatible notebook platform

HP ZBook 17 G4, ZBook 15 G4, ZBook 15u G4  
 HP EliteBook 840 G4, 820 G4, 725 G4, HP 745 G4, 755 G4  
 HP ProBook 640 G3, 650 G3, 645 G3, 655 G3  
 HP EliteBook 850 G4 (only compatible with HD and FHD panels)  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and Windows 10

HP lt4132 LTE/HSPA+ 4G WWAN

HP ZBook 17 G4, ZBook 15 G4, ZBook 15u G4  
 HP EliteBook 840 G4, 820 G4, 725 G4, HP 745 G4, 755 G4  
 HP ProBook 640 G3, 650 G3, 645 G3, 655 G3  
 HP EliteBook 850 G4 (only compatible with HD and FHD panels)  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and Windows 10

HP hs2350 HSPA+ Mobile Broadband

HP EliteBook 2170p, 2570p, 8470p and 8570p Notebook PCs  
 HP EliteBook 8470w, 8570w and 8770w Mobile Workstations  
 HP EliteBook Revolve G1 and HP EliteBook Folio 9470m  
 (dependent on your carrier in your region)  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows XP, Windows Vista, and Windows 7, Windows 8 only.

HP hs3110 HSPA+ Mobile Broadband Module

HP ZBook 17, ZBook 15, ZBook 14  
 HP EliteBook 850 G1, 840 G1, 820 G1  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and Windows 8 only

HP hs3110 HSPA+ W8.1 WWAN

HP ZBook 17, ZBook 15, ZBook 14  
 HP EliteBook 855 G2, 850 G2, 845 G2, 840 G2, 825 G2, 820 G2  
 HP EliteBook Folio 9480m  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and higher

HP lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module

HP ZBook 17, ZBook 15, ZBook 14  
 HP EliteBook 850 G1, 840 G1, 820 G1  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and Windows 8 only

HP lt4211 LTE/EV-DO/HSPA+ WWAN

HP ZBook 17, ZBook 15, ZBook 14  
 HP EliteBook 855 G2, 850 G2, 845 G2, 840 G2, 825 G2, 820 G2  
 HP EliteBook Folio 9480m  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and higher

HP lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module

ZBook 17, ZBook 15, ZBook 14  
 HP EliteBook 850 G1, 840 G1, 820 G1, 810 G2  
 Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.  
**NOTE:** Works with Windows 7 and Windows 8 only

HP lt4112 LTE/HSPA+ W8.1 WWAN

HP ZBook 17, Book 15, ZBook 14  
 HP EliteBook 855 G2, 850 G2, 845 G2, 840 G2, 825 G2, 820 G2  
 HP EliteBook Folio 9480m



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Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.

**NOTE:** Works with Windows 7 and higher

HP lt4111b LTE/EV-DO/HSPA+ WWAN

HP EliteBook Revolve 810 G2 (AMS only) Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.

**NOTE:** Works with Windows 7 and higher

HP lt4120 LTE/EV-DO/HSPA+ WWAN

HP EliteBook 725 G3, 745 G3, 755 G3, 820 G3, 840 G3

HP EliteBook 820 G3, 850 G3 (Only compatible with HP EliteBook 850 G3 with HD and FHD panels)

HP ZBook 15 G3, ZBook 15u G3 and ZBook 17 G3, ~~ZBook Studio G3~~

**NOTE:** Works with Windows 7 and higher

HP lt4112 LTE/HSPA+W10 WWAN

HP ZBook 17, Book 15, ZBook 14, ZBook 17 G2, ZBook 15 G2, Zbook 14 G2, ZBook 15u G2  
HP EliteBook 855 G2, 850 G2, 845 G2, 840 G2, 825 G2, 820 G2, 755 G2, 750 G2, 740 G2, 745 G2, 725 G2, 720 G2

HP EliteBook Folio 9480m, EliteBook Revolve 810 G3

Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.

**NOTE:** Works with Windows 7, Windows 8, Windows 8.1 and Windows 10

HP hs3110 HSPA+W10 WWAN

HP ZBook 17, ZBook 15, ZBook 14, ZBook 17 G2, ZBook 15 G2, Zbook 14 G2, ZBook 15u G2,  
HP ZBook 15 G3, ZBook 15u G3 and ZBook 17 G3, ~~ZBook Studio G3~~

HP EliteBook 855 G2, 850 G2, 845 G2, 840 G2, 825 G2, 820 G2, 755 G2, 750 G2, 740 G2, 745 G2, 725 G2, 720 G2, 725 G3, 745 G3, 755 G3, 820 G3, 840 G3

HP EliteBook 820 G3, 850 G3 (Only compatible with HP EliteBook 850 G3 with HD and FHD panels)

HP EliteBook Folio 9480m, EliteBook Revolve 810 G3

Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.

**NOTE:** Works with Windows 7, Windows 8, Windows 8.1 and Windows 10

HP lt4211 LTE/EV-DO/HSPA+W10 WWAN

HP ZBook 17, ZBook 15, ZBook 14, ZBook 17 G2, ZBook 15 G2, Zbook 14 G2, ZBook 15u G2  
HP EliteBook 855 G2, 850 G2, 845 G2, 840 G2, 825 G2, 820 G2, 755 G2, 750 G2, 740 G2, 745 G2, 725 G2, 720 G2

HP EliteBook Folio 9480m, EliteBook Revolve 810 G3

Factory-configurable options for additional select HP notebooks. Please see the QuickSpecs for your notebook for additional compatibility information.

**NOTE:** Works with Windows 7, Windows 8, Windows 8.1 and Windows 10

**NOTE:** Not all models are available in all regions.

### HP Mobile Broadband Modules and After Market Operator Compatibility

Product Part Number	Product Description	Operator Compatibility					Operating System Support		
		Verizon	Sprint	AT&T	T-Mobile	Generic GSM (SIM)	W7 support	W8.X support	W10 Support
1HC90AA	HP hs3210 HSPA+ Mobile Module			X		X	X		X
1HC91AA	HP lt4132 LTE/HSPA+ 4G WWAN					X	X		X
H4X00AA	HP hs2350 HSPA+ Mobile Broadband			X	X	X	X	X	
E5M76AA	HP hs3110 HSPA+ Mobile Module			X	X	X	X	X	



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J8F05AA	HP hs3110 HSPA+ W8.1 WWAN			X	X	X	X	X	
E5M75AA	HP lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module	X	X	X	X	X	X	X*	
J8F06AA	HP lt4211 LTE/EV-DO/HSPA+ WWAN	X	X	X	X	X	X	X	
E5M74AA	HP lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module (EMEA/APJ)					X	X	X	
J8F07AA	HP lt4112 LTE/HSPA+ 4G Mobile Module					X	X	X	
M0U02AA	HP lt4111b LTE/EV-DO/HSPA+ WWAN (NA Only)	X	X	X	X	X	X	X	
T0E33AA	HP lt4112 LTE/HSPA+W10 WWAN					X	X	X	X
T0E35AA	HP hs3110 HSPA+W10 WWAN			X	X	X	X	X	X
T0E34AA	HP lt4211 LTE/EV-DO/HSPA+W10 WWAN	X	X	X	X	X	X	X	X
N8T16AA	HP lt4120 LTE/EV-DO/HSPA+ WWAN	X	X	X	X	X	X	X	X

\* Win 8 Support only, no Win 8.1 support

### Service and Support

Each HP Mobile Broadband Module has a one-year limited warranty or the warranty remaining for the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day, as well as in online support forums. Certain restrictions and exclusions apply.

### Technical Specifications

	<b>HP hs2350 HSPA+ Mobile Broadband *</b>
<b>Technology/Operating bands</b>	E-GPRS: 850 (Band 5), 900 (Band 8), 1800 (Band 3), 1900 (Band 2) MHz WCDMA: 2100 (Band 1), 1900 (Band 2), 900 (Band 8), 800 (Band 6), 850 (Band 5) MHz
<b>Wireless protocol standards</b>	GSM/GPRS/EDGE: Class C, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 7 Advanced Receiver Type 3i
<b>GPS</b>	Standalone, A-GPS (Internet- and Network assisted)
<b>GPS bands</b>	1575.42 MHz (± 1.023 MHz)
<b>Maximum data rates</b>	HSPA: 21 Mbps (Download), 5.76Mbps (Upload)
<b>Maximum output power</b>	GSM850 & GSM900 bands GPRS: 33 dBm EGPRS: 27 dBm DCS1800 & PCS1900 bands GPRS: 30 dBm EGPRS: 26 dBm UMTS: 24 dBm
<b>Maximum power consumption</b>	2500mA (peak); 1000mA (average)
<b>Form Factor</b>	PCI-Express MiniCard, USB 2.0 interface
<b>Weight</b>	10 g

	<b>HP hs3110 HSPA+ Mobile Broadband Module*</b>
	<b>HP hs3110 HSPA+ W8.1 WWAN *</b>
	<b>HP hs3110 HSPA+ W10 WWAN *</b>
<b>Technology/Operating bands</b>	HSPA+: 2100 (Band1), 1900 (Band 2), 1700 (Band 4), 850 (Band 5), 900 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 MHz (Band 5), 900 (Band 8) MHz
<b>Wireless protocol standards</b>	E-GPRS: Class B, Multi-slot class 33, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 7
<b>GPS</b>	Standalone, A-GPS
<b>GPS bands</b>	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz
<b>Maximum data rates</b>	HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload) HSPA: 7.2 Mbps (Download), 5.76 Mbps (Upload) WCDMA PS: 384 kbps (Download), 384 kbps (Upload) WCDMA CS: 64 kbps (Download), 64 kbps (Upload) E-GPRS: 296 kbps (Download), 236.8 kbps (Upload) GPRS: 107 kbps (Download), 85.6 kbps (Upload)
<b>Maximum output power</b>	HSPA+: 24 dBm E-GPRS 1800/1900: 26 dBm E-GPRS 850/900: 27 dBm GPRS 1800/1900: 30 dBm GPRS 850/900: 33 dBm
<b>Maximum power consumption</b>	2500 mA (peak); 600 mA (average)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6 g
<b>Dimensions</b> (Length x Width x Thickness)	1.65 x 1.18 x 0.09 in (42 x 30 x 2.3 mm)

\* Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors.

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	<b>HP lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module*</b>
<b>Technology/Operating bands</b>	LTE: 1900 (Band 2) , 1700/2100 (Band 4), 850 (Band 5), 700 (Band 13), 700 (Band 17), 1900 (Band 25) MHz HSPA+: 2100 (Band 1), 1900 (Band 2) , AWS 1700/2100 (Band 4), 850 (Band 5), 800 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3) , 850 (Band 5) , 900 (Band 8) MHz EV-DO: 800 (BC0), 1900 (BC1) MHz
<b>Wireless protocol standards</b>	3GPP Release 8 LTE Specification WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification EVDO Release 0 and Release A
<b>GPS</b>	Standalone GPS, A-GPS, GPS XTRA
<b>GPS bands</b>	1575.42 MHz (± 1.023 MHz), GLONASS 1596-1607MHz
<b>Maximum data rates</b>	LTE (Category 3): 100 Mbps (Download), 50Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload) EDGE: 236.8 kbps (Download), 236.8 kbps (Upload) GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)
<b>Maximum output power</b>	LTE: +23 dBm WCDMA: +23 dBm GSM 850/900, GMSK: +32dBm GSM 850/900, 8PSK: +27dBm DCS1800 / PCS 1900, GMSK: +29dBm DCS1800 / PCS 1900, 8PSK: +26dBm CDMA: +24dBm
<b>Maximum power consumption</b>	LTE: 1,200 mA (peak); 900 mA (average) WCDMA: 1,100 mA (peak); 800 mA (average) EGPRS: 2,500 mA (peak); 700 mA (average)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6 g
<b>Dimensions</b> (Length x Width x Thickness)	1.65 x 1.18 x 0.09 in (42 x 30 x 2.3 mm)

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	<b>HP lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module *</b> <b>HP lt4112 LTE/HSPA+ 4G Mobile Module*</b> <b>HP lt4112 LTE/HSPA+ W10 WWAN*</b>
<b>Technology/Operating bands</b>	LTE: 2100 (Band 1)/1900 (Band 2)/1800 (Band 3)/850 (Band 5), 2600 (Band 7), 900 (Band 8), 800 MHz (Band 20, DD800) MHz HSPA+: 2100 (Band 1)/1900 (Band 2)/850 (Band 5)/900 (Band 8) MHz E-GPRS: 1900 (Band 2)/1800 (Band 3)/850 (Band 5)/900 (Band 8) MHz
<b>Wireless protocol standards</b>	3GPP Release 8 LTE Specification WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification E-GPRS: Class B, Multi-slot class 33, coding schemes CS1 - CS4 and MSC1 - MSC9
<b>GPS</b>	Standalone
<b>GPS bands</b>	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz
<b>Maximum data rates</b>	LTE (Category 3): 100 Mbps (Download), 50Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload) EDGE: 236.8 kbps (Download), 236.8 kbps (Upload)

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	GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)
<b>Maximum output power</b>	LTE: 23 dBm HSPA+: 23.5 dBm E-GPRS 1900/1800: 26.5 dBm E-GPRS 900/850: 27.5 dBm GPRS 1900/1800: 29.5 dBm GPRS 900/850: 32.5 dBm
<b>Maximum power consumption</b>	LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average) E-GPRS: 2,800 mA (peak); 700 mA (average)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6 g
<b>Dimensions</b> (Length x Width x Thickness)	1.65 x 1.18 x 0.09 in (42 x 30 x 2.3 mm)

\* Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

#### HP It4111b LTE/EV-DO/HSPA+ WWAN (NA Only)

<b>Technology/Operating bands</b>	LTE: 1900 (Band 2) , 1700/2100 (Band 4), 850 (Band 5), 700 (Band 13), 700 (Band 17), 1900 (Band 25) MHz HSPA+: 2100 (Band 1), 1900 (Band 2) , AWS 1700/2100 (Band 4), 850 (Band 5), 800 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3) , 850 (Band 5) , 900 (Band 8) MHz EV-DO: 800 (BC0), 1900 (BC1) MHz
<b>Wireless protocol standards</b>	3GPP Release 8 LTE Specification WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification EVDO Release 0 and Release A
<b>GPS</b>	Standalone GPS, A-GPS, GPS XTRA
<b>GPS bands</b>	1575.42 MHz (± 1.023 MHz), GLONASS 1596-1607MHz
<b>Maximum data rates</b>	LTE (Category 3): 100 Mbps (Download), 50Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload) EDGE: 236.8 kbps (Download), 236.8 kbps (Upload) GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)
<b>Maximum output power</b>	LTE: +23 dBm WCDMA: +23 dBm GSM 850/900, GMSK: +32dBm GSM 850/900, 8PSK: +27dBm DCS1800 / PCS 1900, GMSK: +29dBm DCS1800 / PCS 1900, 8PSK: +26dBm CDMA: +24dBm
<b>Maximum power consumption</b>	LTE: 1,200 mA (peak); 900 mA (average) WCDMA: 1,100 mA (peak); 800 mA (average) EGPRS: 2,500 mA (peak); 700 mA (average)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6 g
<b>Dimensions</b> (Length x Width x Thickness)	1.65 x 1.18 x 0.09 in (42 x 30 x 2.3 mm)

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environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

#### HP It4120 LTE/EV-DO/HSPA+ WWAN

<b>Technology/Operating bands</b>	LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 17 lower), 800 (Band 20), 1900 (Band 25), 850 (Band 26), 700 (Band 28). HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz EV-DO: 850 (BC0), 1900 (BC1) MHz, 850 (BC10). E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 (Band 5), 900 (Band 8) MHz
<b>Wireless protocol standards</b>	3GPP Release 10 LTE Specification CAT.4, 20MHz BW WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification 1xEVDO Release 0, A and B. E-GPRS: Class B, Multi-slot class 12, coding schemes CS1 - CS4 and MSC1 - MSC9
<b>GPS</b>	Standalone, A-GPS (MS-A, MS-B and XTRA)
<b>GPS bands</b>	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz
<b>Maximum data rates</b>	LTE: 150 Mbps (Download), 50 Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21Mbps (Download), 5.76 Mbps (Upload) CDMA 1xRTT: 153.6 kbps (Download), 153.6 kbps (Upload) EVDO Rel.A: 3.1 Mbps (Download), 1.8 Mbps (Upload) EVDO Rel.B: 14.7 Mbps (Download), 5.4Mbps (Upload) EDGE: 236.8 kbps (Download), 236.8 kbps (Upload) GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)
<b>Maximum output power</b>	LTE: 23 dBm HSPA+: 23.5 dBm 1xRTT/EVDO: 24dBm E-GPRS 1900/1800: 26 dBm E-GPRS 900/850: 27 dBm GPRS 1900/1800: 29.5 dBm GPRS 900/850: 32.5 dBm
<b>Maximum power consumption</b>	LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average) 1xRTT/EVDO: 1,000 mA (peak); 700 mA (average) E-GPRS: 2,800 mA (peak); 500 mA (average)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6.2 g
<b>Dimensions</b> (Length x Width x Thickness)	1.65 x 1.18 x .09 in (42 x 30 x 2.3 mm)

\* Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

### Technical Specifications

The information contained herein is subject to change without notice.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein. All other trademarks are the property of their respective owners.

<b>Date of change:</b>	<b>Version History:</b>		<b>Description of change:</b>
July 4, 2014	V20 to V21		Added three new WWAN Modules
July 8, 2014	V21 to V22	Changed	WWAN part numbers, descriptions
May 24, 2015	V22 to V23	Added	HP lt4111b LTE/EV-DO/HSPA+ WWAN MOU02AA
June 10, 2015	V23 to V24	Added	HP lt4120 LTE/EV-DO/HSPA+ WWAN
July 27, 2015	V24 to V25	Updated	Removed 600 Series from HP lt4120 LTE/EV-DO/HSPA+ WWAN page 4 Added Windows 10 page 5
August 25, 2015	V25 to V26	Added	HP lt4112 LTE/HSPA+W10 WWAN TOE33AA HP hs3110 HSPA+W10 WWAN TOE35AA HP lt4211 LTE/EV-DO/HSPA+W10 WWAN TOE34UT
September 3, 2015	V26 to V27	Updated	HP lt4211 LTE/EV-DO/HSPA+W10 WWAN From TOE34UT to TOE34AA
		Removed	Removing already Discontinued products QC431AA, WD301AA, H6F23AA, H4J87AA
September 17, 2015	V27 to V28	Updated	Updated compatibility for the HP lt4120 LTE/EV-DO/HSPA+ WWAN
November 19, 2015	V28 to V29	Added	Only compatible with HP EliteBook 850 G3 with HD and FHD panels. Note to HP lt4120 LTE/EV-DO/HSPA+ WWAN
February 29, 2016	V29 to V30	Updated	Updated compatibility for HP lt4120 LTE/EV-DO/HSPA+ WWAN HP hs3110 HSPA+W10 WWAN HP lt4211 LTE/EV-DO/HSPA+W10 WWAN
December 16, 2016	V30 to V31	Added	HP lt4132 LTE/HSPA+ 4G WWAN, 1HC91AA & HP hs3210 HSPA+ Mobile Module, 1HC90AA were added their tech specs and compatibilities as well