QuickSpecs

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)

Models

HP hs2340 HSPA+ Mobile Broadband Module	QC431AA
HP hs2350 HSPA+ Mobile Broadband	H4X00AA
HP un2420 EV-DO/HSPA Mobile Broadband Module	WD301AA
HP un2430 EV-DO/HSPA W8 Mini Card	H6F23AA
HP lt2522 LTE/EV DO Verizon WWAN (US only)	H4J87AA
HP hs3110 HSPA+ Mobile Module *New!*	E5M76AA
HP lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module *New!*	E5M75AA
HP lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module *New!*	E5M74AA

QuickSpecs

Overview

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.

Compatibility

Broadband card	Compatible notebook platform
HP hs2340 HSPA+ Mobile Broadband Module	HP EliteBook 2560p, 2760p, 8460p, and 8560p Notebook PCs HP EliteBook 8460w, 8560w, and 8760w Mobile Workstations HP ProBook 5330m Notebook PC (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 only.
HP hs2350 HSPA+ Mobile Broadband	HP EliteBook 2170p, 2570p, 8470p and 8570p Notebook PCs HP EliteBook 8470w, 8570w and 8770w Mobile Workstations HP ProBook 6470b, 6475b, and 6570b Notebook PCs HP ProBook 4340s, 4440s and 4540s Notebook PCs 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 un2420 EV-DO/HSPA Mobile Broadband Module	HP EliteBook 8440p and 8540p Notebook PCs HP EliteBook 8440w and 8540w Mobile Workstations HP ProBook 5310m Notebook PC 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 only.

Overview

HP un2430 EV-DO/HSPA W8 Mini Card	HP EliteBook 2170p, 2560p, 2570p, 2760p, 8460p, 8470p, 8560p, and 8570p Notebook PCs HP EliteBook 8460w, 8470w, 8560w, 8570w, 8760w, and 8770w Mobile Workstations HP ProBook 6470b, 6475b, and 6570b Notebook PCs HP ProBook 4340s, 4440s, and 4540s Notebook PCs HP ProBook 5330m Notebook PC 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. QC430AA works with Windows XP, Windows Vista and Windows 7
HP lt2522 LTE/EV DO Verizon WWAN	HP Elitebook 2170p, 2570p, 8470p, and 8570p Notebook PCs HP Elitebook 8470w and 8570w Mobile Workstations HP EliteBook Folio 9470m **NOTE:** Works with Windows 7 only.
HP hs3110 HSPA+ Mobile Broadband Module	HP ZBook 17, ZBook 15, ZBook 14 HP ProBook 440 G0, 450 G0 HP ProBook 430 G1, 440 G1, 450 G1 HP ProBook 640 G1, 645 G1, 650 G1, 655 G1 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 lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module	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 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

NOTE: Not all models are available in all regions.

Overview

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
QC431AA	HP hs2340 HSPA+ Mobile Broadband Module			X	X	X	X	
H4X00AA	HP hs2350 HSPA+ Mobile Broadband			X	X	X	X	X
WD301AA	HP un2420 EV-DO/HSPA Mobile Broadband Module	X		X	X	X	X	
H6F23AA	HP un2430 EV-DO/HSPA Win 8 Mini Card (Gobi 3000) (3G)	X	X	X	X	X	X	X*
H4J87AA	HP lt2522 LTE/EV-DO Verizon WWAN (US Only)	X			X	X	X	X**
E5M76AA	HP hs3110 HSPA+ Mobile Module			X	X	X	X	X
E5M75AA	HP lt4111 LTE/EV-DO/HSPA+ Qualcomm® Gobi™ 4G Module	X	X	X	X	X	X	X***
E5M74AA	HP lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module (EMEA/APJ)					X	X	X

* W8 Support only on AT&T and T-Mobile, no W8 support on Verizon or Sprint
** Supported only as an upgrade with Windows 7 drivers; not with Windows 8 factory image
*** Win8 Support only, no Win8.1 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

HP hs2340 HSPA+ Mobile Broadband Module

Technology/Operating bands	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), 850 (Band 5) MHz
Wireless protocol standards	GSM/GPRS/EDGE: Class B, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 7 Advanced Receiver Type 3i
GPS	Standalone, A-GPS (Internet- and Network assisted)
GPS bands	1575.42 MHz (± 1.023 MHz)
Maximum data rates	HSPA: 21 Mbps (Download), 5.76Mbps (Upload)
Maximum output power	GSM850 & GSM900 bands GPRS: 33 dBm EGPRS: 27 dBm DCS1800 & PCS1900 bands GPRS: 30 dBm EGPRS: 26 dBm UMTS 24 dBm
Maximum power consumption	2000mA (peak); 600mA (average)
Form factor	PCI-Express MiniCard, USB 2.0 interface
Weight	12 g
Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 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

HP hs2350 HSPA+ Mobile Broadband *

Technology/Operating bands	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
Wireless protocol standards	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
GPS	Standalone, A-GPS (Internet- and Network assisted)
GPS bands	1575.42 MHz (± 1.023 MHz)
Maximum data rates	HSPA: 21 Mbps (Download), 5.76Mbps (Upload)
Maximum output power	GSM850 & GSM900 bands GPRS: 33 dBm EGPRS: 27 dBm DCS1800 & PCS1900 bands GPRS: 30 dBm EGPRS: 26 dBm UMTS: 24 dBm
Maximum power consumption	2500mA (peak); 1000mA (average)
Form Factor	PCI-Express MiniCard, USB 2.0 interface

Technical Specifications

Weight	10 g
Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 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

HP un2420 EV-DO/HSPA Mobile Broadband Module*

Technology/Operating bands	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), 850 (Band 5) MHz EV-DO: 850 (BC0), 1900 (BC1) MHz
Wireless protocol standards	GSM/GPRS/EDGE: Class B, Multi-slot operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 6 CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-2000
GPS	Standalone GPS enabled
GPS bands	1575.42 MHz
Maximum data rates	HSPA: 7.2 Mbps (Download), 5.76 Mbps (Upload) EV-DO: 3.1 Mbps (Download), 1.8 Mbps (Upload)
Maximum output power	E-GPRS: 32dBm WCDMA: 24dBm CDMA: 24dBm
Maximum power consumption	2500mA (peak); 1000mA (average)
Weight	12 g
Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 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

HP un2430 EV-DO/HSPA W8 Mini Card*

Technology/Operating bands	E-GPRS: 850 (Band 5), 900 (Band 8), 1800 (Band 3), 1900 (Band 2) MHz UMTS/WCDMA: 2100 (Band 1, 1900 (Band 2), 900 (Band 8), 850 (Band 5) MHz EV-DO: 850 (BC0), 1900 (BC1) MHz
Wireless protocol standards	GSM/GPRS/EDGE: Class B, Multi-slot operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 6 CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-2000
GPS	Standalone GPS enabled
GPS bands	1575.42 MHz
Maximum data rates	HSPA: 14.4 Mbps (Download), 5.76 Mbps (Upload) CDMA: 3.1 Mbps (Download), 1.8 Mbps (Upload)
Maximum output power	E-GPRS: 32dBm WCDMA: 24dBm CDMA: 24dBm
Maximum power consumption	2500mA (peak); 1000mA (average)

Technical Specifications

Form Factor	PCI-Express MiniCard, USB 2.0 interface
Weight	11.5 g
Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 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

HP lt2522 LTE/EV DO Verizon WWAN*

Technology/Operating bands	LTE: 700 (Band 13) MHz UMTS/WCDMA: 2100 (Band 1), 1900 (Band 2), 900 (Band 8), 850 (Band 5) MHz E-GPRS: 850 (Band 5), 900 (Band 8), 1800 (Band 3), 1900 (Band 2) MHz EV-DO: 800 (BC0), 1900 (BC1) MHz
Wireless protocol standards	GSM/GPRS/EDGE: Class B, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-856, IS-2000 UMTS/WCDMA: Release 99 and Release 7 LTE: Power Class III as per 3GPP TS 36.101
GPS	Standalone, Assisted, XTRA
GPS bands	1575.42 MHz (± 1.023 MHz)
Maximum data rates	LTE: 100 Mbps (Download), 50Mbps (Upload) DC-HSPA: 42Mbps (Download), 5.76 Mbps (Upload) EV-DO: 3.1 Mbps (Download), 1.8 Mbps (Upload)
Maximum output power	LTE: 23 dBm WCDMA: 24dBm E-GPRS: 32dBm 1xRTT/EvDO: 24 dBm
Maximum power consumption	2700mA (peak)
Form Factor	PCI-Express MiniCard, USB 2.0 interface
Weight	10 g
Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 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

HP hs3110HSPA+ Mobile Broadband Module*

Technology/Operating bands	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
Wireless protocol standards	E-GPRS: Class B, Multi-slot class 33, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 7
GPS	Standalone, A-GPS
GPS bands	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz
Maximum data rates	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)
Maximum output power	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
Maximum power consumption	2500 mA (peak); 600 mA (average)
Form Factor	M.2, 3042-S3 Key B
Weight	6 g
Dimensions (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.

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

Technology/Operating bands	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
Wireless protocol standards	3GPP Release 8 LTE Specification WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification EVDO Release 0 and Release A
GPS	Standalone GPS, A-GPS, GPS XTRA
GPS bands	1575.42 MHz (± 1.023 MHz), GLONASS 1596-1607MHz
Maximum data rates	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)
Maximum output power	LTE: +23 dBm

Technical Specifications

	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
Maximum power consumption	LTE: 1,200 mA (peak); 900 mA (average)
	WCDMA: 1,100 mA (peak); 800 mA (average)
	EGPRS: 2,500 mA (peak); 700 mA (average)
Form Factor	M.2, 3042-S3 Key B
Weight	6 g
Dimensions (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 lt4112 LTE/HSPA+ Qualcomm® Gobi™ 4G Module *
Technology/Operating bands	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
Wireless protocol standards	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
GPS	Standalone
GPS bands	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz
Maximum data rates	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)
Maximum output power	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
Maximum power consumption	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)
Form Factor	M.2, 3042-S3 Key B
Weight	6 g
Dimensions (Length x Width x Thickness)	1.65 x 1.18 x 0.09 in (42 x 30 x 2.3 mm)

Technical Specifications

* 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.