

## Case study

# Denver Broncos

Winning NFL team picks HP Workstations for strategic edge



### Industry

Sports  
Broadcast TV

### Objective

Combine technology and software tools to hone game day strategies, improve business efficiency, and protect information security for the NFL team.

### Approach

Deploy mobile and desktop HP Z Workstations equipped with NVIDIA® Quadro® graphics cards to run DVSPORT GameDay and other business-critical applications used by employees throughout the enterprise

### IT matters

- Maximize performance of processing- and graphics-intensive DVSPORT software
- Display crisp, detailed video-playback imagery
- Deploy solution platform offering a variety of form factors for different use cases
- Customize workstation solutions for sports-industry workflows

### Business matters

- Refine winning game strategies through video playback, predictive analytics
- Increase business efficiency; accelerate application performance
- Give coaches and players more time to collaborate
- Strengthen security; protect people and data



**“You can’t afford to have any hiccups on game day or during the draft. HP gives us the technology edge to use data better, operate efficiently, and take the field to win.”**

– Russ Trainor, Vice President of Information Technology, Denver Broncos

The Denver Broncos, who embarked on their 58th season in 2017, are tied for the second-most Super Bowl appearances in NFL history. In addition to winning back-to-back World Championships following the 1997-98 seasons, the Broncos captured their third Super Bowl in 2015. The team has also totaled 29 all-time winning seasons, 22 playoff berths, 15 AFC West titles and 10 AFC Championship Game appearances. “Broncos Country” is home to the NFL’s best fans with the franchise’s 47-year home game sellout streak representing the longest in professional football.





**Click on image to view video**

“I want to put the right tools in the right hands at the right time. HP has proven to be the best platform for us in performance, features, form factors, and reliability.”

– Russ Trainor, Vice President of Information Technology, Denver Broncos

The Denver Broncos are one of the most successful teams in football history. The team is also one of the most technologically sophisticated. From ticket windows to players and coaches, members of the Denver Broncos organization use advanced IT systems to hone their data-driven efficiency. When it comes to game strategy, the powerful software application DVSport GameDay has changed the face of video playback and tendency analysis. To run efficiently, such tools require foolproof hardware, in desktop and mobile form factors suiting everyone from business executives to coaches. For that, the Broncos rely on HP.

Back when football players wore leather helmets and woolen uniforms, coaching analytics meant clipping photos from the opposing team’s hometown newspaper and trying to figure out which players were likely to show up on the field. Then, over time came spliced film reels, video playback, and computer-assisted video playback—until today when state-of-the-art high-definition video is combined with data analytics.

DVSport GameDay is football-specific digital video editing and data analysis software that sharpens the game by illuminating probabilities. Coaches analyze both their own and their opponent’s actions to continuously improve performance. In recent years when the tides have turned in an NFL game, it’s often because computer analytics, coupled with human intelligence, revealed a need to change strategy or personnel.

All of this takes ever-increasing amounts of video clarity and processing power. To run reliably and at peak efficiency, DVSport GameDay requires an extraordinarily high-performance hardware backbone. So do other tools comprising the Denver Broncos operation—the digital scoreboard, ticket-seller windows, and in-stadium graphics developed by the creative services department. It’s easy to see why the Denver Broncos make information security a top priority.

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– Russ Trainor, Vice President of Information Technology, Denver Broncos

Russ Trainor, an IT professional for nearly 30 years, is vice president of information technology for the Denver Broncos. Trainor was thinking about how to tackle one of his organization’s top IT challenges: using data more effectively to increase competitiveness across the enterprise. Then he learned that HP was advancing solutions that fit his organization’s varied needs precisely: namely,



**HP ZBook Studio running DVSport GameDay**

ultra-powerful desktop and mobile devices endowed with the latest NVIDIA® Quadro® graphics cards, and super-crisp HP Z Displays. “HP now is present across the entire Denver Broncos organization,” Trainor says. “From the smaller HP Elite x2 PC Tablets all the way to HP Z Workstations, we believe it’s the best platform on the market.”

### HP Z Workstation family covers wide range of use cases

The most powerful workstations in the world, HP Z Workstations are designed to maximize performance while simplifying IT management through customizable configuration, advanced security features, and easy serviceability. The HP solution family includes form factors covering the wide range of Denver Broncos use cases. Ticket sellers use HP Z2 Mini Workstations for fast, secure transactions. Scouts on the road favor the compact power of HP EliteBook Mobile PCs or HP ZBook 15 Mobile Workstations. The creative services department uses HP Z840 Workstations for graphics design and video rendering. The security team uses HP ZBook Studio Mobile Workstations to run the stadium video camera software that helps keep fans and players safe.

“It’s pulling feeds from around 1,200 cameras at any given time,” says Tahoe Dennis, an IT engineer with the Denver Broncos. “You need to be able not only to view the feed, but to operate every camera remotely—change your field of view, change the resolution, record,

and do tons of things simultaneously. The HP ZBook Studio handles that really well.”

### HP ZBook Studio scores high for sports-industry workflows

HP ZBook Studio is the world’s first quad core workstation Ultrabook™ 1,2 with Intel® Xeon® processors,3 NVIDIA Quadro graphics, and dual HP Z Turbo Drives.4 With its combination of power and mobility, it’s emerging as a top choice for running DVSport software in Denver Broncos’ meeting rooms and coaches’ offices. In fact, the team’s IT and video departments were instrumental in linking HP with DVSport to develop a collaborative solution specifically for sports-industry workflows.

“To run DVSport effectively, you need a strong hardware backbone. It has to be fast, provide ample storage, and support tremendous data processing and video transfer workloads,” says Billy Fogo, software support manager for DVSport. “We’re very selective of the computers we choose to run our software, and with the support of HP’s OEM program we get more than just great hardware. HP Z Workstations deliver outstanding quality playback. You can process the video solely through the NVIDIA card, which makes it look absolutely great.”

Adds Denver Broncos IT Engineer Dennis: “The HP ZBook Studio is the only laptop we’ve found that can run DVSport software really well. The integrated NVIDIA graphics card—leveraging the CUDA parallel computing architecture—just crushes everything it comes across.”

## Customer at a glance

### Application

DVSPORT GameDay digital video editing and data analysis for football; Adobe® digital applications; digital scoreboard; ticketing; stadium security; creative services

### Hardware

- HP Z2 Mini Workstation
- HP ZBook Studio Mobile Workstation
- HP ZBook 15 Mobile Workstation
- HP EliteBook
- HP Z240 Workstation
- HP Z440 Workstation
- HP Z840 Workstation
- HP UltraSlim Docking Station
- HP Z24n Narrow Bezel Display
- HP Z Display Z34c 34-inch Ultra-Wide Curved Display

### HP services

- HP Care Pack 5 year Next Business Day Onsite Hardware Support

The Denver Broncos complement the power of the workstations with HP Z Displays. A coach might use multiple monitors for business applications and video playback. The HP Z24n Narrow Bezel IPS Display brings a virtually borderless screen for maximum-impact imagery. The HP Z Display Z34c 34-inch Ultra-Wide Curved Display increases the field of vision for a super-sized immersive experience. The Denver Broncos keep their solutions running reliably with HP Care Pack 5 year Next Business Day Onsite Hardware Support.

## The sweet taste of victory

All of this technology power is focused on a single objective: winning. Denver Broncos VP Trainor says the team's relationship with HP assures him that they are ideally positioned to drive continuing success as technology evolves in the future. IT Engineer Dennis, meanwhile, takes a moment to savor the milestone victory of Super Bowl 50. "I got everything rolling from an IT perspective and was available in case anybody needed me," he recalls. "But on game day, I was a fan. I went to my seat, sat down with my family—and cheered."

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<sup>1</sup> "World's first quad core workstation Ultrabook" \*Based on HP's internal analysis of all mobile workstation models from any vendors with >200 thousand unit annual sales as of October 29, 2015, having Quad-core CPUs, with Intel's Ultrabook Certification.

<sup>2</sup> Not all configurations will qualify as an Ultrabook.

<sup>3</sup> 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 system required. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering is not a measurement of higher performance.

<sup>4</sup> For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30GB (for Windows® 10) of system disk is reserved for system recovery software.

