QuickSpecs

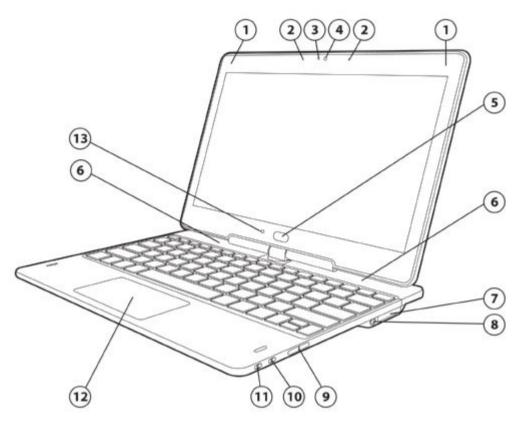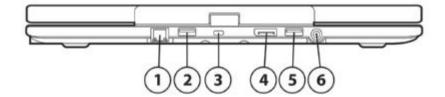*Overview*

1. WLAN antennas
2. Dual-microphone array
3. Webcam LED
4. 720p HD Webcam
5. Home button
6. WWAN antennas
7. Side docking connector

8. Audio jack
9. Volume up/down button
10. Rotation lock button
11. Power button
12. Clickpad image sensor
13. Ambient light sensor

1. RJ-45 (Ethernet) jack
2. USB 3.0 port
3. Security lock slot

4. DisplayPort v1.1a
5. USB 3.0 port
6. Power connector

QuickSpecs

Overview

At A Glance

- Windows 8 versions, Windows 7 versions or FreeDOS
- 11.6-inch diagonal LED-backlit HD UWVA display (1366 x 768)
- Industrial, business rugged HP DuraCase construction features a full magnesium alloy chassis, wear-resistant HP DuraFinish, and stainless steel hinges
- The HP Elitebook Revolve meets military standards 810G testing* for drop, vibration, functional shock, dust, altitude, and high and low temperature.
- Full-sized backlit, spill-resistant keyboard with bottom-case drain
- Clickpad image sensor
- Choice of 3rd Generation Intel® Core™ i7, i5 Core with Turbo Boost Technology or 3rd Generation Intel® Core™ i3 Core
- Intel vPro technology (optional support on models with i7 and i5 processors) enables you to remotely monitor, diagnose, and repair PCs over the network, even if a system's OS is inoperable or it is powered off
- Choice of up to 256 GB mSATA Solid State Drive
- Flexible wireless connectivity options:
  - Integrated WWAN modules with GPS support
  - Integrated Intel 802.11a/b/g/n (2x2) wireless LAN module with Bluetooth
  - Integrated Intel 802.11a/b/g/n (2x2) wireless LAN module
- 6-cell (44 WHr) polymer battery
- Integrated Intel HD Graphics
- Integrated 720p HD Webcam
- DTS Studio Sound with integrated stereo speakers and dual microphone array
- Security features including HP Client Security, Common Criteria Certified Discrete TPM 1.2 Embedded Security Chip, and Security lock slot
- Separate launch buttons for easy access to the following features: Windows, power, rotation lock, volume up and down
- DisplayPort for high resolution support
- Optional HP Docking Station
- Sensors include Gyroscope, Accelerometer, Compass, Ambient Light Sensor, Near Field Communication (NFC)
- MicroSD slot, Micro-SIM

* Testing was not intended to demonstrate fitness for Department of Defense contracts requirements or for military use. Test results are not a guarantee of future performance under these test conditions.

Features

PRODUCT NAME

HP EliteBook Revolve 810 Tablet

OPERATING SYSTEM

Preinstalled

Windows 8 Pro 64*
Windows 8 64*
Windows 7 Professional 64 (available through downgrade rights from Windows 8 Pro)**
Windows 7 Professional 64***
Windows 7 Home Premium 64***
FreeDOS 2.0

Supported

Windows 8 32*
Windows 8 Pro 32*
Windows 8 ML 32*
Windows 8 Enterprise 32*
Windows 8 Enterprise 64*
Windows 7 Professional 32***
Windows 7 Ultimate 32***
Windows 7 Ultimate 64***
Windows 7 Home Premium 32***
Windows 7 Home Basic 32***
Windows 7 Home Basic 64***

* Not all features are available in all editions of Windows 8. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8 functionality. See http://www.microsoft.com/

** This system is preinstalled with Windows® 7 Pro software and also comes with a license and media for Windows 8 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data

** Systems may require upgraded and/or separately purchased hardware to take full advantage of Windows 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details.

PROCESSOR*

3rd Generation Intel® Core™ i7-3687U (2.1 GHz, 4 MB L3 cache, 2 cores)*
  Up to 3.30 GHz with Intel Turbo Boost Technology**
3rd Generation Intel® Core™ i5-3437U (1.9 GHz, 3 MB L3 cache, 2 cores)*
  Up to 2.90 GHz with Intel Turbo Boost Technology**
3rd Generation Intel® Core™ i3-3227U (1.9 GHz, 3 MB L3 cache, 2 cores)*

* Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.

** Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.

CHIPSET

Mobile Intel® QM77 Express (vPro support on i7 and i5 processors)

Features

INTEL CORE I5 WITH VPRO/CORE I7 WITH VPRO TECHNOLOGY CAPABLE

Intel Core i5 with vPro and Core i7 with vPro technology is a selectable feature that is available on units configured with select processors, an Intel Centrino® Advanced-N or Ultimate-N WLAN module and a preinstalled Windows operating system. It provides advances in remote manageability, security, energy efficient performance, and wireless connectivity. Intel Active Management Technology 8.0 (iAMT) offers built-in manageability and proactive security for networked notebook PCs, even when they are powered off* or when the operating system is inoperable. It can help identify threats before they reach the network, isolate infected systems, and update PCs regardless of their power state.\

*Requires a Windows operating system, network hardware and software, connection with a power source, and a direct (non-VPN) corporate network connection which is either cable or wireless LAN.

NOTE: Some functionality of this technology, such as Intel® Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Microsoft Windows required. For hard drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 30 GB for Windows 8 is reserved for system recovery software.

GRAPHICS

Integrated:
Intel HD Graphics

DISPLAY

Internal
11.6-inch diagonal LED-backlit HD* UWVA display (1366 x 768)

External
Up to 32-bit per pixel color depth

DisplayPort
Supports resolutions up to 2560 x 1600, 30-bit color depth at 60 Hz, and full HD (1920 x 1080) monitors, 24-bit color depth at 120 Hz

* HD content required to view HD images.
NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings.

STORAGE AND DRIVES

Solid State Drive
Up to 256 GB mSATA
NOTE: Solid State Drives (SSD), GB = 1 billion bytes. Actual formatted capacity is less. Up to 30 GB for Windows 8 is reserved for system recovery software.

Features

MEMORY

Standard

DDR3L PC3-12800 SDRAM (1600 MHz)
One SODIMM slot supporting dual-channel memory plus 4 GB soldered down
4 GB and 8 GB SODIMMs

Maximum

Upgradeable to 12288 MB with optional 8192 MB SODIMM in slot 1 and 4096 MB soldered down
Dual-channel
Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

NOTE: Maximum memory capacities assume Windows 64-bit operating systems. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

NETWORKING/COMMUNICATIONS

Wireless

Support for a broad range of secure, integrated wireless LAN and wireless WAN options featuring support for the latest industry standards. Broadband Wireless (WWAN) requires a Windows operating system and is available in select countries as a standard, factory configurable feature only. Integrated Bluetooth is also available (factory configurable only) and can be combined with any of the supported wireless LAN and wireless WAN options.

Broadband Wireless (WWAN)

HP un2430 EV-DO/HSPA Mobile Broadband Module with GPS support[1, 2]
HP hs2350 HSPA+ Mobile Broadband Module with GPS support[1, 2]

Wireless LAN (WLAN)

Intel Centrino Advanced N 6205, (2x2) a/b/g/n[1, 3]
Intel 802.11 a/b/g/n (2x2) +Bluetooth Combo[1, 3]

NOTES:
1. Wireless access point and Internet service required. Availability of public wireless access points limited.
2. 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 GPS applications.
3. Wireless use requires separately purchased service contract. Check with your local vendor for coverage area and availability in your area. Connection and speeds will vary due to location, environment, network conditions, and other factors. 4G compatibility with HSPA+.

Communications

Integrated Intel 82579LM Gigabit* Network Connection (vPro configurations)
* The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

Features

AUDIO/MULTIMEDIA

Audio
DTS Studio Sound
Integrated stereo speakers
Integrated microphone (dual-microphone array)
Buttons for volume up and down
Headphone/microphone combo jack

Webcam
Integrated 720p HD webcam

- HD format (widescreen)
- Supports videoconferencing and still image capture
- High quality fixed focus lens
- Video capture at various resolutions up to 1280x720 resolution (720p) and up to 30fps
- M-JPEG compression supports higher frame rates for video capture and videoconferencing
- Improved low light sensitivity
- Improved dynamic range

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard
The HP spill-resistant keyboard is designed using a thin layer of Mylar film under the keyboard and a drain system that funnels fluid through a hole in the bottom of the notebook. This minimizes the risk of damage to sensitive components underneath. The 101/102-key compatible keyboard features an industry standard, full-pitch key layout with desktop keyboard features, such as the isolated inverted-T cursor control keys, editing keys, both left and right control and alt keys, and 12 function keys. U.S. and International key layouts are available. Other features include an integrated numeric keypad, hotkeys for instant access to power conservation, brightness, and other features, 19 mm x 19 mm key pitch (center-to-center spacing), 2.0 mm stroke, and comfort-dished keycaps.

Pointing Devices
Clickpad image sensor
Optional Active Pen

Buttons and Function Keys

Function keys are:
F1 - Ambient Light Sensor
F2 - Battery Gauge
F3 - Sleep
F4 - Display Switching
F5 - Speaker Mute
F6 - Volume Down
F7 - Volume Up
F8 - mic mute
F9 - Brightness Down
F10 - Brightness Up
F11 - Backlit
F12 - WiFi toggle

SENSORS

Accelerometer
Compass
Ambient Light Sensor
Near Field Communication (NFC)

Features

SOFTWARE AND SECURITY

Preinstalled Software with Windows Operating System

HP ePrint*
PDF Complete Corporate Edition
Evernote
Adobe® Flash Player
Cyberlink Media Suite

- Cyberlink PowerDVD
- Cyberlink Media Suite (Windows App) (Windows 8 only)
- Cyberlink Media Suite (Desktop App)
- Cyberlink YouCam (Windows App) (Windows 8 only)
- Cyberlink YouCam BE (Desktop App)
- Cyberlink Photo Director
- Cyberlink Power Director

Skype ready*
Skitch (Windows 8 only)
HP PageLift
Intel WiDi (with select configurations)
Microsoft Office 2010 60 days trial (Windows 7 and Windows 8)
Buy Microsoft Office to activate Office Software on this PC

* Requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter).Requires optional broadband module. Broadband use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Separately purchased data plans or usage fees may apply. Print times and connection speeds may vary.
** Internet access required.

Security

Standard
Common Criteria EAL4+ Augmented Certified Discrete TPM 1.2 Embedded Security Chip
Security lock slot
HP BIOS (BIOS Protection)
Secure Erase[1]
Computrace Persistence[2]
DriveLock and Automatic DriveLock
Preboot Security
Master Boot Record recovery (Windows 7 only)
HP Client Security Software[3]:

- Drive Encryption
- Credential Manager
- Password Manager
- Absolute Data Protect (Windows 8 only)[3]
- Face Recognition[3]
- One Step Logon
- SpareKey[4]

Device Access Manager with Just In Time Authentication
Embedded Security (Windows 7 only)
Privacy Manager (Windows 7 only)
Microsoft Security Essentials (Windows 7 only)[5]
DigitalPass (Windows 7 only)
Central Management capable[6]

Optional

Features

HP Combo Lock

[1] For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.
[2] Computrace agent is shipped turned off, and must be activated by customers when they purchase a subscription. Subscriptions can be purchased for terms ranging for multiple years. Service is limited, check with Absolute for availability outside the U.S
[3] Requires Microsoft Windows.
[4] Requires initial user setup.
[5] Opt-in and Internet connection required for updates
[6] In order to deploy and receive updated policies, the client needs to be connected to the network server and requires separately purchased DigitalPersona Pro software. System access may not prevent users from logging into the system on the first attempt if policy updates haven't yet been received and applied.

For more information on HP security solutions refer to: http://www.hp.com/go/security.

Management

LANDesk Management Suite (optional)[1, 2]
LANDesk Security Suite(optional)[1, 2]
HP System Software Manager (available at no charge as a download from the web)
HP Softpaq Download Manager (available at no charge as a download from the web)

[1] Sold separately or as an optional feature.
[2] Location based functionality planned to be available in May 2013 and requires active LANdesk maintenance service or purchase of updated LANdesk license with location based settings when available.

POWER

Power Supply
External HP 45W Slim Smart AC Adapter
Power cord included is 5.91-foot (1.8 meter).

Primary Battery
HP 6-cell Battery (44 WHr)

Battery Life*
HP 6-cell Primary Battery   Up to 8 hours and 30 minutes (with Windows 7)

System Standby Time
Up to 137 hours

Power Conservation
Supports enhanced Intel SpeedStep technology (allows Battery Optimized Mode, Maximum Performance Mode, or Automatic mode)
Intel Display Power Saving technology
Hibernation
Standby
ACPI compliance

* Battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

Features

WEIGHTS & DIMENSIONS

Weight
Starting at 3.08 lb (1.40 kg) (weight will vary by configuration)

Dimensions (w x d x h)
8.34 x 11.22 x 0.80 in (at front) / 212 x 285 x 22.2 mm (at front)

NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components. Weight includes x-cell battery, lightest SSD, and 1 SODIMM.

PORTS/SLOTS

Ports
DisplayPort – One (v1.1a)
Stereo headphone/microphone combo jack – One
Power Connector – One
Side Docking Connector – One
RJ-45 (Ethernet) – One
USB 3.0 – Two

Digital Media Slots
MicroSD slot, Micro-SIM

SERVICE AND SUPPORT

Limited, 90-day warranty, depending on country); 1 and 3 year limited warranty options available. Optional HP Care Pack Services are extended service contracts which go beyond your standard warranties. For more details visit:
http://www.hp.com/go/lookuptool

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.
http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	**Nominal Operating Voltage**	110/220 V
	Average Operating Power	10.2 W
	Max Operating Power	< 45 W
Temperature	**Operating**	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
	Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	**Operating**	10% to 90%, non-condensing
	Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
Shock	**Operating**	40 G, 2 ms, half-sine
	Non-operating	200 G, 2 ms, half-sine
Random Vibration	**Operating**	0.75 grms
	Non-operating	1.50 grms
Altitude (unpressurized)	**Operating**	-50 to 10,000 ft (-15.24 to 3,048 m)
	Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)
Planned Industry Standard Certifications	**UL**	Yes
	CSA	Yes
	FCC Compliance	Yes
	ENERGY STAR®	Select models*
	EPEAT	Gold**
	ICES	Yes
	Australia / NZ A-Tick Compliance	Yes
	CCC	Yes
	Japan VCCI Compliance	Yes
	KC	Yes
	BSMI	Yes
	CE Marking Compliance	Yes
	BNCI or BELUS	Yes
	CIT	Yes
	GOST	Yes
	Saudi Arabian Compliance (ICCP)	Yes
	SABS	Yes
	UKRSERTCOMPUTER	Yes

* Configurations of the HP EliteBook Revolve that are ENERGY STAR qualified are identified as HP EliteBook Revolve ENERGY STAR on HP websites and on www.energystar.gov.
** EPEAT registration varies by country. See www.epeat.net for registration status by country. EPEAT status listed above applies to U.S.

For accessibility information on HP products, please visit: http://www.hp.com/accessibility.

DISPLAYS

QuickSpecs

Technical Specifications

11.6-inch LED HD (1366 x 768)	Active Area	9.88 x 5.67 in (25.61 x 14.40 cm)	
	Dimensions (W x H)	11.53 x 6.49 in (29.3 x 16.5 cm)	
	Diagonal Size	11.6 in (29.46 cm)	
	Contrast Ratio	300:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	400 nit (typical)	
	Pixel Resolution	**Format**	1366 x 768
		Configuration	RGB Stripe
	Backlight	LED	
	Viewing Angle	40/40/15/30 (Left/Right/Down/Up) (typical)	

STORAGE AND DRIVES

Internal Storage

128 GB 2.5-inch mSATA Solid State Drive	Drive Weight	75 Grams	
	Capacity	128 GB	
	Height	0.276 in (7 mm)	
	Width	2.76 in (70 mm)	
	Interface	SATA Gen 2	
	Performance	**Maximum Sequential Read**	**Maximum Sequential Write**
		250 MB/s	140 MB/s
	Logical Blocks	250,069,680	
	Operating Temperature	32° to 158°F (0° to 70°C) [case temp]	
	Features	ATA Security; ATA-7; SATA 2.6; DIPM; TRIM	
256 GB 2.5-inch mSATA Solid State Drive	Drive Weight	Up to 10 Grams	
	Capacity	128 GB	
	Height	Up to 0.191 in (Up to 4.85 mm)	
	Width	1.18 in (29.85 mm)	
	Interface	SATA 3 (6 Gb/s)	
	Performance	**Maximum Sequential Read**	**Maximum Sequential Write**
		Up to 490 MB/s	Up to 250 MB/s
	Logical Blocks	500,118,192	
	Operating Temperature	32° to 158°F (0° to 70°C) [case temp]	
	Features	ATA Security; ATA-8, SATA 3.0; DIPM; TRIM	

NETWORKING/COMMUNICATIONS

Technical Specifications

Intel® 82579LM Gigabit Ethernet Features Network Connection		10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbti/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023. Clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE(Energy Efficient Ethernet) Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
	Power Management	ACPI compliant - multiple power modes Energy Detect Low Power Mode(Green Ethernet)
	Performance Features	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload(ARP & NS) Large send offload and Giant send offload Receiving Side Scaling MACSec Offload (802.3ae) Intel vPro iSCSI Boot
	Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
	Interface	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ. **NOTE**: Intel 82579 PCIe interface is not PCIe compliant. It operates at half of PCIe specification V1.1 (2.5GT/S) speed.
	NIC Device Driver Name	Intel 82579LM/82579V Ethernet Network Connection

QuickSpecs

Technical Specifications

HP un2430 EV-DO/HSPA Mobile Broadband Module		
	Technology/Operating Bands	GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), AWS (UTRA FDD Band IV), 900MHz(UTRA FDD Band VIII), 850MHz (UTRA FDD Band V) 1xEVDO/1xRTT with receive diversity: 850MHz (Band Class0-Cell), 1900MHz (Band Class1-PCS)
	Wireless Protocol Standards	GSM/GPRS/EDGE: Class A, Multi-slot class 10 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-856, IS-2000
	Wireless Parametric Standards	Meets or exceeds TIA/EIA IS-98-D
	Maximum Data Rates	UMTS (HSPA) - 14.4 Mbps (Download), 5.76Mbps (Upload) CDMA (EVDO Release A) - 3.1 Mbps (Download), 1.8Mbps (Upload)
	GPS	Standalone GPS enabled gpsOneXTRATM™
	GPS Bands	L1 - 1575.42 MHz
	Maximum Output Power	GSM/GPRS/EDGE: 32dBm (+/-1) WCDMA: 24dBm (+0.7/-2.3) CDMA: 24dBm (+0.7/-2)
	Maximum Power Consumption	2750mA (peak); 1100mA (average)
	Power Consumption, Idle Not Connected	20 mA
	Power Management	USB selective suspend Integrated notebook wireless button
	Antenna Type	Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure
	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)
	Voltage, Operating	3.3v +/- 10%
	Temperature, Operating (from TIA/EIA/IS-98-D)	-22° to 158° F (-30° to 70° C) (full RF performance) -22° to 167° F (-30° to 75° C) (reduced RF performance)
	Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108)	-40° to 185° F (-40° to 85° C)
	Humidity, Non-operating	95% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
	Configuration Utilities	HP Connection Manager
	LED Activity	LED Off - Radio Off; Solid LED On - Radio On

QuickSpecs

HP EliteBook Revolve 810 Tablet

Technical Specifications

HP hs2350 HSPA+ Mobile Broadband Module	Technology/Operating Bands	GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900Mhz (UTRA FDD Band II), 900Mhz(UTRA FDD Band VIII), 850 MHz (UTRA FDD Band V)
	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
	Wireless Parametric Standards	Complies with 3GPP specifications
	Maximum Data Rates	UMTS (HSPA) - 21 Mbps (Download), 5.76Mbps (Upload)
	GPS	Standalone, A-GPS (Internet- and Network assisted)
	GPS Bands	1575.42 MHz (± 1.023 MHz)

	Maximum Output Power	GSM/EDGE
		GSM850 & GSM900 bands
		  GPRS: +33 dBm ± 2 dBm (class 4)
		  EGPRS: +27 dBm ± 3 dBm (class E2)
		
		DCS1800 & PCS1900 bands
		  GPRS: +30 dBm ± 2 dBm (class 1)
		  EGPRS: +26 dBm +4 / -3 dBm (class E2)
		
		UMTS
		UTRA FDD Bands
		  +24 dBm +4 / -3 dBm (class 3)

	Maximum Power Consumption	2000mA (peak); 600mA (average)
	Power Consumption, Sleep Mode	5 mA
	Power Management	USB selective suspend Integrated notebook wireless button
	Antenna Type	Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure
	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)
	Voltage, Operating	3.3v +/- 9%
	Temperature, Operating	14° to 149° F (-10° to 65° C) (full RF performance) 14° to 167° F (-10° to 75° C) (reduced RF performance)
	Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108)	-22° to 185° F (-30° to 85° C)
	Humidity, Non-operating	85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
	Configuration Utilities	HP Connection Manager
	LED Activity	LED Off - Radio Off; Solid LED On - Radio On
Intel Centrino Advanced-N 6205 (2x2)	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b

Technical Specifications

	IEEE 802.11g IEEE 802.11n
Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 7, Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
Frequency Band	2.4 GHz and 5GHz
Antenna Structure	2 transmit; 2 receive (2x2)
Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 66 possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
Security[1]	Authentication: WPA and WPA2, 802.1x (EAP_TLS, TTLS, PEAP, LEAP, EAP-FAST) Authentication Protocols: PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2 Encryption: 64 and 128-bit WEP, AES-CCMP, CKIP, TKIP Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between 2.4GHz band Access Points
Output Power (for CCK and OFDM)[2]	17 dBm max
Power Consumption	Transmit: 2.3 Watts (max, with two spatial streams) Receive: 1 Watt (max with two spatial streams) Idle mode[3]: 35 mW (average) Radio off: 20 mW (max)
Power Management	ACPI compliant power management 802.11 compliant power saving mode
Receiver Sensitivity[4]	54 Mbps: -76 dBm, 6 Mbps: -92 dBm
Antenna Connections	2 U.FL type connectors, 50 ohm nominal impedance
Form Factor	PCI-Express Half-MiniCard
Weight	0.0075 lb (3.4 g)
Dimensions	0.12 x 1.06 x 1.18 in (3.1 x 26.8 x 30.0 mm)
Operating Voltage	3.3V +/- 9%
Temperature	Operating 32° to 176° F (0° to 80° C) Non-operating -40° to 176° F (-40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 90% (non-condensing)

Technical Specifications

Altitude	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. In Power Save Polling mode and on battery power.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
5. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsof Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Intel 802.11a/b/g/n (2x2)		
	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
	Frequency Band	2.4 GHz and 5GHz
	Antenna Structure	2 transmit; 2 receive (2x2)
	Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 66 possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Authentication: WPA and WPA2, 802.1x (EAP_TLS, TTLS, PEAP, LEAP, EAP-FAST) Authentication Protocols: PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2 Encryption: 64 and 128-bit WEP, AES-CCMP, CKIP, TKIP Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between 2.4GHz band Access Points
	Output Power (for CCK and OFDM)[2]	17 dBm max

Technical Specifications

Power Consumption	Transmit: 2.3 Watts (max, with two spatial streams) Receive: 1 Watt (max with two spatial streams) Idle mode[3]: 35 mW (average) Radio off: 20 mW (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[4]	54 Mbps: -76 dBm, 6 Mbps: -92 dBm	
Antenna Connections	2 U.FL type connectors, 50 ohm nominal impedance	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.0075 lb (3.4 g)	
Dimensions	0.12 x 1.06 x 1.18 in (3.1 x 26.8 x 30.0 mm)	
Operating Voltage	3.3V +/- 9%	
Temperature	Operating Non-operating	32° to 176° F (0° to 80° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 90% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. In Power Save Polling mode and on battery power.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
5. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsof Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

AUDIO/MULTIMEDIA

Audio	**DTS Studio Sound** (Windows OS only)	
Hardware	**Implementation**	IDT 92HD91 High Definition CODEC
	Function Key Volume Controls	Volume up, volume down, and mute
	Mute Buttons	Playback and Record mute buttons with LED indicator
	Full Duplex	Yes
	Microphone In	Stereo
	Headphone/Line Out	Stereo
	Integrated Microphone	Yes, dual digital microphone array when equipped with optional webcam
Audio Output Quality	**Frequency Response**	20 Hz – 20 kHz
	Signal to Noise Ratio	>85 dB
	Total Harmonic Distortion	0.01%
	Noise Floor	-110 dB
	Play/Record Sampling Rate(s)	8 kHz - 48kHz
	DAC	16, 20 or 24-bit

Technical Specifications

		ADC	16 or 20-bit
Integrated Stereo Speakers	**Power Rating**	1 Watt	
	Impedance	8 Ohms	

POWER

HP 45W Slim Smart AC Adapter	**Dimensions** (H x W x D)	9.60 x 4.95 x 2.24 cm	
	Input	90 to 265 VAC	
		Input Efficiency	87% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.4 A at 90 VAC and maximum load
	Output	Output power	45W
		DC output	19.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<8A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	**Operating temperature**	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 121° F (-20° to 85° C)
		Altitude	0 to 16,405 ft (0 to 5,000 m)
		Humidity	0% to 95%
		Storage Humidity	0% to 95%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; Reliability - failure rate of less than 0.1% annually within the first three years of operation.	
HP 6-cell (44 WHr) Polymer Primary battery	**Dimensions** (H x W x L)	1.11 x 28.1 x 10.3 cm	
	Weight (max)	3.10g	
	Cells/Type	6-cell Polymer	
	Energy	Voltage	11.1V
		Amp-hour capacity	4.0Ah
		Watt-hour capacity	44Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	System in OFF or Standby Mode	2.5 hours
		System ON	3-5 hours
	Fuel Gauge LED	No	
	Optional Travel Battery Available	No	

QuickSpecs

Options and Accessories (sold separately and availability may vary by country)

Type	Description	Part #
Memory	HP 2GB DDR3 1600 PC3-12800 SODIMM	H2P63AA#xxx
	HP 4GB DDR3 1600 PC3-12800 SODIMM	H2P64AA#xxx
	HP 8GB DDR3 1600 PC3-12800 SODIMM	H2P65AA#xxx
Cases	HP Essential Top Load Case (up to 15.6")	H2W17AA#xxx
	HP Essential Backpack (up to 15.6")	H1D24AA
	HP Essential Messenger Case (up to 17.3")	H1D25AA
	HP Deluxe 4 wheel Roller Case (up to 17.3")	XW576AA
	HP Business Nylon Backpack (up to 17.3")	BP849AA
	HP Business Nylon Case(up to 15.6")	BP848AA
	HP BP848 TAA Business Nylon Top Load (up to 15.6")	LU934AA#ABA
	HP Elite Leather Messenger	AX676AA
	HP Professional Series Designer Tote (up to 15.6")	AT889AA
	HP Elite Series Designer Tote (up to 15.6")	AT891AA
	HP Professional Series Carrying Case (up to 15.6")	H4J90AA
	HP Professional Slim Top Load Case (up to 17.3")	H4J91AA
	HP Professional Series Carrying Case TSA (up to 15.6")	H4J92AA
	HP Professional Series Backpack (up to 15.6")	H4J93AA
	HP Professional Leather Case (up to 17.3")	H4J94AA
	HP Business Slim Top Load (up to 14.1" x .75" thick)	H2T13AA
Docking	HP Adjustable Dual Monitor Stand	AW664AA#xxx
	HP Adjustable Display Stand	AW663AA#xxx
	HP Display and Notebook Stand	AW662AA#xxx
	HP LCD Monitor Stand	QM196AA
	HP Dual Hinge Notebook Stand	AW661AA#xxx
	HP USB 2.0 Port Replicator	H1L07AA#xxx
	HP USB 3.0 Port Replicator	H1L08AA#xxx
	HP UltraSlim Docking Station	B9C87AA#xxx
Input/Output - Mice	HP USB Optical Travel mouse	RH304AA
	HP Wireless Mobile Mouse	H2L63AA
	HP USB Essential Keyboard/Mouse	H2S75AA
	HP X6000 Mouse	H2L62AA#XXX
	HP 3-button USB Laser Mouse	H4B81AA
	HP X4000b Bluetooth Mouse	H3T50AA#xxx
Input/Output - Keyboard	HP Stylish Wireless KB/Mouse	H4B79AA
	HP Stylish USB KB/Mouse	H4B80AA
	HP Wireless Mini Keyboard	A3X55AA#xxx
	HP Slim BT Keyboard US	H4Q44AA#ABA

Options and Accessories (sold separately and availability may vary by country)

Input/Output - Other	HP USB Ethernet Adapter	XZ613AA#ABA
	USB Graphics Adapter	NL571AT
	USB Graphics Adapter (DBU PL)	NL571AA
Input/Output - Projector	HP Notebook Projection Companion	LQ552AA#xxx
Adapters	90W Slim Combo Adapter	H4A41AA#xxx
	90W w/USB Universal Adapter	H4A43AA#ABA
	90W Smart AC/Auto/Air Combo Adapter	AJ652AA#xxx
	90W Smart Auto/Truck Adapter	ED493AA
	HP Smart 65W Travel AC Adapter	AU155AA#xxx
	HP 65W Slim Adapter	AX727AA#xxx
	65W Smart AC Adapter	ED494AA#xxx
	90W Smart AC Adapter	ED495AA#xxx
	90W Slim Adapter	BT796AA#xxx
Storage - External Storage	HP Mobile USB DVDRW Non-LS	A2U57AA
Storage - SSD	HP 256GB SED Solid State Drive	H2C38AA
Platform Battery	HP OD06XL Battery	TBD
Health and Education	20 Notebook Managed Charging Cart	QL489AA#xxx
	20 Notebook Charging Cart	QL488AA
	30 Notebook Managed Charging Cart	QL490AA
	30 Notebook Charging Cart	H4F31AA#ABA
	HP Presentation Station Projector Shelf	QN034AA
	HP Presentation Station 1000	QL815AA
	HP Pocket Whiteboard (3 year warranty)	A0X37AA#xxx
Security	HP Docking Station Cable Lock	AU656AA#xxx
	HP UltraSlim Keyed Cable Lock	H4D73AA