



"We focus on a high level of achievement and contribution. Our customers expect HP products and services to be of the highest quality and to provide lasting value."

— Bill Hewlett, Founder

# **Commitment to quality**

A product is only as great as its quality. Quality design is about creating the best product in the market place, one that consumers will find more valuable than other products. The pursuit of quality excellence is continual and encompasses countless design details. Each detail is as important as the next, each potentially a spark of quality innovation.

At HP, we make a quality commitment and stand by it. We follow through with our promises. We believe that we can always do it better—and then we do. And that belief pushes our quality standards ever higher.

Quality excellence is core to HP's legacy. HP's strong focus on quality design and engineering innovations dates back to its early beginnings with Bill Hewlett and Dave Packard. Quality is foremost at every stage of HP's product development process. From the earliest design stage through product testing, manufacturing, service and support, and eventual end-of-life, we remain alert for new opportunities to improve our products, our services, and relationships with our customers.

Our goal is to make our products—and your user experience—the highest possible quality with the lowest total cost of ownership. That's why we look beyond quality and reliability of the product when it comes to our business desktop PCs—we devote ample resources to the overall solution and the customer experience as well.

HP Business Desktop PCs feature the latest PC technologies and optimal expansion capabilities for ultra-performance, reliability, and serviceability in a range of business-class form factors designed to support your workspace and office productivity.

Here's an overview of some of the industry-leading design and quality innovations integrated into the latest line of HP Business Desktop PC platforms—backed by a name you can trust. Because quality matters.

## Our driving ambition: User experience. User satisfaction.

#### Delivering more value to our customers

Our driving ambition is for every customer to be completely satisfied with the quality of our products, services, and solutions. Your relationship with us goes beyond our products—it begins long before your decision to invest in HP technology, and it extends to every interaction you have with HP. We call this the Total Customer Experience (TCE), and it's different for everyone because it's shaped and defined by countless unique impressions, perceptions, and experiences. That's why our passion for quality and TCE affects everything we do. We have dedicated teams who focus exclusively on TCE and quality.

This is our TCE and Quality Policy Statement: "We provide products, services, and solutions of the highest quality and deliver more value to our customers to earn their respect and loyalty."

Our development process involves every major function of the company: supply chain, marketing, design, engineering, service and support, and more. We want our products to provide the consistency and stability that you require. Our attention to detail in the design process, combined with high-quality materials in production, has created a line of some the most durable desktop PCs in the industry.

#### Improving products and services

The HP PC Quality System involves a continuous program of systematic process improvement. Throughout development, manufacturing, service and support, we are zealous in our pursuit for new opportunities to enhance our products and services and to provide more value to our customers.

The HP PC Quality System offers our customers many benefits:

- Stringent component quality standards drive suppliers to improve their quality and processes over time.
- Comprehensive product design and development process has quality control built in.
- Exhaustive lifecycle testing validates product quality and ensures interoperability.
- Routine and random audits are performed throughout development and manufacturing to ensure that our rigid quality standards are maintained.
- Early warning and detection systems contain and resolve potential issues, often before they affect you.
- We gather information from customers with any issues in the field, so corrective action can be taken in a closed-loop process.
- World-class, award-winning service teams and service partners deliver prompt, professional support with minimal impact on your business and users.
- Fundamental, quality-driven processes ensure rapid escalation and resolution. Field findings are then incorporated to the process, delivering continuous improvements to all aspects of the HP Desktop Quality System.
- Lean Enterprise and Six Sigma methodologies drive best-in-class business practices and process excellence.

## Consistent quality: Every detail. Every batch.

#### Before it's shipped to you

Large-scale manufacturing entails numerous quality check points and standardized production metrics. Operator error is removed from the desktop quality check equation by configuring the manufacturing floor using advanced automation to help identify any issues. Key mechanical and electrical features in the desktop are tested to ensure proper functionality.

Simulating the end-user experience, these automated test fixtures are vital because they provide a standardized assessment that ensures every batch of desktops meets the standard. 100% of HP Business Desktop PCs undergo manufacturing quality assurance inspections—meeting the HP Business Desktop quality standards—before shipping to customers.

Whether you buy thousands, hundreds, or only one, you get a business desktop you can depend on—and consistent quality from first to last.

#### **Premium performance materials**

HP Business Desktop PCs use high-quality materials. Throughout product design and development, every aspect of the components and products is tracked and closely monitored.

We maintain deep, long-standing relationships with our suppliers, and we work closely with them to drive ongoing quality improvements over time.

Toolmakers, molders, sheet-metal vendors, and other sub-suppliers must meet the strict requirements of our approved vendors list (AVL), and stringent quality controls ensure that they continue to meet them.

To help maintain our leadership in quality and reliability, we aim to deliver continually higher quality and improving reliability that ensures total customer satisfaction.

#### Going above and beyond

After careful material selection and precision-engineered construction, HP Business Desktop PCs are put to the test. Our testing procedures go above and beyond what a desktop may endure on a typical day in a business environment.

Every HP Business Desktop is subjected to the HP Total Test Process (TTP)—an exhaustive series of rigorous tests that help ensure superior quality and reliability in a wide range of applications and operating environments. To help make our desktops more robust and a more dependable tool for your evolving business needs, our testing process is constantly reviewed and enhanced.

Each product receives a minimum of 115,000 hours of rigorous, comprehensive testing, driven by rigid quality specifications and standards. The program includes 50,000 test steps, with 240 industry-standard hardware and software products tested for compatibility. Our desktop products are exposed to rigorous conditions including harsh drops and vibration, performing at high temperatures and enduring mechanical tests that simulate rough handling over the life of a desktop.

#### Drop, shock, and shake—it's how businesses roll

HP Business Desktop PCs are rigorously tested to provide utmost quality and excellent value for your investment. You get a reliable and durable desktop that can go the distance for how today's businesses roll.

In a typical business workspace setting, desktop PCs are not usually subject to being dropped because once they're installed, they're not moved around much. During shipping however, desktops can be dropped, bumped, or just roughly handled as they're being transported from manufacturing. Shipping, by far, is harder on a desktop PC chassis than almost anything it will be put through in service.

HP desktops undergo drop, shock, and vibration tests to verify full system functionality in several scenarios¹. These tests are performed on both unboxed and boxed (packaged) systems. Shock tests are performed in both operating and non-operating modes. It is very important that internal components undergo shock and vibration testing which will affect different parts of a chassis in different ways. There is a lot of activity going on inside the chassis that has to be properly contained and supported. There are fans and hard drives that spin as high as 7200 rpms. HP mounts the spinning drives using screws with rubber grommets to absorb even the smallest amounts of vibration.

Electrical tests verify performance of local and wide-area wireless connectivity. Safety tests assess the ability of a system to withstand the nearby presence of RF transmitters such as mobile phones, emergency personnel radios, and wireless cards. And as part of our environmental testing, desktops are also subjected to extreme temperature and humidity, simulating operation in harsh environments.

We offer a full portfolio of desktop accessories designed to complement our business desktop product line. All of our accessories are rigorously tested and backed by our world-class global services and solutions, so you can count on them to work seamlessly with your HP Business Desktop PC. Keyboards are tested using 10 million keystrokes (simulating 7 years of keyboard usage) to validate mechanical, electrical, and cosmetic properties.

Our ultimate objective is to build a more solid, more reliable business desktop—and a better tool for your business.

# World-class engineering: Great looks. Great design.

#### First impressions are everything

First impressions are important, as they set the expectations for the rest of the user experience. HP design engineers excel at designing that very important first experience. Clean implementation of innovative PC technologies starts with a holistic design approach to quality. Design engineers work in conjunction with the manufacturing engineers to optimize the design for production in a way that ensures extremely high quality.

Any given HP Business Desktop PC design will go through multiple small builds to fine-tune the design for optimal quality and manufacturability before the design is finalized.

HP's attractive enterprise-class industrial designs, which combine innovation with style, use high-quality materials and flawless finishes. Dual-layer chassis construction, component accessibility, electrical and air flow designs feature business-grade quality.

HP's state-of-the-art U-shaped chassis design consists of two construction layers for strength and rigidity. The outer layer panels are cosmetically sleek and show no signs of welds or mounting points from the inside structure. The inner layer is designed to support all the electrical and mechanical components installed inside.

HP Business Desktop PCs combine impressive looks with world-class design—a winning combination.

#### In-the-box ingenuity trumps ESD

Electrical static discharge (ESD) is simply the discharge of built-up static electricity. ESD however, should not be taken lightly when working with computers. It has the capability of causing enough damage to the components inside the computer to render it completely inoperable.

HP Business Desktop PCs are designed to pass drop, shock and vibration testing, but to also properly contain the electrical current and prevent ESD.

Every aspect of our chassis design works to this end seamlessly to the user. From the quality of the wiring and connectors to the placement of the various components and how they are mounted into the chassis. Even the overall fit of the access cover—all work together as a system to help ensure reliable use.

#### Go for the gold

Plating, the overlaying of a thin metallic coating on metal components, improves conductivity. Many of the expansion capabilities in desktop PCs involve connectors. Electricity has to go from device to another through wires and connectors. Of special importance is the type of metal used in connector plating.

HP's attention to quality extends to even the smallest, most innocuous component. In the case of connector plating, HP has determined gold to be the optimal metal to use. Gold is a highly reliable metal and durable coating for use on connectors. Lesser-quality coatings are very susceptible of scraping off from the friction when inserting and removing something from a connector a number of times.

Summing up, HP's choice of gold for corrosion-free connections provides optimal connection quality for high performance and reliability.

#### Staying cool and vented

The airflow of a case is extremely important to the life of your computer. Poor airflow will trap heat inside the case which will reduce the life of the components.

Integral to the chassis design is how airflow is directed though the case for cooling of the components within. HP Business Desktop PCs are designed to be cooled through an effective front-to-back airflow channel. So we have placed vents in the front and back, leaving the top, bottom, and sides free from any venting.

That smart design lets you orient the desktop in many different positions. And the flow of hot air is properly managed around the desk space. Fans and baffles provide direct airflow and cooling regardless of how you position the desktop or what expansion slots are used.

HP's innovative chassis venting design provides well-directed front-to-back airflow for optimal cooling efficiency.

# PC serviceability. Easy access. Easy expansion.

#### Three hands not required

From business towers to all-in-one desktops, repair and upgrade serviceability for maximum uptime and high performance is of paramount importance in any corporate environment. Quick and easy access to key system components is a huge time saver for computer technicians servicing commercial PCs on-site.

HP's industry-leading serviceability design starts with the access panel. Whether it's a small form factor, ultra-slim desktop, tower or an all-in-one desktop, HP's tool-free access design provides unparalleled serviceability.

Without needing to use any tools, you can easily remove the access panel. You have no awkward manipulation of latches and lifting panels from opposite ends. And you don't need three hands to make it happen.

The access panel comes completely off, so you have full access from different angles to all the replaceable components. Easy and quick access means valuable time saved.

#### No more guesswork with green touch-point labels

User-replaceable PC components need to be easy to see and access.

HP's expandable PC technology incorporates the use of green touch-point labels that provide a quick guide to replaceable and expandable components that can be easily accessed. These labels reduce unnecessary guesswork.

For optimal serviceability, HP's unique tool-less design provides an easier way of replacing any of the major components. You can replace memory, hard drives, expansion cards, optical disk drives in a snap, all without tools, and all are easily accessible. It's easy to go in and add or remove components and work on them. For instance, HP's hard drive cage design integrates a lift-and-hold feature that keeps it up in place, allowing easier access to the internal storage drives.

HP Business Desktop PCs are put through rigorous daily use in challenging and ever-changing business environments. High serviceability drives cost efficiencies where desktops are typically maintained for multiple years for optimal use and performance.

#### One size does not fill all

A key nature of the desktop PC is expansion capability. An elite quality desktop PC should be designed to be configured with a wide variety of PC components and options to fit diverse computing needs.

HP Business Desktop PCs are available in unique chassis designs that provide an ideal blend of size, performance, and maximum expansion capability to match your specific business needs and environments. For instance, if you need to have multiple hard drives for increased data storage or data backup, you should have the ability to install a secondary drive in the PC where there wasn't one before.

# No hype. Clear value. Clear quality.

#### Don't just take our word for it

According to many third parties and independent research firms, HP is an industry leader in quality. Technology Business Research (TBR) is an independent market research firm covering the computer, software, telecom, mobility, and professional services industries. Their quarterly desktop and notebook surveys provide in-depth and timely insights into commercial customer satisfaction. They have been keeping quality and service and support records in the computer industry since 1997. HP has a consistent track record of positive survey results with business desktops.

These days it is very easy to assume desktop PCs are all created equal. But when you look beyond the hype and examine the details, you will find HP Business Desktop PC products clearly provide great value over their many years of service.

- Powerful for ultra-performance to handle the most demanding computing needs.
- Customizable with optimal expansion capabilities to support your growing business needs.
- High serviceability for business reliability to protect and maximize your technology investment.

#### **Keep your business humming**

To help maintain our leadership in quality and reliability, we aim to deliver continually higher quality and improving reliability that ensures total customer satisfaction.

HP quality processes and metrics are aligned with our customers and strive to help reduce downtime, reduce repairs and minimize replacement part inventory. Our main goal is to help prevent disruption to your business, thereby enabling you to focus more on growing your business.

Quality keeps your business up and running. Quality matters.

Learn more at hp.com/elite

HP quality innovation means you get the most value possible from the core PC technology with excellent expansion capabilities to modify your PC during all the years you have it in service. HP Business Desktop PCs offer power and value for any business environment while delivering all the innovation, reliability, and serviceability you would expect from HP.

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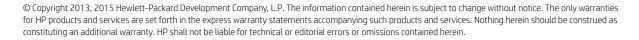




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