

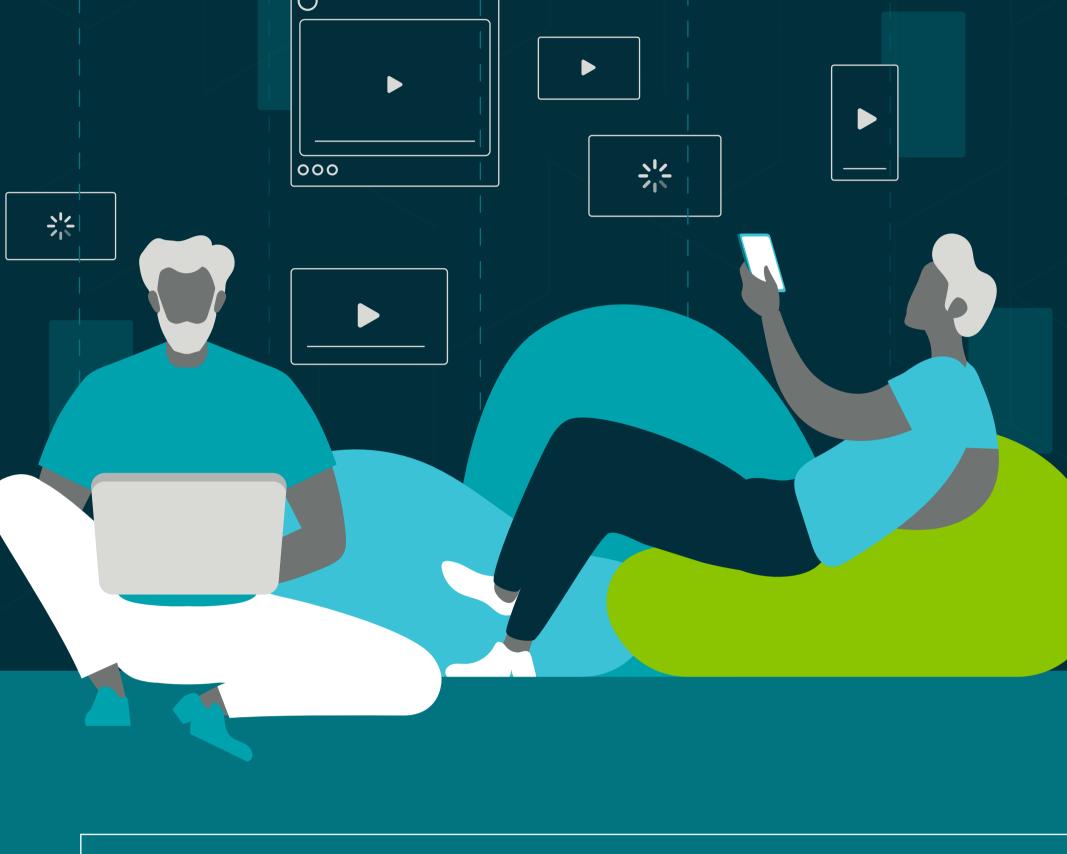
## Streaming Holiday Device Guide

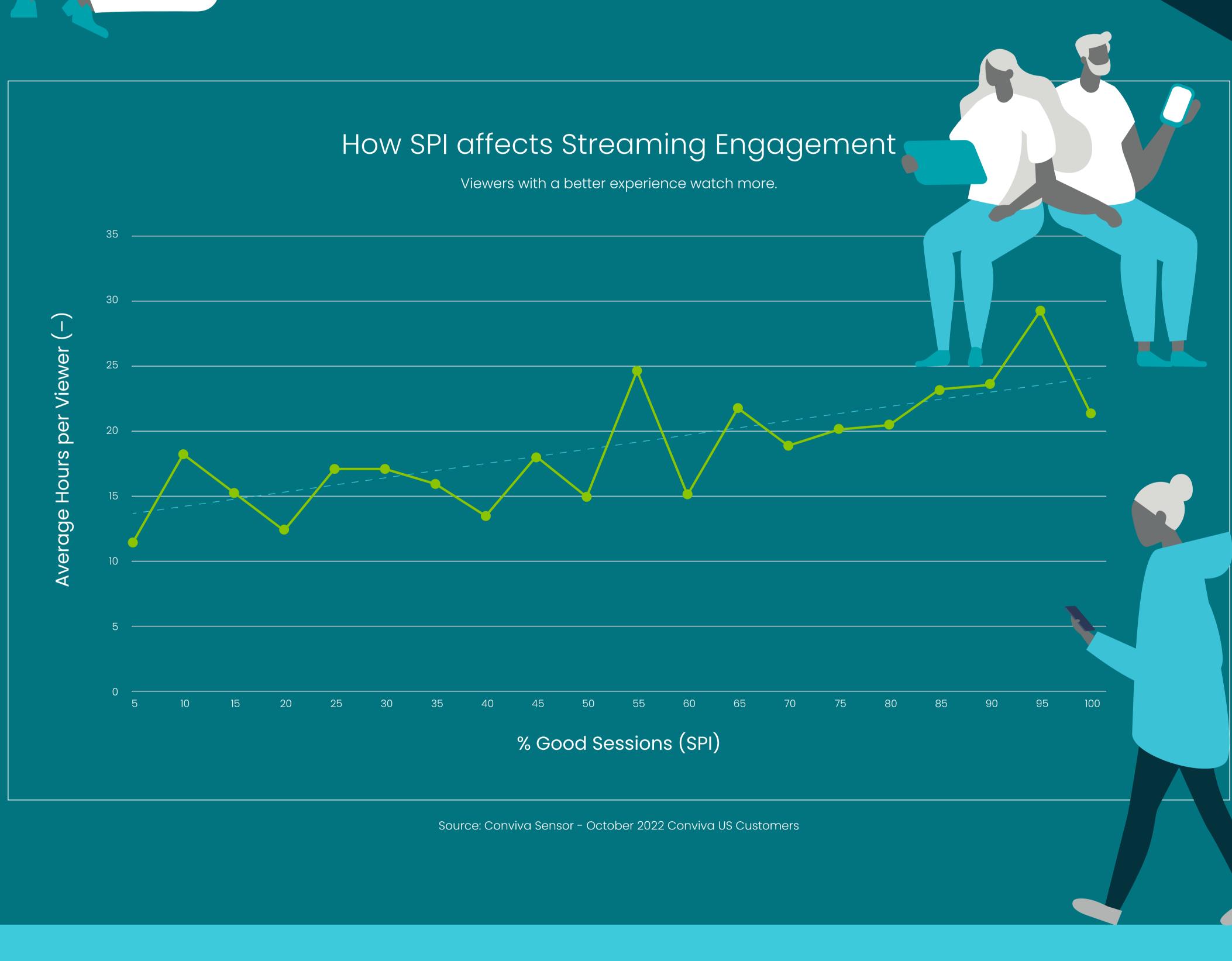
Gift someone a good experience this holiday season.

There are a lot of things that go into holiday purchasing decisions – sometimes need, often price and few would argue that what's trending or bestselling for the season can also be a motivating factor. However, there is one factor you should never ignore. Quality. What happened to quality? Did you know the streaming device you choose can affect your viewing experience? There are so many things that can go wrong when you hit the play button. Fortunately, there is an easy way to measure average streaming quality on specific devices.

Conviva's proprietary Streaming Performance Index (SPI) combines a number of key metrics into a single score that reflects the overall quality of a publisher's streams.

In October of this year we looked at the SPI from hundreds of devices across dozens of streaming publishers and ranked them based on their average score to help you gift someone a good experience this holiday season.







Devices

engagement and SPI. Simply put, people stream longer and more often on average when the experience is of higher quality, as reflected in the SPI score.

When it comes to CTV devices it's hard to go wrong with any

recent Roku dongle. Their exceptional SPI illustrates why they

features, you'll get exceptional quality with Apple TV 4K or any

continue to be an industry leader. If you're looking for more

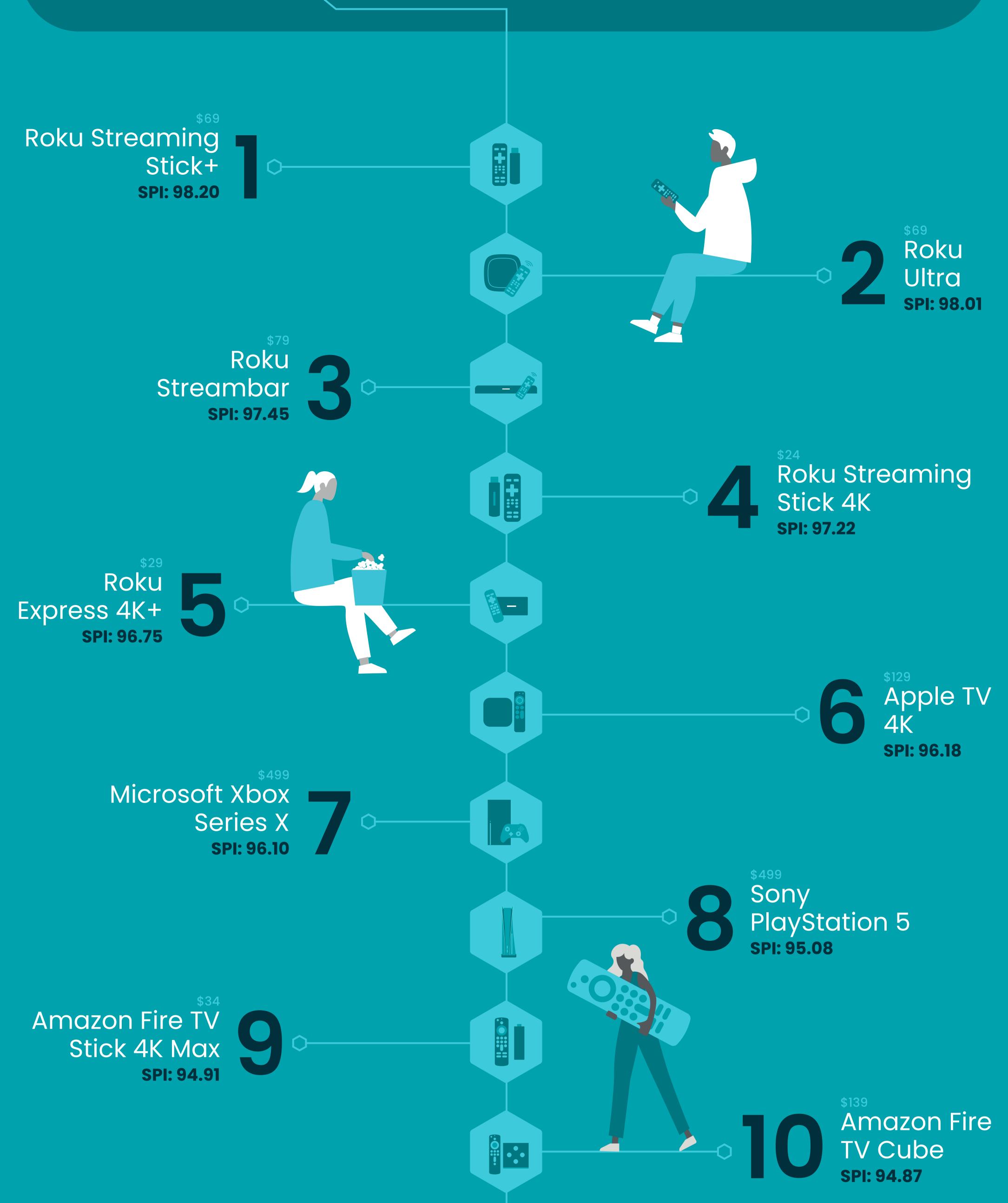
SPI isn't just a number, it's a measure of engagement. By

Conviva has measured a correlation between streaming

analyzing the SPI of the world's largest streaming publishers,

recent gaming console.

Source: Conviva Sensor - October 2022 Conviva US Customers



multiple models.

Source: Conviva Sensor - October 2022 Conviva US Customers



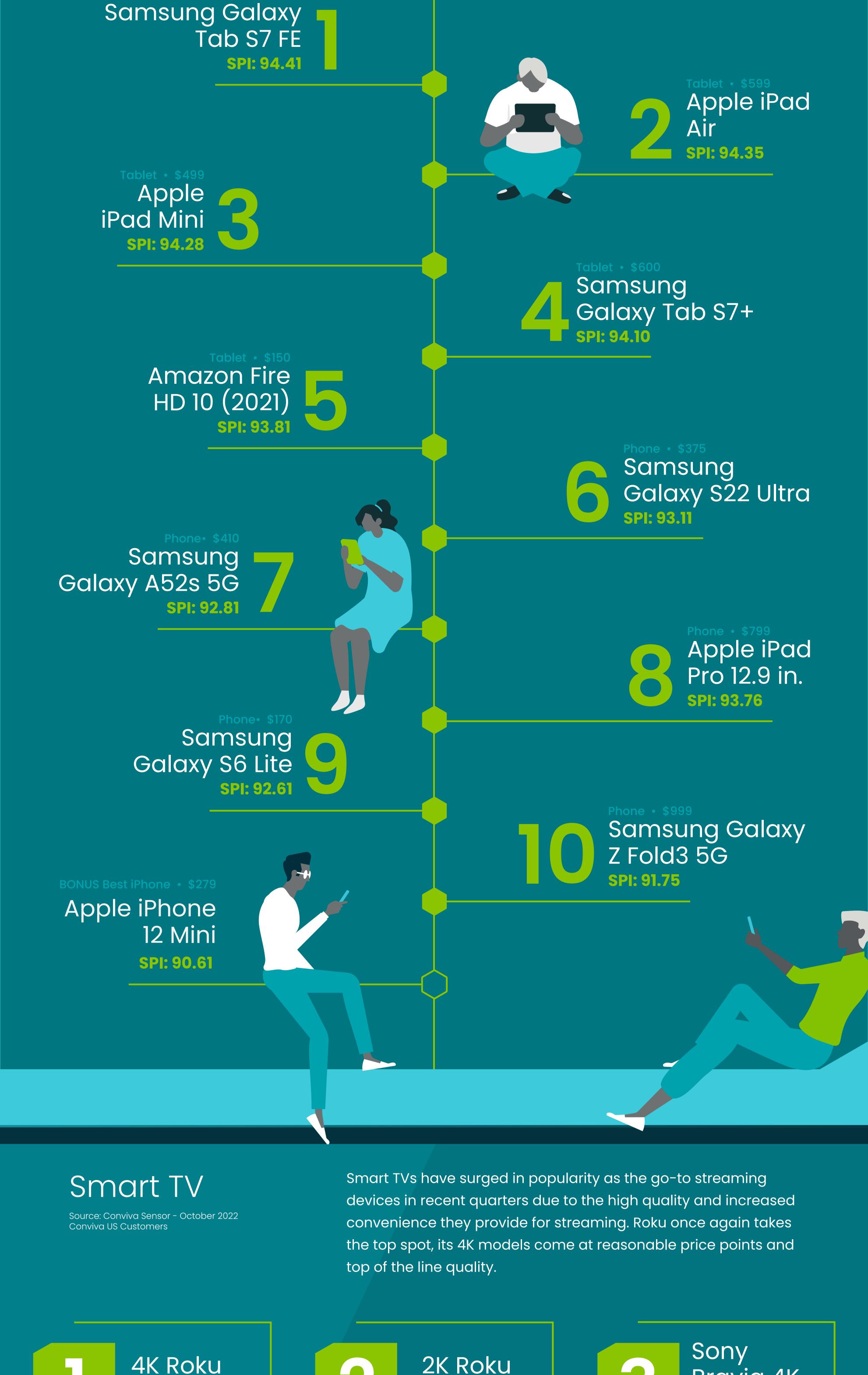
Mobile Devices

Mobile devices tend to have lower quality due to their mobile nature as

Samsung's Galaxy phone line provides exceptional streaming quality in

devices go, tablets provide a higher SPI than most phones. However,

viewing outside of the home adds additional complexity. As far as hand-held



TV

Philips Roku

TCL Android

**Smart TV** 

**SPI: 92.90** 

TV 4K

SPI: 88.94

**SPI: 97.17** 

TV

Panasonic

**SPI: 93.75** 

4K UHDS

SPI: 89.03

HDR

Smart TV 4K

TCL Roku TV

**SPI: 97.39** 

SPI is the percentage of individual streams that meets the thresholds for a "good" streaming experience. Thresholds include connection induced buffering of less than 10 seconds wait before exit, picture quality with bitrate over 150 kbps for mobile, 250 kbps for tablet, 800 kbps for TVs and connected devices, no playback or start failures, and less than 0.4% connection induced rebuffering ratio. Data for this report was collected during the month of October 2022 from Conviva's proprietary sensor technology currently embedded in three billion streaming video applications, measuring in excess of 500 million unique viewers watching 150 billion streams per year with 1.5 trillion real-time transactions per day across more than 180 countries.

## About Conviva

Hisense Smart

Vizio Smart

TV 4K UHD

**SPI: 87.41** 

TV 4K UHD

**SPI: 92.78** 

Conviva is the only global streaming analytics platform for big data that collects, standardizes and puts trillions of streaming data points in context, in real time. With Conviva, streaming businesses can understand real-world human experiences within seconds of observation and take action to grow their business ahead of the

Bravia 4K

Google TV

LG webOS

**SPI: 90.03** 

UHD

Smart TV 4K

**SPI: 94.70** 

seconds of observation and take action to grow their business ahead of the competition.

The Conviva platform provides comprehensive, continuous, census-level measurement through real-time, server side sessionization at scale. It includes first-of-its kind-innovations like time-state analytics and Al automated data modeling. Using a single full stack sensor at the source, coupled with a single big data pipeline, Conviva's 60+ patent platform enables marketers, advertisers, tech ops, engineering and customer care teams to acquire, engage, monetize and retain their

audiences. Conviva is dedicated to supporting brands like DAZN, Disney+, Hulu,

Paramount+, Peacock, Sky, Sling TV and WarnerMedia as they unlock incredible