

Инвестираме във вашето бъдеще



ЕВРОПЕЙСКИ
СЪЮЗ
Европейски фонд
за регионално развитие



НАЦИОНАЛНА
СТРАТЕГИЧЕСКА
РЕФЕРЕНТНА РАМКА
2007 – 2013



ТЕХНИЧЕСКА ПОМОЩ
О П Е Р А Т И В Н А П Р О Г Р А М А

№ *Д-18* **ДОГОВОР**
...../..... *03.04.2015г*

за доставка на преносими, настолни компютри и монитори за нуждите на
Изпълнителна агенция „Одит на средствата от Европейския съюз”

Днес *03.04*..... 2015 г. в гр. София, на основание чл. 14, ал. 4, т.2 от Закона за обществените поръчки, във връзка с утвърден протокол за класиране на участниците и определяне на изпълнител и чл. 101е от ЗОП, в изпълнение на проект № 0097-ОО-1.3 „Подпомагане изпълнението на функциите на Одитния орган по Структурните фондове и Кохезионния фонд на ЕС”, се сключи настоящия договор за обществена поръчка възлагана чрез публична покана с предмет: „Доставка на преносими, настолни компютри и монитори, непрекъсваеми токозахранващи устройства (UPS) и твърди дискове SAS за нуждите на Изпълнителна агенция „Одит на средствата от Европейския съюз” по Обособена позиция № 1 – Доставка на 10 бр. преносими, 5 бр. настолни компютри и 5 бр. монитори между страните, както следва

1. Изпълнителна агенция “Одит на средствата от Европейския съюз”

с адрес гр. София, ул. “Славянска” № 4, ет. 5, с ЕИК/БУЛСТАТ 175618225, Българска народна банка, IBAN BG92 BNBG 9661 3100 1406 01, BIC BNBGBGSD, представлявана от Атанаска Здравкова – главен секретар и упълномощено лице по чл. 8, ал. 2 от Закона за обществените поръчки, на основание заповед № 3-14/19.02.2013 г. на изпълнителния директор на ИА ОСЕС, наричана по-долу „ВЪЗЛОЖИТЕЛ”, от една страна и

2. „СТЕМО“ ООД, със седалище гр. Габрово, ул. “Николаевска“ № 48 и адрес за кореспонденция гр. София, 1407, бул. „Черни връх“ № 51 Б, с ЕИК/БУЛСТАТ 817080126, банка: Уникредит Булбанк АД, клон Габрово, IBAN: BG48UNCR76301053899623, BIC UNCRBGSF, представлявано от управителя Георги Тихомиров Тихов, наричано за краткост „ИЗПЪЛНИТЕЛ”, от друга.

Предмет на договора

Чл. 1. (1) ВЪЗЛОЖИТЕЛЯТ възлага, а ИЗПЪЛНИТЕЛЯТ приема да достави, тества и осигури безплатна гаранционна поддръжка на оборудването (техниката) по обособена позиция № 1: Доставка на 10 бр. преносими, 5 бр. настолни компютри и 5 бр. монитори за нуждите на Изпълнителна агенция „Одит на средствата от Европейския съюз”, при условията на настоящия договор, в съответствие с Техническите спецификации на ВЪЗЛОЖИТЕЛЯ – Приложение № 1 и Офертата на ИЗПЪЛНИТЕЛЯ с техническо и

ценово предложение – Приложение № 2, които са неразделна част от настоящия договор.

Място на изпълнение

Чл. 2. Място на изпълнение на поръчката е сградата на ВЪЗЛОЖИТЕЛЯ, намираща се на адрес гр. София, ул. „Славянска” № 4.

Цена и начин на плащане

Чл. 3. (1) Общата стойност на договора е **20 912,40 лв.** (двадесет хиляди, деветстотин и дванадесет лева и четиридесет стотинки) без ДДС, образувана от единични цени на доставеното оборудване, описано в Приложение № 2, както следва:

1. Цена за Преносим компютър 1 362,08 лв. (хилядя триста шестдесет и два лева и осем стотинки) без ДДС;

2. Цена за Настолен компютър 1 190,29 лв. (хиляда сто и деветдесет лева и двадесет и девет стотинки) без ДДС;

3. Цена за Монитор 268,03 лв. (двеста шестдесет и осем лева и три стотинки) без ДДС.

В цената са включени всички разходи на ИЗПЪЛНИТЕЛЯ, свързани с качествено изпълнение на предмета на поръчката в описания вид и обхват.

(2) Дължимата от ВЪЗЛОЖИТЕЛЯ на ИЗПЪЛНИТЕЛЯ цена за доставката се заплаща до 10 работни дни след одобряването от страна на ВЪЗЛОЖИТЕЛЯ на подписания приемо-предавателен протокол за доставка и тестване на оборудването и представяне на оригинална фактура от ИЗПЪЛНИТЕЛЯ.

(3) ВЪЗЛОЖИТЕЛЯТ заплаща цената на доставката по банкова сметка на ИЗПЪЛНИТЕЛЯ – обслужваща банка: Уникредит Булбанк АД, клон Габрово, IBAN: BG48UNCR76301053899623, BIC UNCRBGSF.

Срок на договора

Чл. 4. (1) Срокът на изпълнение на доставката е 30 календарни дни от датата на подписване на договора за обществена поръчка.

(2) Срокът на гаранционната поддръжка е три години и започва да тече от датата на одобряване от ВЪЗЛОЖИТЕЛЯ на протокола по чл. 5, ал. 2.

Приемане на изпълнението на договора

Чл. 5. (1) Качественото и своевременно изпълнение на договора се координира и контролира от следните лица:

1. за ВЪЗЛОЖИТЕЛЯ – Радостин Ангелов – главен юрисконсулт в дирекция ФСАД, r.angelov@minfin.bg, тел.: 02/9859 5211 и Росен Ралев – главен специалист в дирекция ФСАД, r.rallev@minfin.bg, тел.: 02/9859 2052.

2. за ИЗПЪЛНИТЕЛЯ – Иван Радославов Граматиков – длъжност Ръководител Back офис, и-мейл ivan_gramatikov@stemo.bg, тел.: 02/8162307.

(2) Приемането и предаването на доставката по договора се извършва от определените по ал. 1 длъжностни лица с подписване на приемо - предавателен протокол за доставка и тестване, който се представя за одобрение от ВЪЗЛОЖИТЕЛЯ.

(3) Процедурата по приемането на доставката следва да се осъществи след като всичките компоненти са монтирани, инсталирани и предварително тествани от ИЗПЪЛНИТЕЛЯ и оборудването е напълно готово за въвеждане в експлоатация.

(4) Лицата по ал. 1, извършват официални приемни изпитания (тестване) на техниката за пълното ѝ съответствие с Техническите спецификации на ВЪЗЛОЖИТЕЛЯ и Техническото предложение на ИЗПЪЛНИТЕЛЯ и за доказване на нормалната работоспособност на оборудването.

(5) Съществени проблеми, свързани с нормалната работоспособност на компонентите на доставката могат да доведат до неприемане от страна на ВЪЗЛОЖИТЕЛЯ на изпитваната техника или на части от нея.

Права и задължения на възложителя

Чл. 6. (1) ВЪЗЛОЖИТЕЛЯТ се задължава:

1. да заплати стойността на доставеното и тествано от ИЗПЪЛНИТЕЛЯ оборудване, предмет на настоящия договор при пълно, точно и навременно изпълнение;
2. да осигури достъп и необходимите технически условия за изпълнение предмета на настоящия договор.

(2) ВЪЗЛОЖИТЕЛЯТ има право:

1. да иска от ИЗПЪЛНИТЕЛЯ да изпълни доставката в срок, с необходимото качество и без отклонения;
2. да осъществи контрол на процеса по изпълнение на настоящия договор;
3. да приеме изпълнението с подписване на двустранен приемо - предавателен протокол за доставка и тестване;
4. да откаже приемането на част или цялото количество оборудване, както и да откаже да заплати съответната цена, когато ИЗПЪЛНИТЕЛЯТ се е отклонил от изискванията за доставката по чл. 1 от настоящия договор – в случаите на неизпълнение (непълно, неточно, забавено изпълнение или пълно неизпълнение);
5. да уведоми ИЗПЪЛНИТЕЛЯ, в случай че в рамките на гаранционния срок в доставеното оборудване или част от него се установят скрити, или явни недостатъци, или несъответствия с техническите изисквания и да поиска поправка на техниката и/или замяната ѝ с такава, отговаряща на уговорените изисквания;
6. да направи рекламация на оборудването пред ИЗПЪЛНИТЕЛЯ относно качеството и скрити дефекти, правещи го негодно за ползване, в срок от 10 (десет) дни от установяването, но не по-късно от 12 /дванадесет/ месеца от датата на доставката.

Права и задължения на изпълнителя

Чл. 7. ИЗПЪЛНИТЕЛЯТ има право при пълно, точно и навременно изпълнение на задълженията си да получи цената на изпълнената от него доставка при условията, уредени в договора.

Чл. 8. ИЗПЪЛНИТЕЛЯТ се задължава да:

1. достави и тества оборудването по чл. 1, като изпълни задълженията си с грижата на добрия търговец, с необходимото качество, в срок и съгласно договорените условия, както и да извършва необходимата настройка и конфигурация за успешно действие на компонентите на доставката;

2. достави на свой риск договорените в чл. 1 от настоящия договор количества и вид оборудване;
3. прехвърли на ВЪЗЛОЖИТЕЛЯ собствеността върху оборудването по чл. 1 с подписване на приемо-предавателен протокол по чл. 5, ал. 2;
4. осигури наръчници на потребителя (ръководство за експлоатация) на български или английски език за всички изделия от доставеното оборудване – в деня на доставката;
5. предостави технически носител с всички необходими драйвери (*отнася се за Обособена позиция № 1*) за нормалното функциониране на предлаганата техника – в деня на доставката;
6. осигури гаранционна сервизна поддръжка на всеки от компонентите на доставката в рамките на гаранционния срок - 3 години, считано от датата на одобряване на протокола по чл. 5, ал. 2;
7. при сервизната поддръжка да гарантира установяване на повредата от негова страна и организиране на отстраняването ѝ в рамките на работно време от 9.00 до 18.00 часа до 4 часа от момента на получаване на информация за установена неизправност.
8. в рамките на гаранционния срок да отстранява за своя сметка появилите се неизправности за минималното технологично време, но не по-късно от 72 часа;
9. гарантира, че доставеното оборудване е ново, неупотребявано, съответства на изискванията на ВЪЗЛОЖИТЕЛЯ, техническите спецификации и е в текущата продуктова листа на производителя;
10. в случай, че в рамките на гаранционния срок в доставеното оборудване или част от него се установят скрити недостатъци или несъответствия със техническите изисквания, в срок от 3 (три) дни от получаване на уведомление от ВЪЗЛОЖИТЕЛЯ, да замени оборудването с такова, отговарящо на уговорените изисквания;
11. да приеме рекламация на оборудването, относно качеството и скрити дефекти, правещи го негодно за ползване, направена от ВЪЗЛОЖИТЕЛЯ в срок от 10 (десет) дни от установяването, но не по-късно от 12 (дванадесет) месеца от датата на доставката;
12. да осигури за своя сметка товаро - разтоварните дейности и транспорта по доставката до мястото на изпълнение и в случаите на гаранционно сервизно обслужване.

Гаранционна поддръжка

Чл. 9. (1) Оборудването по чл. 1 има гаранционен срок от три години.

(2) Гаранционният срок започва да тече от датата на одобряване от ВЪЗЛОЖИТЕЛЯ на протокола по чл. 5, ал. 2.

(3) Всички дефекти, които не са причинени от неправилно действие на служители на ВЪЗЛОЖИТЕЛЯ, се отстраняват от и за сметка на ИЗПЪЛНИТЕЛЯ.

(4) В рамките на гаранционния срок ИЗПЪЛНИТЕЛЯТ е длъжен да предприеме действия по установяване на проблема и организиране на отстраняването му до 4 часа от получаване на заявката в рамките на работния ден.

(5) ИЗПЪЛНИТЕЛЯТ в рамките на гаранционния срок, отстранява за своя сметка появилите се дефекти за минималното технологично време, но не по-късно от 72 часа.

(6) ИЗПЪЛНИТЕЛЯТ организира и осигурява транспорта от ВЪЗЛОЖИТЕЛЯ до сервиза и обратно, като поема изцяло разходите за тези дейности.

(7) Заявката за отстраняване на възникнали проблеми в гаранционните срокове по ал. 1 се прави писмено - по факс, или електронната поща.

(8) В случаите, когато функционалността на техниката не може да бъде възстановена в определеният срок, преди изтичането му, се осигурява обратна техника с минимум същите технически параметри.

Отговорност и неустойки

Чл. 10. (1) В случаите на виновно неточно изпълнение, или пълно неизпълнение на задължение на ИЗПЪЛНИТЕЛЯ по чл. 8 и/или чл. 9 от договора, последният дължи на ВЪЗЛОЖИТЕЛЯ неустойка, в размери, както следва:

1. при неточно изпълнение на задължение, свързано с доставката на оборудване по съответната обособена позиция – 5 % от стойността на неизпълнената част за всеки просрочен ден, но не повече от 30 % от нея;

2. при пълно неизпълнение или забавено изпълнение, при което ВЪЗЛОЖИТЕЛЯТ е загубил интерес от изпълнението – 40 % от стойността на неизпълнението;

3. при забавено изпълнение на задължение, свързано с поддръжката/рекламацията на конкретно оборудване - 1 % от стойността му за всеки просрочен час/ден, но не повече от 30 % от стойността му.

4. за всяко друго неизпълнение на задължение по чл. 8 и/или чл. 9 от договора, или отделно задължение в обхвата на обществената поръчка, или произтичащо от задължението му на добър търговец, извън посочените в т. 1 – т. 3 – 10 % от стойността на оборудването, предмет на конкретното неизпълнение.

(2) В случаите по предходната алинея, ВЪЗЛОЖИТЕЛЯТ може да предприеме действия за разваляне на договора изцяло, или в съответната му част.

(3) При забава за плащане на сумата по чл. 3, ВЪЗЛОЖИТЕЛЯТ дължи неустойка в размер на 0,1 % от стойността ѝ за всеки просрочен ден, но не повече от 10 % от нея.

(4) Изплащането на неустойката по предходните алинеи, не лишава изправната страна от възможността да търси обезщетение за действително претърпените вреди и пропуснати ползи над уговорените размери на общо основание.

Конфиденциалност

Чл. 11. ИЗПЪЛНИТЕЛЯТ се задължава да не предоставя, разгласява, или разкрива по никакъв начин пред трети лица информация, станала му известна при изпълнение на задълженията му по настоящия договор.

Чл. 12. ИЗПЪЛНИТЕЛЯТ се задължава да не използва информация, станала му известна при изпълнение на задълженията му по настоящия договор, за своя изгода или за изгода на трети лица.

Мерки за информиране и публичност

Чл. 13. ВЪЗЛОЖИТЕЛЯТ и ИЗПЪЛНИТЕЛЯТ следва да използват във всички съставяни във връзка с изпълнението на договора документи, при спазване изискванията на „Указания за прилагане на мерки за информиране и публичност по Оперативна програма „Техническа помощ” (www.eufunds.bg), следните реквизити:

1. наименованието на проекта, по който договорът за обществена поръчка се изпълнява;
2. наименованието и логото на Оперативна програма „Техническа помощ“;
3. наименованието на фонда, от който е осигурено финансирането – Европейски фонд за регионално развитие (ЕФРР);
4. логото на Националната стратегическа референтна рамка;
5. флаг/емблема на Европейския съюз.

Прекратяване на договора

Чл. 14. (1) Настоящият договор се прекратява:

1. с изпълнение на всички задължения на страните;
2. по взаимно съгласие между страните, изразено писмено;
3. едностранно от ИЗПЪЛНИТЕЛЯ, със седем дневно писмено предизвестие, отправено до ВЪЗЛОЖИТЕЛЯ по пощата с обратна разписка, при забава на изпълнение задължението му по чл. 3 от договора с повече от 10 работни дни.
4. едностранно от ВЪЗЛОЖИТЕЛЯ без предизвестие, ако в резултат на обстоятелства, възникнали след сключването му, не е в състояние да изпълнява договорните си задължения.

(2) ВЪЗЛОЖИТЕЛЯТ има право едностранно да развали договора без предизвестие, когато ИЗПЪЛНИТЕЛЯТ забави изпълнението на задължението си за доставка с повече от 3 (три) дни, считано от датата на изтичане на посочения в чл. 4, ал. 1 срок. В този случай, ВЪЗЛОЖИТЕЛЯТ не дължи на ИЗПЪЛНИТЕЛЯ каквото и да е обезщетение.

Уведомления между страните

Чл. 15. (1) Адресът за уведомление на ВЪЗЛОЖИТЕЛЯ е: гр.София, ул."Славянска" № 4, София 1040.

(2) Адресът за уведомление на ИЗПЪЛНИТЕЛЯ е гр. София, 1407, бул. „Черни връх“ № 51 Б.

(3) Всички уведомления, направени между страните по договора, следва да са на български език, в писмена форма - чрез писмо, по електронен път или факс.

(4) Уведомлението влиза в сила при получаването му или на посочената дата за влизане в сила в зависимост от това коя от двете дати е по-късна.

Други условия

Чл. 16. Всички протоколи, се изготвят и подписват в два еднообразни екземпляра, по един за ВЪЗЛОЖИТЕЛЯ и ИЗПЪЛНИТЕЛЯ.

Чл. 17. (1) Страните по този договор ще решават споровете и всички допълнителни въпроси, възникнали при и по повод изпълнението на договора или свързани с неговото тълкуване, недействителност, неизпълнение или прекратяване, по взаимно съгласие, на добра воля с двустранни писмени споразумения, а при непостигане на

съгласие въпросът се отнася за решаване пред компетентния съд на територията на Република България по реда на Гражданския процесуален кодекс.

(2) За неуредените по този договор въпроси се прилагат разпоредбите на законодателството на Република България.

Към договора се прилагат следните документи, съставляващи неразделна част от него:

Приложения: 1. Технически спецификации – 1 бр.;

2. Оферта на изпълнителя, включваща техническо предложение и ценово предложение.

Настоящият договор се подписва в два еднообразни екземпляра, по един за всяка от страните.

ЗА ВЪЗЛОЖИТЕЛ:

Атанаска Здравкова



ЗА ИЗПЪЛНИТЕЛ:

Георги Тихов



ДО
ИЗПЪЛНИТЕЛНА АГЕНЦИЯ
„ОДИТ НА СРЕДСТВАТА ОТ ЕВРОПЕЙСКИЯ СЪЮЗ”

ТЕХНИЧЕСКО ПРЕДЛОЖЕНИЕ

ОТНОСНО: Възлагане на обществена поръчка чрез Публична покана с предмет: „Доставка на преносими, настолни компютри и монитори, непрекъсваеми токозахранващи устройства (UPS) и твърди дискове SAS за нуждите на Изпълнителна агенция „Одит на средствата от Европейския съюз“ по обособена позиция № 1”

на СТЕМО ООД

УВАЖАЕМИ ДАМИ И ГОСПОДА,

Предлагаме да изпълним обществената поръчка в съответствие със заложените в техническите спецификации изисквания и условията на проекта на договора, както следва:

1. В изпълнение на договора ще доставим оборудването по обособена позиция № 1 със следните технически параметри: подробно описани в Приложение № 1 - Пълно описание на техническите параметри на предложените изделия
2. Предлаганото оборудване е ново и неупотребявано и към момента на подаване на офертата присъства в продуктовата листа на производителя.
3. Техниката отговаря на българските стандарти за степен на защита и електромагнитна съвместимост, или еквивалентен стандарт.
4. Захранващите блокове отговарят на стандартите CE, PFC (или техни еквиваленти) и са пригодени за работа в стандартизираната електрическа мрежа в Република България (отнася се за Обособена позиция № 1).
5. Ще предоставя на технически носител всички необходими драйвери за нормалното функциониране на предлаганото оборудване и ще посочва линк към официалната страница на производителя, която предлага драйверите (отнася се за Обособена позиция № 1).
6. При рекламации за дефекти и/или лошо качество, правещи оборудването негодно за ползване, своевременно ще извърша замяна с годно за употреба оборудване, отговарящо на изискванията по техническите спецификации на възложителя и направеното от мен предложение.
7. Срокът за изпълнение на доставката е 30 (тридесет) календарни дни от датата на подписване на договора.

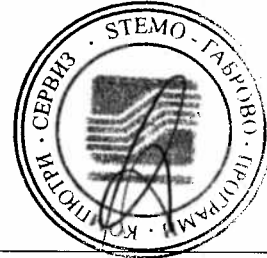
Благодеста Сотирова
Състезател АА



000047

Приложения:

1. Приложение № 1 – Пълно описание на техническите параметри на предложените изделия;
2. Брошури на предложените изделия;
3. Декларация с линк към официалната страница на производителя, която предлага драйверите.



Дата: 17.06.2015 г.

ПОДПИС И ПЕЧАТ: _____

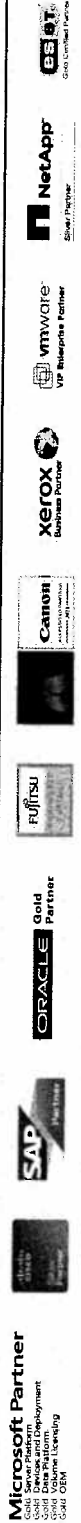
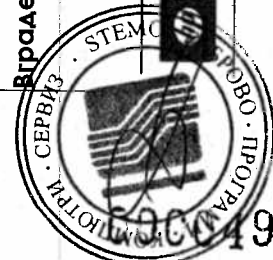
Даниела Христова – Мениджър акаунт продажби ИКТ
и Пълномощник на Управителя на STEMO ООД

ОБОСОБЕНА ПОЗИЦИЯ 1

Приложение № 1

1. ТЕХНИЧЕСКА СПЕЦИФИКАЦИЯ - Преносими компютри - 10 бр.

Показател	МИНИМАЛНИ ИЗИСКВАНИЯ	Предложение от СТЕМО ООД HP ProBook 655 G1 Notebook PC
Процесор	INTEL CORE I5, 4 MB cache четири логически ядра или еквивалентен	Еквивалентен AMD A8-550M Quad Core 2.1GHz: <ul style="list-style-type: none"> • Поискани 4 MB cache – предложени 4MB cache • Поискани четири логически ядра – предложени четири логически ядра и четири физически ядра
Оперативна памет	1x8GB DDR3, един свободен слот за памет	1x8GB DDR3 1600MHz, един свободен слот за памет
Екран	Резолюция 1366x768, Anti-Glare, диагонал на дисплея 15,6"	Резолюция 1366x768, Anti-Glare, LED подсветка, диагонал на дисплея 15,6"
Твърд диск	500GB SATA 7200 rpm	500GB SATA II 7200 rpm
Видео интерфейс	Intel Media Graphics Accelerator или еквивалентен	AMD Radeon™ HD 8550G дискретен клас
Оптично устройство	Вградено DVD+/-RW	Вградено SuperMulti DVD+/-RW
Мрежов интерфейс	Вградени: Ethernet 100/1000 Mbps NIC, Wireless (802.11 b/g/n); Bluetooth 3.0	Вградени: Realtek Ethernet 10/100/1000 Mbps NIC, Wireless 802.11 Broadcom 943228 a/b/g/n 2x2; Bluetooth 4.0
Вградени портове	1 RJ-45 (NIC), 1 x USB 3.0, 2 x USB 2.0, вграден smart card reader за карти по ISO-7816, или еквивалент, (85.60 x 53.98 mm.), вградена HD камера (720p)	1 RJ-45 (NIC), 4 x USB 3.0 (всички поддържат и USB 2.0), вграден smart card reader за карти по ISO7816 (85.60 x 53.98 mm.), вградена HD камера (720p)



Показател	Минимални изисквания	Предложение от СТЕМО ООД HP ProBook 655 G1 Notebook PC
Клавиатура	Гравирана с English (US) и кирилица по БДС	Гравирана с English (US) и кирилица по БДС
Посочващо устройство (мишка)	Според фирмената технология	Тъч пад с поддръжка на жестове, бутон за включване / изключване с LED индикатор , двупосочно превъртане , два бутона пикап
Акумулаторни батерия	Осигуряваща автономна работа за 3 часа	6 клетъчна литиево-йонна батерия, осигуряваща автономна работа до 8 часа и 15 минути
Захранване	Външен адаптер от 220V/50Hz и кабел по БДС	Външен адаптер от 220V/50Hz и кабел по БДС
Операционна система	OEM: Windows 7 Professional или Windows 8 Pro	OEM: Microsoft Windows 7 Professional 64-bit предварително инсталирана
Съвместимост с ОС	MS Windows 7 и MS Windows 8 и да са включени в Windows Certified Products List (WCPL)	Съвместимост с MS Windows 7 и MS Windows 8 и са включени в Windows Certified Products List (WCPL) https://sysdev.microsoft.com/en-US/Hardware/LPL/ProductDetails.aspx?ProductID=45201&OrganizationID=31
Гаранция от датата на одобряване на приемо - предавателния протокол за доставка и тестване, при условията на проекта на Договор	Три години	Три години
Чанта/раница за пренасяне	С логото на производителя на компютъра, побираща и целия комплект аксесоари	Чанта с логото на производителя на компютъра, побираща и целия комплект аксесоари



000050

2. ТЕХНИЧЕСКА СПЕЦИФИКАЦИЯ - Настолни компютри - 5 бр.

Показател	Минимални изисквания	Предложение от СТЕМО ООД
Процесор	Intel Core i3 3 GHz, 4 MB cache или еквивалентен	HP ProDesk 600 G1 Tower Business PC Intel Core i3-4360 3.7 GHz 4MB cache (четвърто поколение)
Оперативна памет	4GB (2x2) DDR3 1333MHz (с 4 слота на дънната платка)	4GB (2x2) DDR3 1600MHz (с 4 слота на дънната платка)
Твърд диск	500 GB SATA II, 7200 rpm	500 GB SATA III, 7200 rpm
Оптично устройство	DVD±RW	SuperMulti DVD±RW
Видео интерфейс	Вграден	Вграден Intel® HD Graphics 4600
Мрежов интерфейс	Ethernet 100/1000 Mbps, Half/Full duplex, Autosensitive & Autonegotiation, Wake on LAN, PXE Boot	Intel I217LM Ethernet 100/1000 Mbps, Half/Full duplex, Autosensitive & Autonegotiation, Wake on LAN, PXE Boot
Вградени портове	8xUSB (от тях поне 2xUSB 3.0 на предния панел) Преден панел: 1 x Audio out, 1 x MIC	10 x USB (от тях 2 x USB 3.0 на предния панел) Преден панел: 1 x Audio out, 1 x MIC
Кутия	Desktop/Tower, АТХ захранване - 300 вата, с минимум 90% ефективност, осигуряващо безпроблемна работа при пълно натоварване на системата	Tower, АТХ захранване - 320 вата, с 90% ефективност, осигуряващо безпроблемна работа при пълно натоварване на системата
Мишка	USB, двубутонна, скрол, оптична, с цвeта и с логото на производителя на компютъра	USB, двубутонна, скрол, оптична, с цвeта и с логото на производителя на компютъра
Клавиатура	С вграден Smart card reader за карти по ISO 7816, или еквивалент, (85.60 x 53.98 mm.), USB, гравирана с English (US) и кирилица по БДС, с цвeта и с логото на производителя на компютъра	HP USB CCID SmartCard Keyboard с вграден Smart card reader за карти по ISO7816 (85.60 x 53.98 mm.), USB, гравирана с English (US) и кирилица по БДС, с цвeта и с логото на производителя на компютъра
Операционна система	OEM: Windows 7 Professional или Windows 8 Pro	OEM: Microsoft Windows 8.1 Pro downgrade to Win7 Pro 64 OS EURO преаварително инсталирана



000051

Показател	Минимални изисквания	Предложение от Стемо ООД
Съвместимост с ОС	MS Windows 7 и MS Windows 8 и да са включени в Windows Certified Products List (WCPL)	HP ProDesk 600 G1 Tower Business PC Съвместим с MS Windows 7 и MS Windows 8 и са включени в Windows Certified Products List (WCPL) https://sysdev.microsoft.com/en-US/Hardware/LPL/ProductDetails.aspx?ProductID=394443&OrganizationID=31
Допълнителни изисквания	ТРМ и фабрично вграден детектор за отваряне на кутията	ТРМ и фабрично вграден детектор за отваряне на кутията
Мултимедия	Слушалки с микрофон, 2 м. до 3 м. кабел (без удължител)	Слушалки с микрофон Plantronics Audio 345 3м. кабел (без удължител)
Гаранция от датата на одобряване на приемо - предавателния протокол за доставка и тестване, при условията на проекта на договор	Три години (вкл. мишката и клавиатурата)	Три години (вкл. мишката и клавиатурата)

3. ТЕХНИЧЕСКА СПЕЦИФИКАЦИЯ - Монитори - 5 бр.

Показател	Минимални изисквания	Предложение от Стемо ООД
Технология	TFT Wide Anti-Glare, или еквивалент	HP ProDisplay P221, 21.5" LED Backlit Monitor
Размер	21.5"	TFT Wide Anti-Glare
Разделителна способност	1600x 900	21.5"
Сяржност	250cd/m ²	1920 x 1080
Контраст	1000:1	250cd/m ²
Верткален ъгъл на визия	160°	1000:1
Хоризонтален ъгъл на визия	160°	160°
Време за реакция	5 ms (max)	170°
		5 ms (max)



000052

Показател	Минимални изисквания	Предложение от Стемо ООД
Вход на сигнала	VGA или DVI с преходник DVI към VGA	HP ProDisplay P221, 21.5" LED Backlit Monitor
Сигнален кабел	В комплекта	VGA и DVI
Захранващ кабел	По БАС	В комплекта – VGA кабел
Гаранции от датата на одобряване на приемо - предавателния протокол за доставка и тестване, при условията на проекта на договор	Три години	Три години



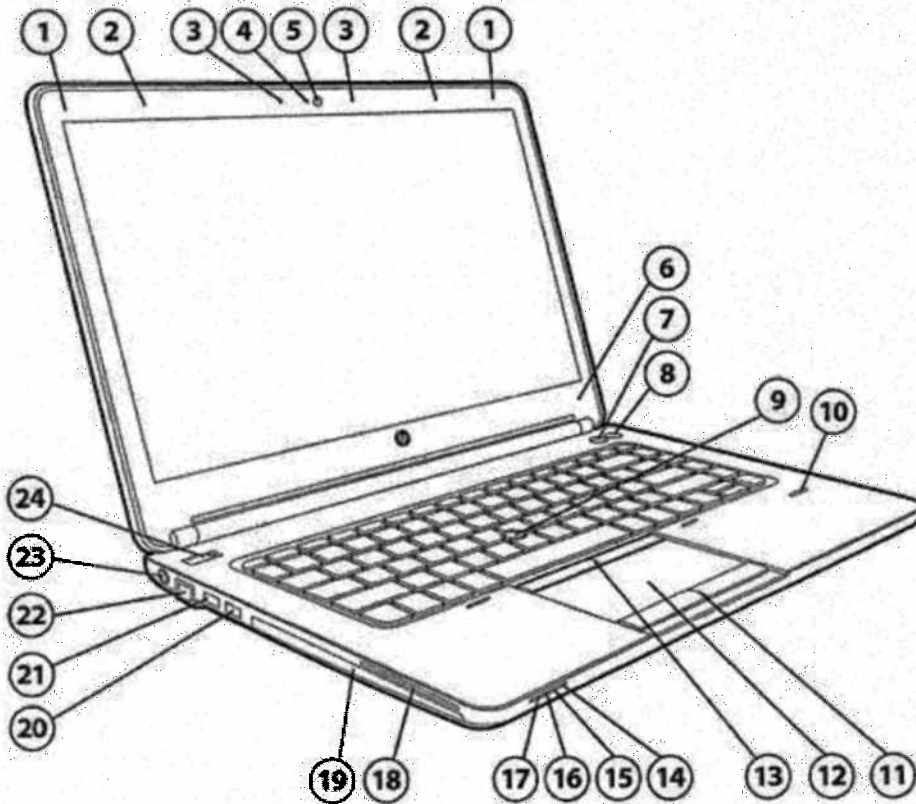
Дата: 17.06.2015 г.

Подпис и печат:
 Даниела Христова – Мениджър акаунт продажби ИКТ
 и Пълномощник на Управителя на СТЕМО ООД

000053

Overview

HP ProBook 645 G1 Notebook PC



Front/Left

- | | |
|---|--|
| 1. WLAN antennas (2)* | 14. Hard drive light |
| 2. WWAN antennas (2)* | 15. AC adapter/Battery light |
| 3. Internal microphone array (2)** | 16. Power light |
| 4. Webcam light (select models only) | 17. Wireless light |
| 5. Webcam (select models only) | 18. Smart Card Reader |
| 6. Internal display switch | 19. Optical Drive (select models only) |
| 7. Wireless button | 20. Media Card Reader |
| 8. Volume mute button | 21. USB 3.0 port (1) |
| 9. Pointing stick (select models only) | 22. USB 3.0 charging port (1) |
| 10. Fingerprint reader | 23. RJ-45 (network) jack/lights |
| 11. Touchpad buttons | 24. Power connector |
| 12. Touchpad zone | 25. Power button |
| 13. Pointing stick buttons (select models only) | |

* The antennas are not visible from the outside of the computer. For optimal transmission, keep the areas immediately around the antennas free from obstructions.

** Models without optional webcam have single integrated microphone on left side of display panel.

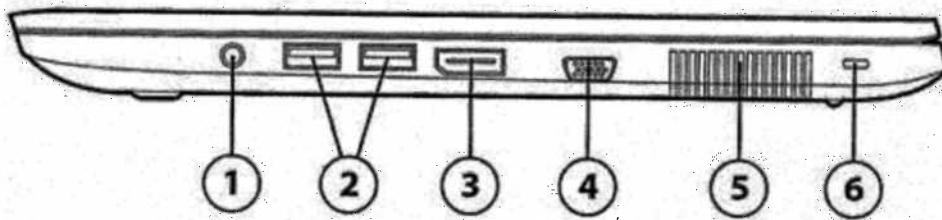
**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

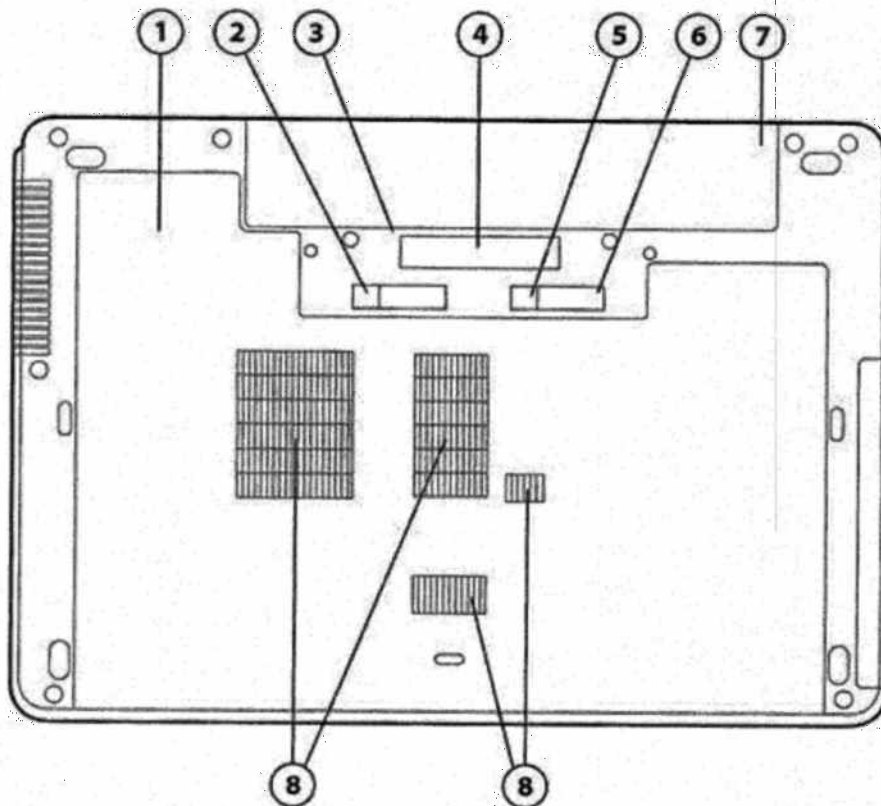
HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Overview



Right

- | | |
|--|------------------------------|
| 1. Audio-out (headphone) jack/Audio-in (microphone) jack | 4. External VGA monitor port |
| 2. USB 3.0 ports (2) | 5. Vents (2) |
| 3. DisplayPort 1.2 | 6. Security cable slot |



Bottom

- | | |
|--------------------------|-------------------------------|
| 1. Service cover | 5. Service cover release lock |
| 2. Battery release latch | 6. Service door release latch |
| 3. SIM card slot | 7. Battery bay |
| 4. Docking connector | 8. Vents |

ВЯРНО С
ОРИГИНАЛА

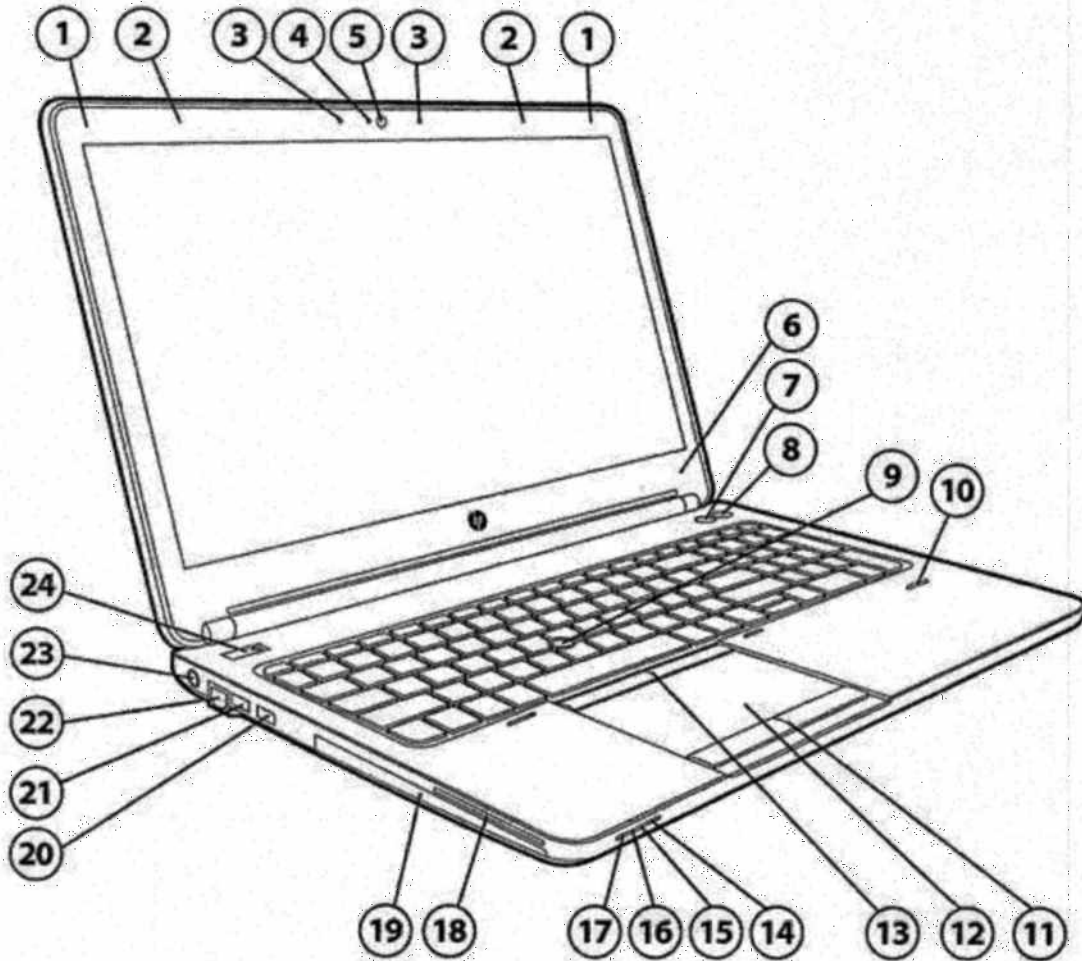


QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Overview

HP ProBook 655 G1 Notebook PC



Front/Left

- | | |
|---|---|
| 1. WLAN antennas (2)* | 14. Hard drive light |
| 2. WWAN antennas (2)* | 15. AC adapter/Battery light |
| 3. Internal dual-microphone array (2)** | 16. Power light |
| 4. Webcam light (select models only) | 17. Wireless light |
| 5. Webcam (select models only) | 18. Smart Card Reader |
| 6. Internal display switch | 19. Upgrade bay (optical drive shown)Optical Drive (select models only) |
| 7. Wireless button | 20. Media Card Reader |
| 8. Volume mute button | 21. USB 3.0 ports (1) |
| 9. Pointing stick (select models only) | 22. USB 3.0 charging port (1) |
| 10. Fingerprint reader (select models only) | 23. RJ-45 (network) jack/lights |
| 11. Touchpad buttons | 24. Power connector |
| 12. Touchpad zone | 25. Power button |
| 13. Pointing stick buttons (select models only) | |

* The antennas are not visible from the outside of the computer. For optimal transmission, keep the areas immediately around the antennas free from obstructions.

** Models without optional webcam have single integrated microphone on left side of display panel.

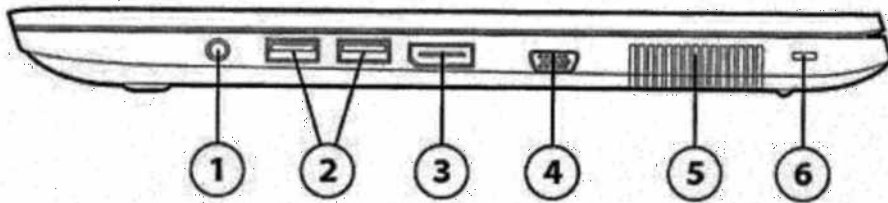
**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

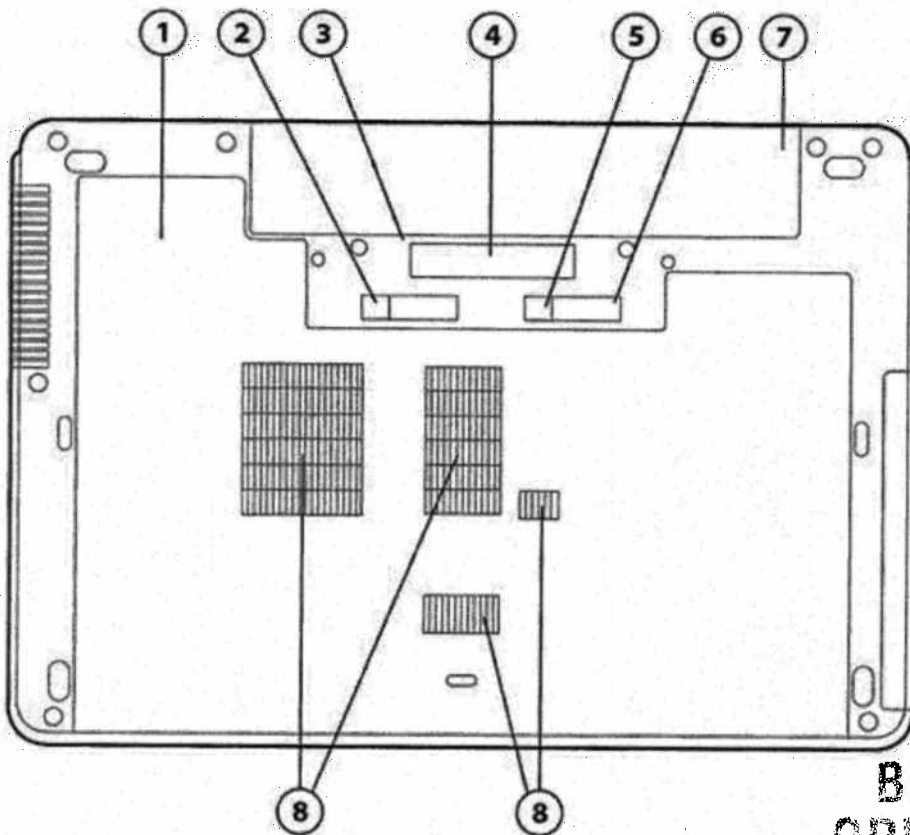
HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Overview



Right

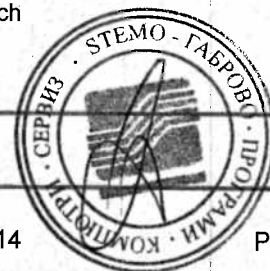
- | | |
|--|------------------------------|
| 1. Audio-out (headphone) jack/Audio-in (microphone) jack | 4. External VGA monitor port |
| 2. USB 3.0 ports (2) | 5. Vents (2) |
| 3. DisplayPort 1.2 | 6. Security cable slot |



Bottom

- | | |
|--------------------------|-------------------------------|
| 1. Service cover | 5. Service cover release lock |
| 2. Battery release latch | 6. Service door release latch |
| 3. SIM card slot | 7. Battery bay |
| 4. Docking connector | 8. Vents |

**ВЯРНО С
ОРИГИНАЛА**



Overview

At A Glance

- Windows 8 versions, Windows 7 versions, SUSE Linux, or FreeDOS 2.0
- New thinner and lighter design - PC-ABS (Polycarbonate-Acrylnitrile/Butadiene/Styrene) durable material is nearly 20% thinner than previous generation; soft-touch, more durable 4-step paint process; larger buttons (power), revamped keyboard (arrow keys); latch/hook removal for clean palmrest design; top mounted speakers for optimized audio experience
- Full-sized spill-resistant keyboard; full separate numeric keypad (HP ProBook 655 only)
- Larger Touchpad with gestures support, on/off button with LED indicator
- New User Experience Software: HP ePrint, HP Wireless Hotspot (Win 8 only), HP PageLift, HP Mobile Connect (EMEA only)
- Enhanced security features including HP Client Security, new HP Trust Circles and HP Fingerprint Reader
- Accelerated Processing Unit and graphics from AMD
- LED-backlit display
 - HP ProBook 645: 14.0-inch diagonal HD, HD+, FHD
 - HP ProBook 655: 15.6-inch diagonal HD or FHD
- Optional HD webcam with dual-microphone array for video conferencing
- DisplayPort 1.2 now native with integrated graphics
- Four USB 3.0 ports for fast data transfer from devices (1 charging)
- HD Audio with DTS Sound+ optimized for high fidelity audio
- Wireless and speaker mute button to conveniently manage the connectivity and speaker.
- Flexible wireless connectivity options:
 - HP Connection Manager allows full control over wireless connections, including 3G and 4G mobile broadband, Wi-Fi, Ethernet and Bluetooth® (Win 7 only)
 - HP Mobile Connect (EMEA Only) (Win 8 Only)
 - Integrated 4G HP Mobile Broadband Modules
 - Integrated 802.11 b/g/n wireless LAN module
 - Integrated 802.11 a/b/g/n or b/g/n with Bluetooth 4.0 High Speed combo card (Linux support Bluetooth 2.1 only)
(Bluetooth sold separately or as an optional feature.)
 - HP Wireless Hotspot (Win 8 Only)
- Choice of 7200 rpm user-removable hard drive (up to 500 GB) with HP 3D DriveGuard, 5400 rpm user-removable hard drive (up to 1 TB), 500 GB 7200 rpm Self Encrypting Drive, 500 GB 5400 rpm FIPS Self Encrypting Drive, 256 GB SED Solid State Drive, or 128/180 GB Solid State Drive

NOTE: See important legal disclosures for all listed specs in their respective features sections.

**ВЯРНО С
ОРИГИНАЛА**



Features

PRODUCT NAMES

HP ProBook 645 G1 Notebook PC
HP ProBook 655 G1 Notebook PC

OPERATING SYSTEM

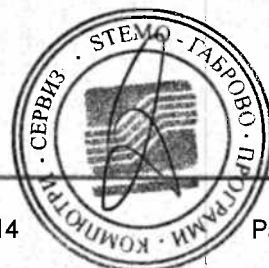
Preinstalled	Windows 8.1 Pro 64*
	Windows 8 64*
	Windows 8 Pro 64*
	Windows 7 Professional 32 (available through downgrade rights from Windows 8 Pro 32)**
	Windows 7 Professional 64 (available through downgrade rights from Windows 8 Pro 64)**
	Windows 7 Professional 32***
	Windows 7 Professional 64***
	Windows 7 Home Premium 32***
	Windows 7 Home Premium 64***
	SUSE Linux Enterprise Desktop 11
	FreeDOS 2.0
	Web-only Support
Windows 8.1 Enterprise 64	
Windows 8.1 Multi-Language 64	
Windows 8.1 Emerging Mkts 64	
Windows 8.1 Chinese Mkt 64	
Windows 8 Enterprise 64	
Windows 7 Basic 32	
Windows 7 Basic 64	
Windows 7 Pro 32	
Windows 7 Enterprise 32	
Windows 7 Enterprise 64	
Windows 7 Ultimate 32	
Windows 7 Ultimate 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> for details.

** 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.

*** Not all features are available in all editions of Windows 7. This system 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.

**ВЯРНО С
ОРИГИНАЛА**



Features

ACCELERATED PROCESSING UNIT

AMD Elite Quad-Core A10-5750M APU (2.5 GHz, 4 MB cache) with AMD Radeon™ HD 8650G Graphics
AMD Elite Quad-Core A8-550M APU (2.1 GHz, 4 MB cache) with AMD Radeon™ HD 8550G Graphics
AMD Elite A6-5350M APU (2.9 GHz, 1 MB cache, 2 cores) with AMD Radeon™ HD 8450G Graphics
AMD Elite A4-5150M APU (2.7 GHz, 1 MB cache, 2 cores) with AMD Radeon™ HD 8350G Graphics
AMD Elite Quad-Core A10-4600M APU (2.3 GHz, 4 MB cache) with AMD Radeon™ HD 7660G Graphics
AMD Elite Quad-Core A8-4500M APU (1.9 GHz, 4 MB cache) with AMD Radeon™ HD 7640G Graphics
AMD Elite A6-4400M APU (2.7 GHz, 1 MB cache, 2 cores) with AMD Radeon™ HD 7520G Graphics
AMD Elite A4-4300M APU (2.5 GHz, 1 MB cache, 2 cores) with AMD Radeon™ HD 7420G Graphics

NOTE: AMD Radeon™ Dual Graphics requires an AMD "A" series APU plus an AMD Radeon™ discrete graphics configuration.

AMD Dynamic Switchable Graphics technology requires either an AMD "A" series APU or an Intel processor, plus an AMD Radeon™ discrete graphics configuration and is available on Windows 8 Pro, Windows 8, Windows® 7 Professional, Home Premium, and/or Home Basic OS.

NOTE: With AMD Dynamic Switchable Graphics technology, full enablement of all discrete graphics video and display features may not be supported on all systems (e.g. OpenGL applications will run on the integrated GPU or the APU as the case may be).

NOTE: Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

FUSION CONTROLLER HUB (FCH)

AMD A76M FCH

GRAPHICS

Integrated graphics:

AMD Elite Quad-Core A10-5750M Accelerated Processor with AMD Radeon™ HD 8650G Graphics
AMD Elite Quad-Core A8-550M Accelerated Processor with AMD Radeon™ HD 8550G Graphics
AMD Elite A6-5350M Accelerated Processor with AMD Radeon™ HD 8450G Graphics
AMD Elite A4-5150M Accelerated Processor with AMD Radeon™ HD 8350G Graphics
AMD Elite Quad-Core A10-4600M Accelerated Processor with AMD Radeon™ HD 7660G Graphics
AMD Elite Quad-Core A8-4500M Accelerated Processor with AMD Radeon™ HD 7640G Graphics
AMD Elite A6-4400M Accelerated Processor with AMD Radeon™ HD 7520G Graphics
AMD Elite A4-4300M Accelerated Processor with AMD Radeon™ HD 7420G Graphics

NOTE: Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

ВЯРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Features

DISPLAY

HP ProBook 645

Internal

- 14" diagonal LED-backlit HD anti-glare (1366 x 768)
- 14" diagonal LED-backlit HD+ anti-glare (1600 x 900)
- 14" diagonal LED-backlit FHD anti-glare slim (1920 x 1080)

External

Up to 32-bit per pixel color depth

VGA

Port supports resolutions up to 1920 x 1200 external resolution @75 Hz

DisplayPort 1.2

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

DVI-D (single link)

Video signal available through DVI port in optional HP Docking Station (sold separately) supports resolutions up to 1600 x 1200 at both full and reduced blanking, and 1920 x 1200 at reduced blanking

Number of Displays Supported

# Displays with HP Advanced Docking Station	UMA	Discrete
ProBook 645 with A10	4	n/a

NOTE: HD content required to view HD images.

NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings.

HP ProBook 655

Internal

- 15.6" diagonal LED-backlit HD anti-glare (1366 x 768)
- 15.6" diagonal LED-backlit FHD anti-glare slim (1920 x 1080)

External

Up to 32-bit per pixel color depth

VGA

Port supports resolutions up to 1920 x 1200 external resolution @75 Hz

DisplayPort 1.2

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

DVI-D (single link)

Video signal available through DVI port in optional HP Docking Station (sold separately) supports resolutions up to 1600 x 1200 at both full and reduced blanking, and 1920 x 1200 at reduced blanking

Number of Displays Supported

# Displays with HP Advanced Docking Station	UMA	Discrete
ProBook 655 with A10	4	n/a

NOTE: HD content required to view HD images.

NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings.

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Features

STORAGE AND DRIVES

Primary Storage Bay

Hard Drives*

320/500/1 TB 5400 rpm SMART SATA II HDD;
320/500/750 GB 7200 rpm SMART SATA II HDD
500 GB 7200 rpm SED (Self Encrypting Drive)
500 GB 5400 rpm FIPS** SED (Self Encrypting Drive)

Solid State Drive*

128/180 GB 2.5" Solid State Drive
256 GB SED Solid State Drive

HP 3D DriveGuard (Windows only)

The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive

*For hard drives and solid state drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8) of system disk is reserved for the system recovery software.

** FIPS-certified, hardware-based AES-256 encryption image

NOTE: For Solid State Drives (SSD), GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 5GB for Windows 8 is reserved for system recovery software.

OPTICAL DRIVES

Fixed 9.5 mm Serial ATA Upgrade Bay

Blu-ray ROM DVD+/-RW SuperMulti DL Drive
DVD+/-RW SuperMulti DL Drive
DVD-ROM Drive

Weight saver

MEMORY

Standard

DDR 3L PC3L-12800 (1600 MHz)
Two SODIMM slots supporting dual-channel memory
2 GB, 4 GB, and 8 GB SODIMMs*

Maximum

Upgradeable to 16384 MB with optional 8192 MB SODIMMs in slots 1 and 2

Dual-channel

Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

* Maximum memory capacities assume Windows 64-bit operating systems or Linux. 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.

**ВЯРНО С
ОРИГИНАЛА**



Features

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 hs3110 HSPA+ Mobile Broadband Module*

HP It4111 LTE/EV-DO/HSPA+ Mobile Broadband Module (US) **, **

HP It4112 LTE/HSPA+ Mobile Broadband Module (EMEA, APJ) **, **

Wireless LAN (WLAN)*

Atheros 802.11 b/g/n (1x1)***

Atheros 802.11 b/g/n (1x1) with Bluetooth® v4.0 combo***, ****

Broadcom 802.11 a/b/g/n (2x2) with Bluetooth® v4.0 combo***, ****

* WWAN is an optional feature sold separately or as an add on feature. WWAN 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, in all regions and only available on products featuring Intel processors.

***Wireless access point and Internet service is required and is not included. Availability of public wireless access points limited.

**** Bluetooth sold separately or as an optional feature.

NOTE: Supports Bluetooth® v2.1 on Linux operating systems

Communications

Realtek 10/100/1000* Ethernet Controller

56K V.92 modem** (Available as a factory configurable option on the HP ProBook 655 only.)

* 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.

** Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval.

AUDIO/MULTIMEDIA

Audio

HD Audio with DTS Sound+

(2) Integrated stereo speakers

Integrated digital microphone (dual-microphone array when equipped with optional webcam)

Function keys for microphone mute, volume up, volume down

Stereo headphone/line out

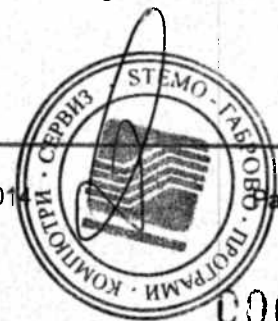
Stereo microphone in

Webcam

Optional* 720p HD** webcam

- HD format (widescreen)
- Supports videoconferencing (non-HD) 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
- Skype-ready

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Features

- * Sold separately as an optional feature.
- ** HD content required to view HD images.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

The HP spill-resistant keyboard is designed using a thin layer of Mylar film under the keyboard. The 101/102-key compatible keyboard features a full-pitch key layout with desktop keyboard features, such as editing keys, both left and right control and alt keys, and function keys. US and International key layouts are available. Includes a separate numeric keypad (HP ProBook 655 only).

Pointing Devices

Touchpad with gestures support, on/off button with LED indicator, two-way scroll, two pick buttons, optional point stick

Buttons and Function Keys

Separate launch buttons provide easy access to wireless on/off and speaker mute. Function keys provide control of features including: standby mode, display brightness, external display, microphone mute, volume down, and volume up.

SOFTWARE AND SECURITY

Preinstalled Software with Windows Operating System

BIOS

HP DriveLock | HP Automatic Drive Lock
HP BIOS Protection*
HP Disk Sanitizer**
HP SpareKey***
Update via Network
Master Record Security
Power On Authentication
Pre-Boot Security
Secure Erase****
Hybrid Boot
Measured Boot
Secure Boot
Absolute Persistence Module*****

* HP Tools partition with an HP BIOS required for automatic recovery.

** For the use cases outlined in the DOD 5220.22-M Supplement. Does not support Solid State Drives (SSDs). Initial setup required. Web history deleted only in Internet Explorer and Firefox browsers and must be user enabled.

*** Requires initial user set up.

**** For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

***** The Absolute Persistence agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

MultiMedia

CyberLink PowerDVD
CyberLink Power2Go (Optical drives)
CyberLink YouCam BE (Windows 7 only)

Communication

HP Connection Manager (Windows 7 only)
HP GPS and Location* (Windows 7 only)

ВЯРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Features

HP Mobile Connect** (Windows 8 only)
HP Wireless Hotspot*** (Windows 8 only)
Intel WiDi Software****
HP Roaming Alert (Windows 8 only)
Intel My WiFi and Wireless Drivers

HP Value Add Software

HP 3D DriveGuard
HP ePrint Driver***** (HP Exclusive)
HP PageLift (HP Exclusive)*****
HP Recovery Manager (Windows 7 only)
HP Support Assistant
HP Recovery Disc Creator (Windows 7 only)
UEFI System Diagnostics (Windows 8 only)

3rd Party

Adobe Flash Player (Commercial)
Skype*****
Buy Office
Free 50GB Box Cloud Storage & Collaboration Account*****

NOTE: HP Recovery Manager enables fast recovery of the factory preinstalled image if the system becomes corrupted or if important system files are accidentally deleted. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8) of system disk is reserved for the system recovery software.

*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.

**Internet access required.

*** The wireless hotspot application requires an active internet connection and separately purchased data plan. While HP wireless hotspot is active, on-device applications will continue to work and will use the same data plan as the wireless hotspot. Wireless hotspot data usage may incur additional charges. Check with your service provider for plan details. Requires Windows 8.1 or HP Connection Manager for Windows 7.

**** Integrated Intel Wi-Di feature is available on select configurations only and requires separately purchased projector, tv or computer monitor with an integrated or external Wi-Di receiver. External Wi-Di receivers connect to the projector, tv or computer monitor via a standard HDMI cable, also sold separately.

***** 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.

***** HP PageLift requires Windows 7 or higher edition.

***** Skype is not offered in China.

***** Offer available on new 2013 HP commercial PC and requires Box registration. Offer subject to change without notice.

Security

Standard

HP Client Security*
HP Credential Manager
HP Password Manager
HP Drive Encryption (FIPS 140-2)**
HP Device Access Manager with Just In Time Authentication
TPM 1.2 Embedded Security Chip (Common Criteria EAL4+ Certified)
HP File Sanitizer***
HP Spare Key

ВЕРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Features

- Integrated Smart Card Reader (FIPS 201)
- Security lock slot
- Security screw for bottom access door
- Microsoft Security Essentials (Windows 7)****
- Microsoft Defender (Windows 8)
- HP Fingerprint Sensor

* Not all features are remotely manageable.

** Requires Windows. Data is protected prior to Drive Encryption login. Turning the PC off or into hibernate logs out of Drive Encryption and prevents data access. Drive encryption planned to be available in October 2013.

*** For the use cases outlined in the DOD 5220.22-M Supplement. Does not support Solid State Drives (SSDs). Initial setup required. Web history deleted only in Internet Explorer and Firefox browsers and must be user enabled.

**** Opt in and internet connection required for updates.

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

POWER

Power Supply

- External 65W HP Smart AC Adapter
- Power cord included is 1.8 m (+/- 0.1 m) or 1.0 m (+/- 0.1 m).
- Total length including external AC adapter is TBD feet (TBD meter).
- HP Fast Charge*

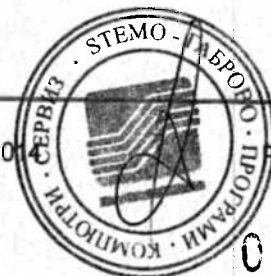
Primary Battery

- HP 9-cell Lithium-Ion Battery (100 WHr)
- HP 6-cell Lithium-Ion Battery (55 WHr)
- HP 6-cell Long Life Lithium-Ion Battery (55 WHr)
- HP 3-cell Lithium-Ion Battery (33 WHr)

Battery Life*

	Dual-Core	Quad-Core
HP ProBook 645 G1		
6-cell (55 WHr) with hard drive	Up to 9 hours	Up to 9 hours 15 minutes
6-cell (55 WHr) with 2.5" solid state drive	Up to 9 hours 30 minutes	Up to 10 hours 15 minutes
9-cell (100 WHr) with hard drive	Up to 16 hours	Up to 16 hours 15 minutes
9-cell (100 WHr) with 2.5" solid state drive	Up to 17 hours 15 minutes	Up to 18 hours
6-cell Long Life (55 WHr) with hard drive	N/A	Up to 9 hours
6-cell Long Life (55 WHr) with 2.5" solid state drive	N/A	Up to 9 hours 45 minutes
HP ProBook 655 G1		
6-cell (55 WHr) with hard drive	Up to 8 hours 15 minutes	Up to 8 hours 45 minutes
6-cell (55 WHr) with 2.5" solid state drive	Up to 9 hours 15 minutes	Up to 9 hours 15 minutes
9-cell (100 WHr) with hard drive	Up to 14 hours 45 minutes	Up to 14 hours 45 minutes
9-cell (100 WHr) with 2.5" solid state drive	Up to 15 hours 45 minutes	Up to 16 hours 15 minutes
6-cell Long Life (55 WHr) with hard drive	N/A	N/A

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Features

6-cell Long Life (55 WHr) with 2.5" solid state drive N/A N/A

System Standby Time**
Up to TBD days

* Windows 7 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.

** Standby life will vary depending on various factors including battery, Memory, CPU, EC and LAN chip. The maximum capacity of the battery will naturally decrease with time and usage.

NOTE: Fast Charge recharges your battery up to 90% within 90 minutes when the system is off (6-cell only).

Power Conservation

AMD PowerPlay technology (discrete models)
Hibernation
Standby
ACPI compliance

WEIGHTS & DIMENSIONS

HP ProBook 645 Notebook PC

Weight

Lightest possible configuration across battery and panel options (HD Panel, No-ODD, 3-cell (31Whr) Battery, M.2 128GB SSD) at 4.4lb / 2kg. Lightest Weight Configurations (across panel, battery and ODD options, if applicable)

	3-cell (31Whr)	6-Cell (55Whr)	6-Cell Long Life (55Whr)	9-Cell (100Whr)
No-ODD	4.4lb/2kg	4.59lb/2.083kg	4.65lb/2.109kg	4.80lb/2.18kg
ODD	4.69lb/2.13kg	4.87lb/2.21kg	4.94lb/2.24kg	5.09lb/2.31kg

Dimensions (w x d x h)

13.39 x 9.33 x 0.99 (front)/1.14 (rear) in
34.0 x 23.7 x 2.53 (front)/2.90 (rear) cm

HP ProBook 655 Notebook PC

Weight

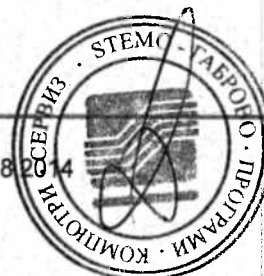
Lightest possible configuration across battery and panel options (HD Panel, No-ODD, 3-cell (31Whr) Battery, M.2 128GB SSD) at 5.1lb / 2.32kg. Lightest Weight Configurations (across panel, battery and ODD options, if applicable)

	3-cell (31Whr)	6-Cell (55Whr)	6-Cell Long Life (55Whr)	9-Cell (100Whr)
No-ODD	5.1lb/2.32kg	5.30lb/2.40kg	5.35lb/2.43kg	5.51lb/2.5kg
ODD	5.39lb/2.50kg	5.58lb/2.53kg	5.64lb/2.56kg	5.80lb/2.63kg

Dimensions (w x d x h)

14.88 x 10.12 x 0.99 (front) -1.14 in (rear)
37.80 x 25.70 x 2.53 (front) -2.90 cm (rear)

**ВЯРНО С
ОРИГИНАЛА**



Features

PORTS/SLOTS

Ports

USB 3.0 - Three

USB 3.0 charging port- One

DisplayPort 1.2 - One

VGA - One

Stereo microphone input - One

Headphone/line out - One

RJ-45 (Ethernet) - One

Docking connector - One

Serial port - One*

Power connector - One

* ProBook 655 only

Expansion Slots

Media Card Reader

- supports SD, SDHC, SDXC

SERVICE AND SUPPORT

HP Services offers limited 3-year and 1-year warranty options depending on country; 1-year limited warranty on primary battery. On-site service and warranty upgrades are also 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>.

*Sold separately or as an optional feature.

** Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. Consult the HP Customer Support Center for details. <http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>

NOTE: Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit: www.hp.com/go/cpc

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

SYSTEM UNIT

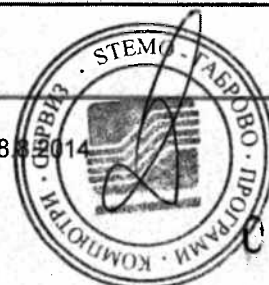
Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	TBD
	Average Operating Power	TBD W
	Max Operating Power	< 65 W
Temperature	Operating	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
	Non-operating	-4° to 140° F (-20° to 60° C)
Relative 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	Registered TBD in United States**
	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	

**ВЯРНО С
ОРИГИНАЛА**

* Configurations of the HP ProBook 645 and HP ProBook 655 that are ENERGY STAR qualified are identified as HP ProBook 645 ENERGY STAR and HP ProBook 655 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>.



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

DISPLAYS

14.0" diagonal LED-backlit HD anti-glare SVA eDP 1.2 flat (1366x768)	Outline Dimensions (W x H x D)	12.6 x 8.09 x 0.14 in (32.09 x 20.56 x 0.36 cm)
	Active Area	12.18 x 6.85 in (30.94 x 17.395 cm)
	Weight	0.71 lb (320g) (max)
	Diagonal Size	14.0 in (35.6cm)
	Surface Treatment	Anti-glare
	Contrast Ratio	300:1 (min)
	Refresh Rate	60 Hz
	Brightness	200 nit (typical)
	Pixel Resolution	Format 1366 x 768 (HD) Configuration RGB Stripe
	Interface	eDP 1.2 (1 lane)
	LCD Mode	TN
	PPI	125 ppi
	Viewing Angle	SVA 40/40/15/30 (Left/Right/Down/Up)

14.0" diagonal LED-backlit HD+ anti-glare SVA eDP 1.2 flat (1600 x 900)	Outline Dimensions (W x H x D)	12.6 x 8.09 x 0.14 in (32.09 x 20.56 x 0.36 cm)
	Active Area	12.19 x 6.86 in (30.96 x 17.415 cm)
	Weight	0.72 lb (325 g) (max)
	Diagonal Size	14.0 in (35.6cm)
	Surface Treatment	Anti-glare
	Contrast Ratio	300:1 (min)
	Refresh Rate	60 Hz
	Brightness	250 nit (typical)
	Pixel Resolution	Format 1600 x 900 (HD+) Configuration RGB Stripe
	Interface	eDP 1.2 (1 lane)
	LCD Mode	TN
	PPI	131 ppi
	Viewing Angle	SVA 40/40/15/30 (Left/Right/Down/Up)

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

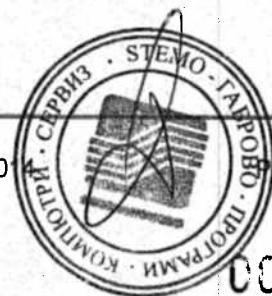
HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

14.0" diagonal LED-backlit FHD anti-glare UVA eDP 1.3 slim PSR (1920x1080)	Outline Dimensions (W x H x D)	12.6 x 8.09 x 0.12 in (32.09 x 20.56 x 0.3 cm)
	Active Area	12.18 x 6.85 in (30.93 x 17.4 cm)
	Weight	0.75 lb (340 g) (max)
	Diagonal Size	14.0 in (35.6cm)
	Surface Treatment	Anti-glare
	Contrast Ratio	600:1 (min)
	Refresh Rate	60 Hz
	Brightness	300 nit (typical)
	Pixel Resolution	Format 1920 x 1080 (FHD) Configuration RGB Stripe
	Interface	eDP 1.3+PSR (2 lane)
	LCD Mode	IPS/FFS/VA
	PPI	157 ppi
	Viewing Angle	UWVA 85/85/85/85 (Left/Right/Down/Up)

15.6" diagonal LED-backlit HD anti-glare SVA eDP 1.2 flat (1366x768)	Outline Dimensions (W x H x D)	14.17 x 8.83 x 0.15 in (36.0 x 22.43 x 0.38 cm)
	Active Area	13.55 x 7.62 in (34.42 x 19.35 cm)
	Weight	< 1.1 lb (500 g) (max)
	Diagonal Size	15.6 in (39.62 cm)
	Surface Treatment	Anti-glare
	Contrast Ratio	300:1 (min)
	Refresh Rate	60 Hz
	Brightness	200 nit (typical)
	Pixel Resolution	Format 1366 x 768 (HD) Configuration RGB Stripe
	Interface	eDP 1.2 (1 lane)
	LCD Mode	TN
	PPI	101 ppi
	Viewing Angle	SVA 40/40/15/30 (Left/Right/Down/Up)

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

15.6" diagonal LED-backlit FHD anti-glare SVA eDP 1.2 slim (1920x1080)	Outline Dimensions (W x H x D)	TBD
	Active Area	TBD
	Weight	TBD
	Diagonal Size	TBD
	Surface Treatment	TBD
	Contrast Ratio	TBD
	Refresh Rate	TBD
	Brightness	TBD
	Pixel Resolution	Format 1920 x 1080 (FHD)
		Configuration RGB Stripe
	Interface	eDP 1.2 (2 lane)
	LCD Mode	TN
	PPI	TBD
Viewing Angle	UWVA 85/85/85/85 (Left/Right/Down/Up)	

STORAGE AND DRIVES

Internal Storage

320 GB* 5400 rpm SATA Hard Drive

Drive Weight	0.25 lbs (115 g)
Capacity	320 GB
Height	0.37 in (9.5 mm)
Width	2.75 in (70 mm)
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
Transfer Rate	Synchronous 300 MB/s (Drive Capability) (maximum)
Seek Time (typical reads, including settling)	Single Track 1.5 ms
	Average 11 ms
	Maximum 22 ms
Rotational Speed	7200 rpm
Logical Blocks	625,142,448
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

ВЯРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

Technical Specifications

500 GB* 5400 rpm SATA Hard Drive

Drive Weight	0.22 lb (101 g)
Capacity	500 GB
Height	0.37 in (9.5 mm)
Width	2.75 in (70 mm)
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
Transfer Rate	Synchronous 300 MB/s (Drive Capability) (maximum)
Seek Time (typical reads, including settling)	Single Track 3 ms
	Average 13 ms
	Maximum 24 ms
Rotational Speed	5400 rpm
Logical Blocks	976,773,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

1 TB* 5400 rpm SATA Hard Drive

Drive Weight	0.254 lb (115 g)
Capacity	1 TB
Height	0.37 in (9.5 mm)
Width	2.75 in (70 mm)
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
Transfer Rate	Synchronous 300 MB/s (Drive Capability) (maximum)
Seek Time (typical reads, including settling)	Single Track 3 ms
	Average 13 ms
	Maximum 24 ms
Rotational Speed	5400 rpm
Logical Blocks	1,953,525,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

320 GB* 7200 rpm SATA Hard Drive

Drive Weight	0.25 lbs (115 g)
Capacity	320 GB
Height	0.37 in (9.5 mm)
Width	2.75 in (70 mm)
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
Transfer Rate	Synchronous 300 MB/s (Drive Capability) (maximum)
Seek Time (typical reads, including settling)	Single Track 1.5 ms
	Average 11 ms
	Maximum 22 ms
Cache	16 MB
Rotational Speed	7200 rpm
Logical Blocks	625,142,448
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

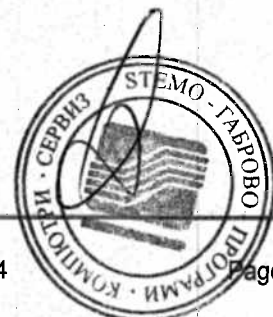
500 GB* 7200 rpm SATA Hard Drive

Drive Weight	0.25 lbs (115g)
Capacity	500 GB
Height	0.37 in (9.5 mm)
Width	2.75 in (70 mm)
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
Transfer Rate	Synchronous 300 MB/s (Drive Capability) (maximum)
Seek Time (typical reads, including settling)	Single Track 1.5 ms
	Average 11 ms
	Maximum 22 ms
Rotational Speed	7200 rpm
Logical Blocks	976,773,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

750 GB* 7200 rpm SATA Hard Drive

Drive Weight	0.25 lbs (115g)
Capacity	750 GB
Height	0.37 in (9.5 mm)
Width	2.50 in (63.5 mm)
Interface	ATA-8, SATA 2.6, 3.0 Gb/s
Transfer Rate	Synchronous 300 MB/s (Drive Capability) (maximum)
Seek Time (typical reads, including settling)	Single Track 1.5 ms
	Average 11 ms
	Maximum 22 ms
Rotational Speed	7200 rpm
Logical Blocks	1,465,149,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

500 GB* 7200 rpm SMART SATA II Self Encrypting Drive	Drive Weight	0.25 lbs (115g)		
	Capacity	500 GB		
	Height	0.37 in (9.5 mm)		
	Width	2.50 in (63.5 mm)		
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s		
	Transfer Rate	Synchronous (maximum)	300 MB/s (Drive Capability)	
	Seek Time (typical reads, including settling)	Single Track	1 ms	
		Average	12 ms	
		Maximum	20 ms	
	Cache	16 MB		
	Rotational Speed	7200 rpm		
	Logical Blocks	976,773,168		
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]		
Features	ATA Security			

500 GB* 5400 rpm SATA FIPS** Hard Drive	Drive Weight	0.25 lbs (95g)		
	Capacity	500 GB		
	Height	0.28 in (7 mm)		
	Width	2.75 in (70 mm)		
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ		
	Transfer Rate	Synchronous (maximum)	300 MB/s (Drive Capability)	
	Seek Time (typical reads, including settling)	Single Track	1.5 ms	
		Average	11 ms	
		Maximum	22 ms	
	Cache	16 MB		
	Rotational Speed	5400 rpm		
	Logical Blocks	976,773,168		
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]		
Features	ATA Security			

* FIPS-certified, hardware-based AES-256 encryption image

SATA 6 Gb/s 128 GB*, 2.5-inch Solid State Drive	Drive Weight	73 Grams		
	Capacity	128 GB		
	Height	0.276 in (7 mm)		
	Width	2.76 in (70 mm)		
	Interface	SATA 3 (6 Gb/s)		
	Performance	Maximum Sequential Read	415 MB/s	
		Maximum Sequential Write	175 MB/s	
	Logical Blocks	250,069,680		
Operating Temperature	32° to 158°F (0° to 70°C) [case temp]			
Features	ATA Security; ATA-8; SATA 3.0; DIPM; TRIM			

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

SATA 6 Gb/s 180 GB*, 2.5-inch SATA Solid State Drive	Drive Weight	78 Grams	
	Capacity	180 GB	
	Height	0.276 in (7 mm)	
	Width	2.76 in (70 mm)	
	Interface	SATA Gen 3 (6 Gb/s)	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		Up to 550 MB/s	Up to 520 MB/s
	Logical Blocks	351,651,888	
	Operating Temperature	32° to 158°F (0° to 70°C) [case temp]	
	Features	ATA Security; ATA-8, SATA 3.0; DIPM; TRIM	

SATA 6 Gb/s 256 GB*, 2.5-inch SATA SED Solid State Drive	Drive Weight	73 Grams	
	Capacity	256 GB	
	Height	0.276 in (7 mm)	
	Width	2.76 in (70 mm)	
	Interface	SATA 3 (6 Gb/s)	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		Up to 460 MB/s	Up to 260 MB/s
	Logical Blocks	500,118,192	
	Operating Temperature	32° to 158°F (0° to 70°C) [case temp]	
	Features	ATA Security; ATA-8 compliant; SATA 3.0; DIPM; TRIM	

* For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8) of system disk is reserved for the system recovery software.

*** FIPS-certified, hardware-based AES-256 encryption image.

OPTICAL DRIVES

Blu-ray ROM DVD+/-RW SuperMulti DL Drive	Access Times	Random	<190 ms CD-ROM (typical) <180ms DVD-ROM (typical) <230 ms BD-ROM (typical)
	Max Data Transfer Rate	24X CD-ROM 8X DVD-ROM 24X CD-R 16X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 4X - DVD+R Dual Layer 4X - DVD-R Dual Layer 5X DVD-RAM 6X BD-ROM	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

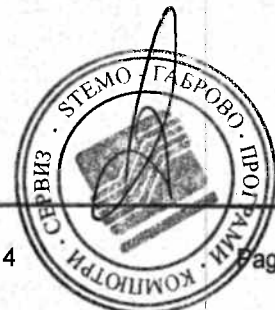
HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

Supported Media (read)	CD-DA, , CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM, BD-ROM, BD-R, BD-RE
Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-RAM
Max Media Capacity (read)	50.0 GB
Max Media Capacity (write)	8.5 GB
Transport	Tray Loading

DVD+/-RW SuperMulti DL Drive	Access Times	Random	<140ms CD (typical) < 160 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM 8X DVD 24X CD-R 24X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 6X - DVD+R Dual Layer 6X - DVD-R Dual Layer 5X DVD-RAM	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, DVD+R DL, DVD-R DL	
	Max Media Capacity (read)	8.5 GB	
	Max Media Capacity (write)	8.5 GB	
	Transport	Tray Loading	

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

DVD-ROM Drive	Access Times	Random	< 140 ms CD (typical) < 160 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM 8X-DVD	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	None	
	Max Media Capacity (read)	8.5GB	
Transport	Tray Loading		

SECURITY

HP Fingerprint Reader	Mobile Voltage Operation	3.0V-3.6V	
	Operating Temperature	14° - 167°F (-10° - 75°C)	
	Current Consumption	36 mA peak	
	Image		
	Low Latency Wait for Finger	950 uA	
	Capture Rate	6000 lines/sec	
	ESD Resistance	IEC 61000-4-2 4B (±15KV)	
Detection Matrix	200*1 (plus another secondary line) 508 dpi 12*3 mm sensor area		

NETWORKING/COMMUNICATIONS

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

Integrated Realtek 10/100/1000 NIC	Ethernet Features	<p>10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)</p> <p>100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)</p> <p>1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40)</p> <p>Auto-Negotiation (Automatic Speed Selection)</p> <p>Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s</p> <p>IEEE 802.1p QoS (Quality of Service) Support</p> <p>IEEE 802.1q VLAN support</p> <p>IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)</p> <p>IEEE 802.3az EEE (Energy Efficient Ethernet)</p> <p>Jumbo Frame 9K</p> <p>Auto MDI/MDIX Crossover cable detection</p>
	Power Management	<p>ACPI compliant - multiple power modes</p> <p>Situation-sensitive features reduce power consumption</p> <p>Advanced link down power saving for reducing link down power consumption</p>
	Performance Features	<p>TCP/IP/UDP Checksum Offload (configurable)</p> <p>Protocol Offload (ARP & NS)</p> <p>Large send offload and Giant send offload</p> <p>Receiving Side Scaling</p>
	Manageability	<p>Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only)</p> <p>PXE 2.1 Remote Boot</p> <p>Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))</p> <p>Comprehensive diagnostic and configuration software suite</p> <p>Virtual Cable Doctor for Ethernet cable status</p>
	Interface	<p>PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ</p>
	NIC Device Driver Name	<p>Realtek PCIe GBE Ethernet Family Controller</p>

HP hs3110 HSPA+ Mobile Broadband Module*	Technology/Operating Bands	<p>CDMA/1xEV-DO: 800MHz (Cell), 1900MHz (PCS)</p> <p>GSM/GPRS/EDGE: 850MHz (Cell), 900MHz (EGSM), 1800MHz (DCS), 1900MHz (PCS)</p> <p>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)</p> <p>LTE: 700 MHz (Verizon, Band XIII)</p>
	Mobile Operator	<p>Verizon (US only)</p>
	Wireless Protocol Standards	<p>GSM/GPRS/EDGE: Class B, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9.</p> <p>CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-856, IS-2000</p> <p>UMTS/WCDMA: Release 99 and Release 7</p> <p>LTE: Power Class III as per 3GPP TS 36.101</p>
	Wireless Parametric Standards	<p>Complies with 3GPP specifications Release 8 for LTE</p>
	Maximum Data Rates	<p>EvDO (Revision A) - 3.1 Mbps (Download), 1.8 Mbps (Upload)</p> <p>WCDMA (DC-HSPA+) - 42Mbps (Download)</p> <p>LTE (Category 3) - 100 Mbps (Download), 50Mbps (Upload)</p>
	GPS	<p>Standalone, Assisted, XTRA</p>



**ВЯРНО С
ОРИГИНАЛА**



000079

QuickSpecs

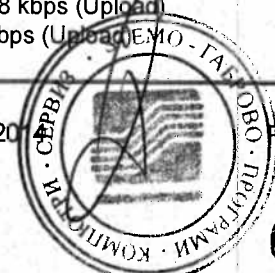
HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

GPS Bands	1575.42 MHz (\pm 1.023 MHz)
Maximum Output Power	GSM/GPRS/EDGE: 32dBm (+/-1) WCDMA: 24dBm (+0.7/-2.3) LTE: +23 dBm (+2.7 dBm/-1.7 dBm) 1xRTT/EvDO: +24 dBm (+0.5 dBm/-1.5 dBm)
Maximum Power Consumption	2700mA (peak)
Power Consumption, Sleep Mode	10 mA
Power Management	USB selective suspend Integrated notebook wireless button
Antenna Type	Dual high efficiency 6 band antennae with spatial diversity, mounted in the display enclosure
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)
Voltage, Operating	3.3v +/- 9%
Temperature, Operating (from TIA/EIA/IS-98-D)	-4° to 149° F (-20° to 65° C)
Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108)	-40° to 185° F (-40° to 85° C)
Humidity, Non-operating	85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
LED Activity	LED Off - Radio Off; Solid LED On - Radio On

* Mobile Broadband is an optional feature sold separately or as an add on 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 It4111 LTE/EV-DO/HSPA+ 4G WWAN*	Technology/Operating Bands	LTE FDD all bands with diversity: 1900 MHz (Band II) ¹ , 1700/2100MHz (Band IV (AWS), 850 MHz (Band V), 700MHz (Band XIII), 700MHz (Band XVII), 1900MHz G Block (Band XXV) WCDMA/HSDPA/HSUPA/HSPA+: all bands with diversity: 2100 MHz (Band I), 1900 MHz (Band II), AWS 1700/2100MHz (Band IV), 850 MHz (Band V), 800 MHz (Band VIII) GSM/GPRS/EDGE: 1900 MHz, 1800 MHz, 850 MHz, 900 MHz CDMA: Cellular 800MHz (BC0), PCS 1900MHz (BC1)
	Wireless Protocol Standards	3GPP Release 8 LTE Specification WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification EVDO Release 0 and Release A
	Wireless Parametric Standards	Complies with 3GPP specifications Release 8 for LTE
	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)



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

GPS	Standalone GPS, A-GPS, GPS XTRA
GPS Bands	1575.42 MHz (\pm 1.023 MHz), GLONASS 1596-1607MHz
Maximum Output Power	LTE: +23 dBm (+/- 1 dBm) WCDMA: +23 dBm (+/- 1 dBm) GSM850/900, GMSK: +32dBm (+/- 1dBm) GSM850/900, 8PSK: +27dBm (+/- 1dBm) DCS1800 / PCS 1900, GMSK: +29dBm (+/- 1dBm) DCS1800 / PCS 1900, 8PSK: +26dBm (+/- 1dBm) CDMA: +24dBm (+/- 1dBm)
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)
Power Consumption, Sleep Mode	2 mA
Power Management	USB selective suspend, Integrated notebook wireless button
Antenna Type	Dual high efficiency multi-band antennae with spatial diversity
Form Factor	M.2, 3042-S3 Key B
Weight	6 g
Dimensions (Length x Width x Thickness)	42 mm x 30 mm x 2.3 mm
Voltage, Operating	3.135 V to 4.4 V (3.3 V +1.1V/-0.165V)
Temperature, operating (from TIA/EIA/IS-98-D)	-13° to 140° F (-25° to 60° C)
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)
LED Activity	LED Off - Radio Off; Solid LED On - Radio On

¹ 1900 MHz (Band II) and 850 MHz (Band V) not supported at launch but support planned in a future firmware update.
* 4G LTE not available on all products, in all regions and only available on products featuring Intel processors. WWAN use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors.

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

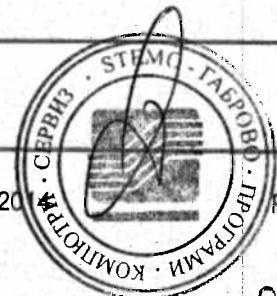
HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

HP It4112 LTE/HSPA+ Gobi 4G Module*	Technology/Operating Bands	LTE FDD all bands with diversity: 2100 MHz (Band I), 1900 MHz (Band II), 1800 MHz (Band III), 850 MHz (Band V), 2600 MHz (Band VII), 900 MHz (Band VIII), 800 MHz (Band XX, DD800) WCDMA/HSDPA/HSUPA/HSPA+ all bands with diversity: 2100 MHz (Band I), 1900 MHz (Band II), 800 MHz (Band V), 900 MHz (Band VIII) GSM/GPRS/EDGE: 1900 MHz (Band II), 1800 MHz (Band III), 850 MHz (Band V), 900 MHz (Band VIII)
	Wireless Protocol Standards	3GPP Release 8 LTE Specification WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification
	Wireless Parametric Standards	Complies with 3GPP specifications Release 8 for LTE
	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)
	GPS	Standalone
	GPS Bands	1575.42 MHz (± 1.023 MHz), GLONASS 1596-1607MHz
	Maximum Output Power	LTE: +23 dBm (+/- 2 dBm) WCDMA: +23.5 dBm (+/- 1 dBm) GPRS Band II, III: +29.5 dBm (+/- 1 dBm) GPRS Band V, VIII: +32.5 dBm (+/- 1 dBm) EGPRS Band II, III: +26.5 dBm (+/-1.5 dBm) EGPRS Band V, VIII: +27.5 dBm (+/-1.5 dBm)
	Maximum Power Consumption	LTE: 1,200 mA (peak); <900 mA (average) WCDMA: 1,100 mA (peak); <800 mA (average) EGPRS: 2,800 mA (peak); <700 mA (average)
	Power Consumption, Sleep Mode	3 mA
	Power Management	USB selective suspend, Integrated notebook wireless button
	Antenna Type	Dual high efficiency multi-band antennae with spatial diversity
	Form Factor	M.2, USB 2.0 interface
	Weight	6 g
	Dimensions (Length x Width x Thickness)	42 mm x 30 mm x 2.3 mm
	Voltage, Operating	3.135 V to 4.4 V (3.3 V +1.1V/-0.165V)
	Temperature, operating (from TIA/EIA/IS-98-D)	14° to 131° F (-10° to 55° C)
	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)
	LED Activity	LED Off - Radio Off; Solid LED On - Radio On

* 4G LTE not available on all products, in all regions and only available on products featuring Intel processors. WWAN use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors.

Atheros 802.11 b/g/n Wireless LAN IEEE 802.11b



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

(1x1)*	Standards	IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified
	Frequency Band	2.4 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: many 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
	Security¹	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.
	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 access points
	Output Power²	13.5 dBm, nominal
	Power Consumption	Transmit: 2.0 W (max) Receive: 1.6 W (max) Associated to Access Point, Idle: 250 mW nominal Wireless Button Off: 100 mW nominal Radio disabled: 75 mW nominal
	Power Management	ACPI compliant power management 802.11 compliant power saving mode
	Receiver Sensitivity³	72.2 Mbps: -70 dbm, 54 Mbps: -74 dBm, 11 Mbps: -88 dBm, 1 Mbps: -95 dBm
	Antenna Connections	High efficiency antenna with spatial diversity, mounted in the display enclosure
	Form Factor	PCI-Express Half-MiniCard 1.2
	Weight	0.013 lb (6 g)
	Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)
	Operating Voltage	3.3v +/- 9%
	Temperature	Operating 14° to 158° F (-10° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
	Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
	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. 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).
- * Wireless access point and internet service required. Availability of public wireless access points limited.



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

Technical Specifications

Atheros 802.11b/g/n (1x1) and Bluetooth 4.0 Standards Combo*, **	Wireless LAN	IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified
	Frequency Band	2.402 - 2.482 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: card will support rates for NSS=1 for RX and TX for 20 MHz channels. Short and long guard interval shall be supported.
	Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM
	Security¹	Support for WPA and WPA2 Support for CCX version up to and including CCXv5 Support for the following EAP types: EAP-TLS, EAP-PEAPv0, EAP-PEAPv1, EAP-PEAPv2, EAP-FAST, EAP-SIM Support for using both machine and user credentials in a single profile. The same profile must be able to be used both before user login and after user login Support the use of Windows Domain credentials IP provider shall have support for an auto-logon to Windows using a PLC and LEAP via the IP provider UI (http://support.microsoft.com/default.aspx/kb/315231). Must have Windows Single Sign On support so that customers can use the WLAN as their primary domain network. With regard to SSO, network association and authentication must occur and be successful before Windows domain authentication is attempted Support for use of the UI client in a user account with limited local security privileges Client service / profile manager must support the WiFi Alliance's WiFi Protected Setup specification. Any credentials saved in a profile must be done securely such that they cannot be re-used by any other user or machine.
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power²	13.5dBm , minimum
	Power Consumption	Transmit: 2.0 W (max) Receive: 1.6 W (max) Associated to Access Point, Idle: 250 mW nominal Wireless Button Off: 100 mW nominal Radio disabled: 75 mW nominal
	Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
	Receiver Sensitivity³	802.11b:-95 dBm (1 Mbps), -93 dBm (2 Mbps), -91 dBm (5.5 Mbps), -88 dBm (11 Mbps) 802.11g:-90 dBm (6 Mbps), -89 dBm (9 Mbps), -87 dBm (12 Mbps), -85 dBm (18 Mbps), -82 dBm (24 Mbps), -79 dBm (36 Mbps), -76 dBm (48 Mbps), -74 dBm (54 Mbps) 802.11n:-70dBm (72.2 Mbps)
	Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure
	Form Factor	PCI-Express Half-MiniCard
	Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)



ВЯРНО С
ОРИГИНАЛА



000084

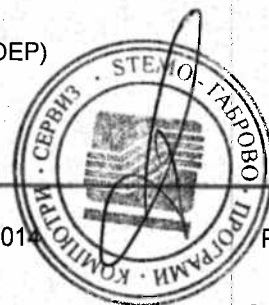
QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

Technical Specifications

Operating Voltage	3.3v +/- 10%
Temperature	Operating 14° to 158° F (-10° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
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. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
Bluetooth Specification	V4.0 High Speed, V2.1+EDR, backwards compatible with V1.1, 1.2 and 2.0
Number of Available Channels	79 (1 MHz) available channels
Data Rates and Throughput	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
Transmit Power	-6 dBm to 4 dBm (Bluetooth Class II)
Receiver Sensitivity	Better than -80 dBm at 0.1 % raw bit error rate
Power Consumption	Peak (Tx) 330 mW Peak (Rx) 230 mW Sleep <17 mW
Antenna	Internally integrated within module
Range	Up 33 ft (10 m)
Electrical Interface	USB 2.0 compliant Microsoft Windows Plug and Play compliant
Bluetooth Software Supported	Broadcom Bluetooth for Windows Microsoft Windows Bluetooth Software
Link Topology	Point to Point, Multipoint Pico Nets up to 7 slaves
Security	Full support of Bluetooth Security Provisions
Power Management	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
Certifications	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
Bluetooth Profiles Supported	Generic Access Profile (GAP) Service Discovery Application Profile (SDAP) Serial Port Profile (SPP) Dial_Up Networking Profile (DUN) Generic Object Exchange Profile (GOEP) Object Push Profile (OPP) File Transfer Profile (FTP) Synchronization Profile (SYNC)

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

Hard Copy Cable Replacement (HCRP)
Personal Area Networking Profile (PAN)
Human Interface Device Profile (HID)
Generic Audio/Video Distribution Profile (GAVDP)
Advanced Audio/Video Distribution Profile (A2DP)
FAX Profile (FAX)
Basic Imaging Profile (BIP)
Headset Profile (HSP)
Hands Free Profile (HFP)
Basic Printing Profile (BPP)
VDP (Video Distribution Profile)
AVRCP (Audio Video Remote Control Profile)

* Wireless access point and internet service required. Availability of public wireless access points limited.

** Bluetooth sold separately or as an optional feature.

Broadcom 802.11 a/b/g/n (2x2) with Bluetooth® v4.0 combo*, **

Wireless LAN Standards

IEEE 802.11a
IEEE 802.11b
IEEE 802.11g
IEEE 802.11n

Interoperability Frequency Band

Wi-Fi certified
802.11b/g/n

- 2.402 - 2.482 GHz

802.11a/n

- 4.9 - 4.95 GHz (Japan)
- 5.15 - 5.25 GHz
- 5.25 - 5.35 GHz
- 5.47 - 5.725 GHz
- 5.825 - 5.850 GHz
- 2.402 - 2.482 GHz

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: card will support rates for NSS=1 and NSS=2 for RX and TX for 20 and 40 MHz channels. Short and long guard interval shall be supported.

Modulation

Direct Sequence Spread Spectrum
BPSK, QPSK, CCK, 16-QAM, 64-QAM

Security¹

- IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only
- AES-CCMP: 128 bit in hardware
- 802.1x authentication
- WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.
- WPA2 certification
- IEEE 802.11i
- Cisco Certified Extensions, all versions through V5
- WAPI

Network Architecture Models

Ad-hoc (Peer to Peer)
Infrastructure (Access Point Required)

Roaming

IEEE 802.11 compliant roaming between access points



ВЯРНО С
ОРИГИНАЛА



000086

QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

Output Power²	<ul style="list-style-type: none">• 2.4G: +13.5dBm minimum• 5G: +12dBm minimum• Maximum output power must be able to achieve modular regulatory certification with notebooks that have antennas >20cm from the user and peak gain of +3dBi at 2.4GHz and +4dBi at 5GHz
Power Consumption	Transmit: 2.0 W (max) Receive: 1.6 W (max) Idle mode (PSP): 250 mW (WLAN Associated) Idle mode: 100 mW (WLAN unassociated) Radio disabled: 75 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity³	802.11b:-95 dBm (1 Mbps), -93 dBm (2 Mbps), -91 dBm (5.5 Mbps), -88 dBm (11 Mbps) 802.11a/g:-90 dBm (6 Mbps), -89 dBm (9 Mbps), -87 dBm (12 Mbps), -85 dBm (18 Mbps), -82 dBm (24 Mbps), -79 dBm (36 Mbps), -76 dBm (48 Mbps), -74 dBm (54 Mbps) 802.11n:-69 dBm (72.2 Mbps), -66 dBm (300 Mbps)
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express Half-MiniCard
Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)
Weight	3.3g
Operating Voltage	3.3v +/- 9%
Temperature	Operating 14° to 158° F (-10° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
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. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
Bluetooth Specification	V4.0 High Speed, V2.1+EDR, backwards compatible with V1.1, 1.2 and 2.0
Number of Available Channels	79 (1 MHz) available channels
Data Rates and Throughput	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps asymmetric or 1306.9 kbps symmetric
Transmit Power	-6 dBm to 4 dBm (Bluetooth Class II)



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

Technical Specifications

Receiver Sensitivity	Better than -80 dBm at 0.1 % raw bit error rate
Power Consumption	Peak (Tx) 330 mW Peak (Rx) 230 mW Sleep <17 mW
Antenna	Internally integrated within module
Range	Up to 33 ft (10 m)
Electrical Interface	USB 2.0 compliant Microsoft Windows Plug and Play compliant
Bluetooth Software Supported	Broadcom Bluetooth for Windows Microsoft Windows Bluetooth Software
Link Topology	Point to Point, Multipoint Pico Nets up to 7 slaves
Security	Full support of Bluetooth Security Provisions
Power Management	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
Certifications	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
Bluetooth Profiles Supported	Generic Access Profile (GAP) Service Discovery Application Profile (SDAP) Serial Port Profile (SPP) Dial_Up Networking Profile (DUN) Generic Object Exchange Profile (GOEP) Object Push Profile (OPP) File Transfer Profile (FTP) Synchronization Profile (SYNC) Hard Copy Cable Replacement (HCRP) Personal Area Networking Profile (PAN) Human Interface Device Profile (HID) Generic Audio/Video Distribution Profile (GAVDP) Advanced Audio/Video Distribution Profile (A2DP) FAX Profile (FAX) Basic Imaging Profile (BIP) Headset Profile (HSP) Hands Free Profile (HFP) Basic Printing Profile (BPP) VDP (Video Distribution Profile) AVRCP (Audio Video Remote Control Profile)

* Wireless access point and internet service required. Availability of public wireless access points limited.

** Bluetooth sold separately or as an optional feature.

AUDIO/MULTIMEDIA - DTS SOUND+

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

Technical Specifications

Hardware	Implementation	IDT 92HD91
	Function Key	Volume up, volume down, and mute
	Volume Controls	
	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
	ADC	16 or 20-bit

Integrated Stereo Speakers	Power Rating	2 Watts
	Impedance	4 Ohms

POWER

HP 65W Smart AC Adapter	Dimensions	4.17 x 1.85 x 1.1 in (10.6 x 4.7 x 2.8 cm)		
	Weight	0.62 lb (280 g)		
	Input	Input	100 to 240 VAC	
		Input Efficiency	87% min at 115/230 VAC	
		Input frequency range	47 to 63 Hz	
	Output	Input AC current	1.7 A at 90 VAC, 0.85 A at 180 VAC	
		Output power	65W	
		DC output	18.5V	
		Hold-up time	5 msec at 115 VAC input	
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown	
		Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	Operating temperature	32° to 104° F (0° to 40° C)	
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)	
		Altitude	0 to 10,000 ft (0 to 3,048 m)	
		Humidity	20% to 80%	
Storage Humidity		10% to 90%		

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

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; MTBF - over 200,000 hours at 25°C ambient condition.

HP 9-cell (100 WHr) Lithium-Ion Primary battery

Dimensions (H x W x L)	0.8 x 2.4 x 8.1in (2 x 6.6 x 20.5cm)	
Weight (max)	1.1lb, (.488kg)	
Cells/Type	Lithium-Ion	
Energy	Voltage	11.25V
	Amp-hour capacity	8.85Ah
	Watt-hour capacity	100Wh
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	3.5 to 5 hours
	System ON	4 to 7 hours
	Fuel Gauge LED	No
Warranty	1 year	
Compatible with optional Travel Battery	Yes	

HP 6-cell (55 WHr) Lithium-Ion Primary battery

Dimensions (H x W x L)	0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm)	
Weight (max)	.70lb, (.313kg)	
Cells/Type	Lithium-Ion	
Energy	Voltage	10.8V
	Amp-hour capacity	5.1Ah
	Watt-hour capacity	55Wh
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 to 5 hours
	Fuel Gauge LED	No
Warranty	1 year	
Compatible with optional Travel Battery	Yes	

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

**HP 6-cell (55 WHr)
Long Life Primary
Battery**

Dimensions (H x W x L)	0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm)	
Weight (max)	.72lb, (.323kg)	
Cells/Type	Lithium-Ion	
Energy	Voltage	10.8V
	Amp-hour capacity	5.1Ah
	Watt-hour capacity	55Wh
	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 to 5 hours
	Fuel Gauge LED	No
Warranty	3 years*	
Compatible with optional Travel Battery	Yes	

* 3-year platform warranty is required for a 3-year Long Life Battery warranty.

**HP 3-cell (33 WHr)
Lithium-Ion Primary
battery**

Dimensions (H x W x L)	TBD in (TBD cm)	
Weight (max)	TBD lb, TBD kg)	
Cells/Type	Lithium-Ion	
Energy	Voltage	11.1V
	Amp-hour capacity	2.95Ah
	Watt-hour capacity	33Wh
	Temperature	
	Operating (Charging)	32° to 113° F (0° to 45° C)
	Operating (Discharging)	14° to 140° F (-10° to 60° C)
	Non-operating	-4° to 140° F (-20° to 60° C)
Battery Re-Charge Time	System in OFF or Standby Mode	TBD hours
	System ON	TBD hours
	Fuel Gauge LED	No
Warranty	1 year	

ENVIRONMENTAL

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

Environmental Data

Eco-Label Certifications & Declarations

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration
- US ENERGY STAR®
- EPEAT Gold registered in the United States. See <http://www.epeat.net> for registration status in your country.

HP ProBook 645 G1 Notebook PC

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook".

Energy Consumption (in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)	12.79 W	12.72 W	11.05 W
Normal Operation (Long idle)	8.42 W	8.43 W	8.36 W
Sleep	0.98 W	1.11 W	0.96 W
Off	0.49 W	0.59 W	0.47 W

NOTE:

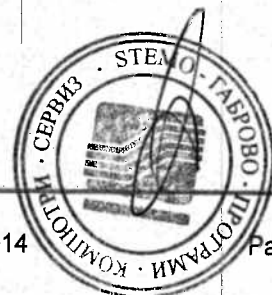
Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.

Heat Dissipation*

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)	44 BTU/hr	44 BTU/hr	38 BTU/hr
Normal Operation (Long idle)	29 BTU/hr	29 BTU/hr	29 BTU/hr
Sleep	3 BTU/hr	4 BTU/hr	3 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

ВЯРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Typically Configured - Idle	3.3	27
Fixed Disk - Random writes	3.4	27

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

Mercury greater than 1ppm by weight

Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Lithium

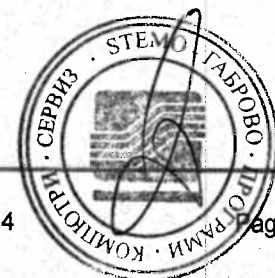
Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product contains 0.0 % post-consumer recycled plastic (by wt.)
- This product is 95.4% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
 - PAPER/Corrugated 482.6 g
- Internal:
 - PLASTIC/EPE (Expanded Polyethylene) 28 g
 - PLASTIC/Polyethylene low density 30.4 g
- The PAPER/Corrugated contains at least 70% recycled content.
- The PLASTIC/EPE (Expanded Polyethylene) materials contains at least 50 % recycled content.
- The PLASTIC/Polyethylene low density) materials contains at least 50 % recycled content.

ВЯРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655 G1 Notebook PC

Technical Specifications

HP ProBook 655 G1 Notebook PC

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook".

Energy Consumption (in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)	11.3 W	12.24 W	12.37 W
Normal Operation (Long idle)	8.64 W	9.04 W	8.6 W
Sleep	0.93 W	1.04 W	0.92 W
Off	0.51 W	0.66 W	0.51 W

NOTE:

Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.

Heat Dissipation*

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)	39 BTU/hr	42 BTU/hr	42 BTU/hr
Normal Operation (Long idle)	30 BTU/hr	31 BTU/hr	30 BTU/hr
Sleep	3 BTU/hr	4 BTU/hr	3 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Typically Configured - Idle	3.37	27
Fixed Disk - Random writes	3.42	27

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater than 1ppm by weight
- Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Lithium

Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.

**ВЯРНО С
ОРИГИНАЛА**



Technical Specifications

- This product contains 0.0 % post-consumer recycled plastic (by wt.)
- This product is 97.5 % recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
 - PAPER/Corrugated 513.5 g
- Internal:
 - PLASTIC/EPE (Expanded Polyethylene) 33.4 g
 - PLASTIC/Polyethylene low density 26 g
- The PAPER/Corrugated contains at least 70% recycled content.
- The PLASTIC/EPE (Expanded Polyethylene) materials contains at least 50 % recycled content.
- The PLASTIC/Polyethylene low density) materials contains at least 50 % recycled content.

ALL MODELS

MATERIAL USAGE

This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at: <http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf>):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel - finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

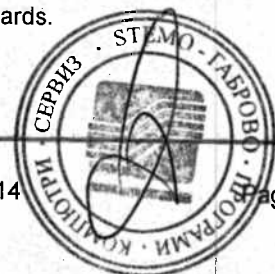
PACKAGING USAGE

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

END-OF-LIFE MANAGEMENT AND RECYCLING

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

Technical Specifications

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: <http://www.hp.com/go/reuse-recycle> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/recyclers>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

HEWLETT-PACKARD CORPORATE ENVIRONMENTAL INFORMATION

For more information about HP's commitment to the environment:

Global Citizenship Report

<http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html>

Eco-label certifications

<http://www8.hp.com/us/en/hp-information/environment/ecolabels.html>

ISO 14001 certificates:

http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf

and

<http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf>

Country of Origin

TBD

**ВЯРНО С
ОРИГИНАЛА**



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

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

Type	Description	Part #
Cases	HP Professional Series Carrying Case (up to 15.6")	H4J90AA
	HP Professional Slim Top Load Case (up to 17.3")	H4J91AA
	HP Business Backpack (up to 17.3")	H5M90AA
	HP Business 4 Wheel Roller Case	H5M93AA
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 90W Docking Station	A7E32AA#xxx
	HP 120W Advd Docking Station	A7E36AA#xxx
Input/Output	HP Ultra Mobile Wireless Mouse	H6F25AA
	HP Stylish Wireless KB/Mouse	H4B79AA
	HP Stylish USB KB/Mouse	H4B80AA
Adapters	HP 65W Slim Adapter	AX727AA#XXX
	90W Smart AC Adapter	ED495AA#xxx
	90W Slim Adapter	BT796AA#xxx
	HP 65W Smart AC Adapter	H6Y89AA
	HP 90W Smart AC Adapter	H6Y90AA
	HP 65W Slim AC Adapter	H6Y82AA
	HP 90W Slim AC Adapter	H6Y83AA
Batteries	HP ST09 Extended Life Notebook Battery	QK639AA
	HP BB09 Ultra Extended Life Notebook Battery	QK640AA
Security	HP Docking Station Cable Lock	AU656AA#XXX
	HP UltraSlim Keyed Cable Lock	H4D73AA
Storage - External Storage	HP Mobile USB DVDRW	A2U57AA
Health and Education	HP 20-Notebook Managed Charging Cart	QL489AA#xxx
	HP 30-Notebook Managed Charging Cart	QL490AA

ВЯРНО С
ОРИГИНАЛА



QuickSpecs

HP ProBook 645 G1 Notebook PC, HP ProBook 655
G1 Notebook PC

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

Copyright © 2014 Hewlett-Packard Development Company, L.P.

All rights reserved. Intel, Core, and Celeron are registered trademarks or trademarks of Intel Corporation in the U.S. and/or other countries. Bluetooth is a trademark owned by its proprietor and used by Hewlett-Packard Company under license. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. Adobe is a trademark of Adobe Systems Incorporated. ENERGY STAR is a registered mark owned by the U.S. government.

The information contained herein is subject to change without notice and is provided "as is" without warranty of any kind. The warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

**ВЯРНО С
ОРИГИНАЛА**



HP ProDesk 600 G1 Tower PC



Productivity and manageability in one.

Give busy workers the edge they need to stay ahead. This PC's solid-state hybrid drive¹ responds to the speed of work and opens applications right away. Powerful security and business-class management software frees up IT staff time.



HP recommends Windows.

Less waiting around

Speedy and responsive to keep pace with your multitasking. Quickly open new files and switch applications with less wait time, thanks to a solid-state hybrid drive.¹

Power through your day with greater speed and performance. Get the latest in processing technology with your choice of 4th generation Intel® Core™ processors.²

Easily share your internet connection with your devices and help colleagues get online fast with HP Wireless Hotspot.³

Keep everything in sight

Watch your inbox while working on other tasks. There's plenty of screen room for all of your work with support for multiple displays.⁴

Make the most of virtual conferencing. Bring work to life through rich sound and video with DTS Sound+ and an HD webcam.^{5, 6}

Keep your most important devices easily connected. Access and transfer data fast with two front USB 3.0 ports.

Share presentations, videos, and other content—no cables needed. WiDi Intel® Wireless Display lets you connect your ProDesk to projectors and other WiDi-ready devices.⁷

Put in more face time. You're ready for web chats and conferences with Skype™ pre-configured on your HP ProDesk 600 G1. It's almost as good as being there.^{8, 6}

Hassle-free security and management

HP Client Security software suite helps you quickly and easily encrypt your hard drive, permanently delete unwanted or discarded data⁹, restrict unauthorized access, and more.⁹ Stay up and running. HP BIOS Protection¹⁰ offers enhanced protection against virus attacks and other security threats, and is designed to help prevent data loss and reduce downtime. You can help safeguard your data with easy backup and recovery, using HP Recovery Manager.¹¹

Securely store all of your passwords and speed up access to your favorite password protected applications with HP Password Manager.¹²

Get right to the updates you need and spend less time managing updates with HP Support Assistant.

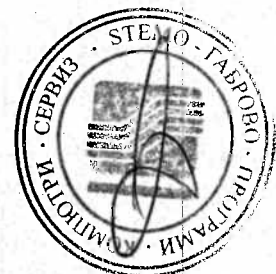
Plan with confidence

Get more out of your investment. The HP ProDesk 600 G1 is designed for a long lifecycle, with platform stability up to 30 months.

HP ProDesk PCs are rigorously tested to help ensure reliability. During the HP Total Test Process, our PCs experience 115,000 hours of performance trials to help get you through your business day.

Add a little style to the workplace. HP business PCs feature a new industrial design with rounded edges and other features to help the system look newer for longer.

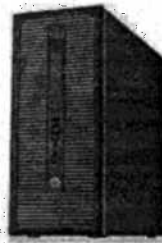
**ВЯРНО С
ОРИГИНАЛА**



000099

HP ProDesk 600 G1 Tower PC

HP recommends Windows.



Form Factor	Microtower
Operating System	Windows 8 Pro 64 Windows 8 64 Windows 7 Ultimate 32 Windows 7 Ultimate 64 Windows 7 Professional 32 Windows 7 Professional 64 Windows 7 Professional 32 (available through downgrade rights from Windows 8 Pro 64) Windows 7 Professional 64 (available through downgrade rights from Windows 8 Pro 64) Windows 7 Home Premium 32 Windows 7 Home Premium 64 SUSE Linux Enterprise Desktop 11 FreeDOS
Processor Family	Intel® Core™ i7 processor; Intel® Core™ i5 processor
Processor	Intel® Core™ i7-4770 with Intel HD Graphics 4600 (3.4 GHz, 8 MB cache, 4 cores); Intel® Core™ i5-4670 with Intel HD Graphics 4000 (3.2 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4570 with Intel HD Graphics 4600 (3.2 GHz, 6 MB cache, 4 cores)
Chipset	Intel® Q85 Express
Memory	Up to 32 GB 1600 MHz DDR3 SDRAM Memory slots: 4 DIMM
Storage	Internal drive bays One 6,35 cm (2.5"); Two 8,9 cm (3.5") External drive bays One 8,9 cm (3.5"); One slimline; One 13,3 cm (5.25") 320 GB, up to 2 TB, SATA (7200 rpm) 500 GB, up to 1 TB, SATA (10000 rpm) 500 GB, up to 1 TB, SATA SSHD 120 GB, up to 160 GB, SATA SSD up to 256 GB, SATA SED
Removable Media	Slim SATA Blu-ray writer; Slim SATA SuperMulti DVD writer; Slim SATA DVD-ROM
Graphics	Integrated: Intel HD Graphics 4000 and 4600; Discrete: AMD Radeon HD 8350 (1 GB); AMD Radeon HD 8490 (1GB); NVIDIA NVS 310 (512 MB); NVIDIA NVS 315 (1GB); NVIDIA GeForce GT630 (2 GB)
Audio	HD audio with Realtek ALC221 codec; DTS Studio Sound audio management technology; Microphone and headphone front ports (3.5mm); Line-out and Line-In rear ports (3.5mm); Multi-streaming capable; Internal speaker (standard)
Communications	Standard: Intel i217LM Gigabit Network Connection; Optional: Intel Ethernet I210-T1 PCIe x1 Gb Network Interface Card; Intel Centrino Advanced-N 6205 802.11a/b/g/n PCI Express x1 Network Interface Card
Expansion Slots	3 PCIe x1; 1 PCIe x16
Ports and Connectors	4 USB 3.0; 6 USB 2.0; 1 serial; 2 PS/2; 1 VGA; 2 DisplayPort; 1 audio in; 1 audio out; 1 RJ-45; 1 headphone; 1 microphone
Security	Trusted Platform Module (TPM) 1.2; SATA port disablement (via BIOS); Drive lock: Intel® Identify Protection Technology (IPT); Serial, parallel, USB enable/disable (via BIOS); Optional USB Port Disable factory (user configurable via BIOS); Removable media write/boot control; Power-On password (via BIOS); Setup password (via BIOS); HP Chassis (1 bay) Security Kit: Solenoid Hood Lock / Sensor; Support for chassis padlocks and cable lock devices
Software	CompuTrace (status tracing); Device Access Manager; Drive Encryption; File Sanitizer (Activated via Wizard); Disk Sanitizer (external version); Microsoft Security Essentials (Windows 7); Microsoft Defender (Windows 8); Security Manager; Secure Erase (Windows 8); Cyberlink Media Suite; Cyberlink PhotoDirector; Cyberlink Power Director; Cyberlink Power DVD; Bfi; Cyberlink Power2Go (Secure Burn); HP ePrint Driver; HP PageLift; HP Support Assistant (Windows 7); HP Recovery Disk Creator (Windows 7); HP Recovery Manager (Windows 8); HP QuickStart; Adobe Flash Player (Windows 7); Bing Search for Internet Explorer 10 (Windows 7); Bing Search (Windows 8); Evernote; PDF Complete (Windows 7); PDF Complete, Corporate Edition (Windows 8); Skype; Buy Office
Dimensions	17 x 44.2 x 39.9 cm
Weight	Starting at 9.3 kg Exact weight depends on configuration
Energy Efficiency Compliance	ENERGY STAR® qualified configurations available
Power	320W standard efficiency, 92% efficient, active PFC
Expansion Solutions	3 PCIe x1, 1 PCIe x16 One 8,9 cm (3.5"); One slimline; One 13,3 cm (5.25") One 6,35 cm (2.5"); Two 8,9 cm (3.5")
Warranty	3-year limited warranty including 3 years of parts, labour, and next-business-day onsite service. Terms and conditions vary by country. Certain restrictions and exclusions apply.

¹ Solid State Hybrid Drives planned to be available October 2013; ² 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 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; ³ The wireless hotspot application requires an active internet connection, a separately purchased data plan and separately purchased wireless NIC card. While HP wireless hotspot is active, on-device applications will continue to work and will use the same data plan as the wireless hotspot. Wireless hotspot data usage may incur additional charges. Check with your internet service provider for plan details. Requires Windows; ⁴ Support for external displays as a standard feature through integrated processor-based graphics is dependent upon the particular PC platform/form factor; the actual number of displays supported will vary. An optional discrete graphics solution will be required for the support of additional displays. Additional cables required. DisplayPort with Multi-Stream through integrated graphics is planned to be available in fall 2013 as an integrated feature and as a web update in late summer 2013; ⁵ Internet access required; ⁶ Webcam required for video conferencing; ⁷ Integrated Intel Wi-Di feature is available on select configurations only and requires a separately purchased wireless NIC card, and a separately purchased projector, tv or computer monitor with an integrated or external Wi-Di receiver. External Wi-Di receivers connect to the projector, tv or computer monitor via a standard HDMI cable, also sold separately; ⁸ For the use cases outlined in the D005220-22-M Supplement. Does not support Solid State Drives (SSDs). Requires Disk Sanitizer, External Edition for Business Desktops from hp.com. Initial setup required. Web history deleted only in Internet Explorer and Firefox browsers and must be user enabled; ⁹ Requires Windows; ¹⁰ HP Tools partition with an HP BIOS required for automatic recovery. Business Desktops do not support the HP BIOS Protection auto-recovery feature; ¹¹ Requires Windows 7; ¹² Requires Internet Explorer (IE 8 or IE 9). Not all websites and applications may be supported.

**ВЯРНО С
ОРИГИНАЛА**

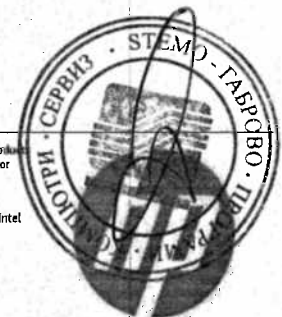
Get engaged with HP Financial Services

Get engaged with HP Financial Services to implement innovative technologies essential for driving business value and competitive differentiation. More information on www.hp.com/go/hpfs.

The product could differ from the images shown. © 2013 Hewlett-Packard Development Company, L.P. 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.

Not all features are available in all editions of Windows 8. Systems may require upgraded and/or separately purchased hardware to take full advantage of Windows 8 functionality. See <http://www.microsoft.com/windows> for details. Bluetooth is a trademark of its proprietor and used by Hewlett-Packard Company under license. Intel and Core are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the U.S. and other countries. All other trademarks are the property of their respective owners. Learn more at www.hp.eu/desktops

4AA4-7146EEE, July 2013



000100

HP ProDesk 600 G1 Tower PC

HP recommends Windows.

Accessories and services (not included)

HP 8-GB PC3-12800 (DDR3-1600 MHz)
DIMM Memory

Maximize your business PC performance with HP Memory. Upgrading your memory is a cost-effective way to boost your system performance without having to upgrade your processor.

Product number: B4U37AA



HP 128 GB SATA 6 Solid State Drive

Boost the performance and robustness of your HP Business Desktop PC with an HP Solid State Drive. The HP Solid State Drives are a drop-in replacement for the 2.5-inch or 3.5-inch (with bracket) hard disk drive of some HP Compaq Business Desktop PCs providing many performance and durability improvements over traditional Hard Disk Drive (HDD) technology.

Product number: QV063AA



HP Wireless Keyboard and Mouse

The HP Wireless Keyboard and Mouse places advanced functionality and ease of operation at your fingertips. Stop hiding wires and regain a clutter-free work space with a cordless keyboard, cordless laser mouse and USB wireless receiver in a single package – built with the environment in mind.

Product number: QY449AA



3-year Next Business Day Onsite

Receive 3 years of next business day onsite repair from an HP-qualified technician for your computing device, if the issue cannot be solved remotely

Product number: U6578E

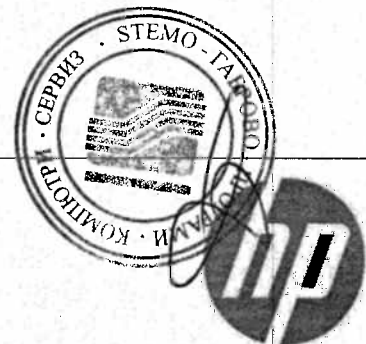


ВЯРНО С
ОРИГИНАЛА

The product could differ from the images shown. © 2013 Hewlett-Packard Development Company, L.P. 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.

Not all features are available in all editions of Windows 8. Systems may require upgraded and/or separately purchased hardware to take full advantage of Windows 8 functionality. See <http://www.microsoft.com/windows> for details. Bluetooth is a trademark of its proprietor and used by Hewlett-Packard Company under license. Intel and Core are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the U.S. and other countries. All other trademarks are the property of their respective owners. Learn more at www.hp.eu/hpeptions

4AA4-7146EEE, July 2013



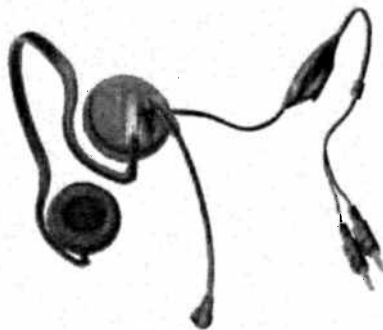
000101

PLANTRONICS .AUDIO™ 345

Behind-the-head stereo headset

The Plantronics .Audio 345 gives rich stereo and crystal-clear voice accuracy for music, gaming, DVDs, internet telephony, sound recording, and voice applications.

The lightweight, discreet, behind-the-head design and soft, swivel-mounted ear cushions let you work and play in plush all-day comfort.



Key features:

- Intense audio experience – full range stereo for rich, full sound
- Noise-cancelling microphone – reduces background noise and ensures crystal clear audio quality
- Easy to connect – no software or drivers, simply plug in the 3.5mm jacks

- Convenient controls – inline volume and mute controls give you full control over your listening and speaking experience
- Vista compliant



NOISE-CANCELLING

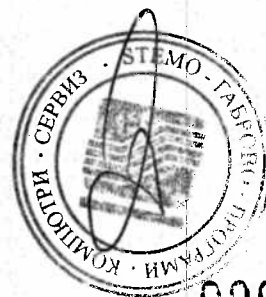


COMFORT



MUTE

ВЯРНО С
ОРИГИНАЛА



000102

Product specifications

Plantronics .Audio 345	
Speaker driver size (diameter)	36mm
Speaker frequency response (Hz-kHz)	20-20
Speaker impedance	32 Ohms
Microphone type (unidirectional)	Electret
Microphone impedance	2k Ohms
Microphone frequency response (Hz-kHz)	100-8
Cable length	3m
Plug type	3.5mm

Features

Stereo sound	Yes
Noise-cancelling	Yes
QuickAdjust	No
Mute	Yes
Volume control	Yes
Ear cushion	Leatherette
Wearing style	Behind-the-head
Technology	Noise-cancelling microphone

Order information

Plantronics .Audio 345	Part number	EAN codes
	37855-01	5033688027478

Plantronics .Audio 345

Best for:

- Full-range stereo via your PC
- Crystal-clear accuracy for sound recording and voice applications
- Behind-the-head wearing style with soft, swivel-mounted ear cushions for all-day comfort

compatible with



PC

ideal for



INTERNET
CHAT



SPEECH
RECOGNITION



This product is not intended for call centre use, call centre use will make your warranty null and void.

**ВЯРНО С
ОРИГИНАЛА**



000103

Datasheet

HP ProDisplay P221 54,6 cm (21.5") LED Backlit Monitor



Essential business functionality and energy efficiency at competitive prices.

Keep up the good work with solid performance, a stylish large screen design, and environmental features all at an attractive price point with the HP ProDisplay P221 54,6 cm (21.5") LED Backlit Monitor.

Efficiently grow and maintain your business with proven HP quality and reliability, stable lifecycles, HP accessory compatibility, and energy savings. Do more throughout the day and help save more throughout the quarter with a monitor that goes the distance.



Essential business features

- Support your business needs at a competitive price with a large 54,6 cm (21.5") diagonal LED display. Review documents side by side, read e-mails¹ while multitasking in another window, and keep more applications open at the same time.
- See the difference with an LED display for vibrant text and graphics presentation. LED technology also makes your display thin, light, and easy to position on the desk.
- Deliver clear views for single and multiple users with wide viewing angles. High contrast ratios and fast response times keep your content crisp and readable throughout the day².
- Work comfortably with up to 30 degrees of tilt on the adjustable design, and easily connect to devices with the convenient VGA and DVI inputs. The internal power supply minimizes clutter on the desktop and simplifies setup and deployment.

Compatibility with HP accessories

- Customize your work space with options like the HP Quick Release, HP Speaker Bar and HP USB Graphics Adapter (options sold separately).
- Free up valuable space and lift the monitor completely off the desk. The 100-mm standard VESA pattern allows mounting on a HP Monitor Arm, HP Stand, the HP Quick Release and other VESA-compatible accessories (options sold separately).

Stability now, and peace of mind for the future

- Maintain product consistency across staggered deployments, ease transitions and help reduce support costs with a minimum one-year lifecycle stability commitment from HP.
- Support identical installations and unify your operations worldwide with globally consistent products in over 145 countries.
- Get improved reliability and peace of mind from HP quality standard testing that puts our monitors through their paces before you do.
- Rest assured that your IT investment is supported by a standard, three-year limited warranty. Select HP Care Pack Services³ to extend service contracts beyond the standard warranties.

Smart software for the multi-tasker

- HP Display Assistant consolidates monitor setting controls into one easy-to-use, centralized interface.
- Customize your workspace with resizable screen partitions that let you work on a document in one partition, refer to a spreadsheet in another, and check e-mails⁴ in another—at the same time.
- Use the new expanded toolbar to view the applications you're using across all of your connected displays.

Energy efficient, environmentally aware

- Mercury-Free LED backlighting, a BFR/PVC-free design⁵, and arsenic-free display glass⁶ are just a few of the environmental features built into this display.
- Help lower your overall bottom line with award-winning eco-certifications, including ENERGY STAR[®], EPEAT[®] Gold⁷ and TCO.

**ВЯРНО С
ОРИГИНАЛА**



COC104

HP ProDisplay P221 54,6 cm (21.5") LED Backlit Monitor Specifications Table



Product Number	C9E49AA; C9E49AS; C9E49AT
Display size (diagonal)	54,6 cm (21.5")
Viewing Angle	170° horizontal; 160° vertical
Brightness	250 cd/m ²
Contrast Ratio	1000:1 static; 3000000:1 dynamic
Response Ratio	5 ms on/off
Aspect Ratio	Widescreen (16:9)
Native Resolution	1920 x 1080
Display Features	Plug and Play; Anti-glare; User programmable; Language selection; On-screen controls; LED Backlights
Input signal	1 VGA; 1 DVI (with HDCP support)
Input power	Input voltage: 100 to 240 VAC
Power consumption	28 W (maximum), 22 W (typical), < 0.5 W (standby)
Dimensions with Stand (W x D x H)	51.8 x 16 x 37.9 cm
Dimensions without Stand (W x D x H)	51.8 x 4.75 x 31.52 cm (Head Only)
Weight	4 kg (Head Only)
Ergonomic features	Tilt: -5 to +25°
Environmental	Arsenic-free display glass; Low halogen; Mercury-free display backlighting; TCO Certified Edge
Energy Efficiency Compliance	ENERGY STAR® qualified
Warranty	3-years limited warranty including 3 years of parts and labour. Certain restrictions and exclusions apply.

**ВЯРНО С
ОРИГИНАЛА**



000105

HP ProDisplay P221 54,6 cm (21.5") LED Backlit Monitor

Accessories and services (not included)

HP Integrated Work Center Stand for Ultra Slim Desktop and Thin Client



The HP Integrated Work Center Stand is designed to help maximize the use of limited desk space without compromising performance or productivity by accommodating an HP Compaq 6005 Pro, or 8000 Series HP Ultra-slim Desktop PC or an HP Thin Client and most HP 17 to 24-inch* (43,18 to 60,96 cm) diagonal LCD monitors (please refer to compatibility in the Quick Spec) with VESA standard mounting brackets. * HP monitors weighing 3,4 kg to 4,8 kg (7.5 lbs to 10.5 lbs).

Product number: LH526AA

HP LCD Speaker Bar



Attach seamlessly to the front bezel of your monitor to add full multimedia support features, including stereo speakers with full sound range and an external jack for headphones.

Product number: NQ576AA

HP Quick Release



A secure and easy-to-use mounting solution for your VESA-compliant HP thin clients, compatible HP flat panel monitors and other HP desktop products. Attach to any a compatible stand, bracket or wall mount and make the most of your workspace.

Product number: EM870AA

HP USB Graphics Adapter



HP offers a variety of optional products (each sold separately) designed to complement our monitors and enhance the overall computing experience. The super-compact HP USB Graphics Adapter enables connection of up to six simultaneous displays to help you boost productivity and multi-task across several open applications. Use one Adapter to bridge between a notebook or desktop PC and second monitor or use multiple Adapters to connect several displays to each other. Supports resolutions up to 1920 x 1080 (widescreen) or 1600 x 1200 (traditional).

Product number: NL571AA

5-year Next Business Day Onsite



Care Pack

Receive 5 years of next business day onsite repair from an HP-qualified technician for your computing device, if the issue cannot be solved remotely

Product number: U7935E

Learn more at
www.hp.eu/hpoptions

ВЯРНО С
ОРИГИНАЛА



000106

Datasheet

HP ProDisplay P221 54,6 cm (21.5") LED Backlit Monitor

Messaging Footnotes

¹ Internet access required and not included.

² All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

³ Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at www.hp.com/hps/carepack.

⁴ Meeting the industry definition of 'BFR/PVC-free' per the INEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals are not BFR/PVC-free.

⁵ Arsenic and its compounds were not detected using U.S. EPA test methods 3052/6010b by ICP-AES with a Method Detection Limit of 10 ppm.

⁶ EPEAT® Gold where HP registers commercial display products. See www.epeat.net for registration status in your country.

Learn more at
www.hp.eu/monitors

Get engaged with HP Financial Services

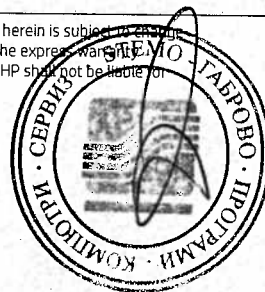
Get engaged with HP Financial Services to implement innovative technologies essential for driving business value and competitive differentiation. More information on www.hp.com/go/hpfs.

Sign up for updates
www.hp.com/go/getupdated

ВЯРНО С
ОРИГИНАЛА

The product could differ from the images shown. © 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. Specific features may vary from model to model. 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.

4AA4-5348EEE, November 2014



000107

ДЕКЛАРАЦИЯ

Подписаната Даниела Иванова Христова, с л. к. № 642672872, издадена на 06.07.2011 г. от МВР – гр. София, в качеството ми на Мениджър акаунт продажби ИКТ и Пълномощник на Управителя на СТЕМО ООД, ЕИК: 817080126, със седалище и адрес на управление: гр. Габрово 5300, ул. «Николаевска» 48, участник във възлагане на обществена поръчка чрез Публична покана с предмет: **„Доставка на преносими, настолни компютри и монитори, непрекъсваеми токозахранващи устройства (UPS) и твърди дискове SAS за нуждите на Изпълнителна агенция „Одит на средствата от Европейския съюз“ по обособена позиция № 1“**

ДЕКЛАРИРАМ, ЧЕ:

драйверите за нормалното функциониране на предлаганото оборудване се намират на официалната страница на производителя на адрес:
<http://www8.hp.com/bg/bg/drivers.html>

Дата: 17.06.2015 г.

ДЕКЛАРАТОР: _____



ДО
ИЗПЪЛНИТЕЛНА АГЕНЦИЯ
„ОДИТ НА СРЕДСТВАТА ОТ ЕВРОПЕЙСКИЯ СЪЮЗ”

ЦЕНОВО ПРЕДЛОЖЕНИЕ

ОТНОСНО: Възлагане на обществена поръчка чрез Публична покана с предмет: „Доставка на преносими, настолни компютри и монитори, непрекъсваеми токозахранващи устройства (UPS) и твърди дискове SAS за нуждите на Изпълнителна агенция „Одит на средствата от Европейския съюз“ по обособена позиция № 1, 2 и 3”

на СТЕМО ООД

УВАЖАЕМИ ДАМИ И ГОСПОДА,

Предлагаме за изпълнение на дейностите по посочената обществена поръчка за:

Обособена позиция № 1: обща цена 20 912,40 лв. (двадесет хиляди деветстотин и дванадесет лева и четиридесет стотинки) без ДДС,
при единични цени за:

Преносим компютър 1 362,08 лв. (хиляда триста шестдесет и два лева и осем стотинки) без ДДС;

Настолен компютър 1 190,29 лв. (хиляда сто и деветдесет лева и двадесет и девет стотинки) без ДДС;

Монитор 268,03 лв. (двеста шестдесет и осем лева и три стотинки) без ДДС.

В състояние сме да изпълним задълженията си по проекта на договор за обществена поръчка, качествено и в срок при цените от настоящото предложение.

Дата: 17.06.2015 г.

подпис и печат:
Даниела Христова – Менеджър акционерска продажби ИКТ
и Пълномощник на Управителна Изпълнителна Агенция СТЕМО ООД

