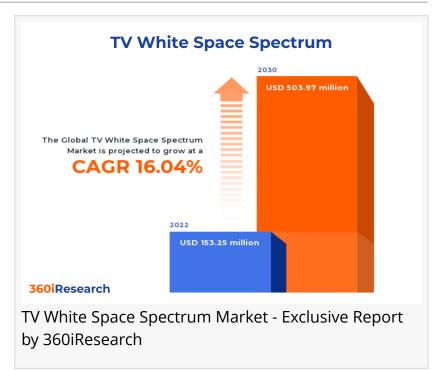


TV White Space Spectrum Market worth \$503.97 million by 2030 - Exclusive Report by 360iResearch

The Global TV White Space Spectrum Market to grow from USD 153.25 million in 2022 to USD 503.97 million by 2030, at a CAGR of 16.04%.

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The TV white space spectrum (TVWS) refers to the unused portions of the very high frequency (VHF) and ultra-high frequency (UHF) television bands that are not used by broadcasters. The scope and potential for TV White Space Spectrum encompasses various applications such as rural broadband access, urban connectivity, smart grid networks, and smart meters. The vacant frequency bands have been identified as potential resources for providing wireless broadband connectivity in underserved regions and urban areas with high demand for internet services and facilitating the transition from analog to digital broadcasting. The growing demand for machine-to-machine communications and rising adoption and preference for Internet of Things (IoT) devices has fuelled the adoption of the TV white space spectrum. TVWS is also associated with lower path loss, longer transmission range, and higher penetration ability, which results in a

reduced number of base stations required and helps achieve superior mobility. However, high capital costs associated with setting up the infrastructure for TVWS deployment deter the entry of emerging players. Interference from adjacent channels or existing TV broadcasters can also pose challenges that need to be addressed through efficient spectrum management techniques. Efforts by major players and the growing number of R&D activities to develop advanced modulation techniques and interference mitigation algorithms can enhance spectral efficiency and improve performance.

Device: Growing preference for portable TV white space devices owing to their flexibility A fixed TVWS installation utilizes a base station located in fixed and connected to the internet and transmits to a collection of receiver units that are also present in fixed locations. Fixed TV White Space (TVWS) devices serve as a reliable means of providing broadband connectivity in rural or underserved areas. Mobile or portable TVWS usage refers to mobile devices that directly use the TVWS frequencies to communicate without the involvement of a fixed receiver unit. With their ease-of-transportation advantage over fixed devices, portable TVWS solutions are well-suited for applications such as event coverage requiring temporary internet access or emergency response teams needing instant connectivity during disaster relief efforts.

Component: Ability of antennas to ensure reliable communication in TVWS spectrum Antennas are crucial for the effective transmission and reception of signals in a TVWS network. Antennas designed for the TVWS spectrum provide maximum power, efficiency, high coverage, and reliable communications across the entire TV White space spectrum band. Backhaul services enable the transfer of data between the access points of a TVWS network and its core infrastructure. Depending on the geography and available resources, different backhaul solutions can be employed, such as fiber optics, microwave links, or satellite connections. Cables play a significant role in connecting various components within a TVWS network setup. High-quality cables ensure minimal signal loss during transmission while providing durability and weather resistance. Power supplies provide the necessary energy for the functioning of TVWS equipment. Power supplies can range from traditional grid-based power supplies to alternative solutions such as solar or wind systems. Radios are responsible for transmitting and receiving wireless signals in a TVWS network. High-quality radios ensure efficient signal processing and reliable communication over long distances.

Application: Government initiatives propelling the utilization of TVWS spectrum to improve urban connectivity

TV White Space (TVWS) spectrum is increasingly being utilized to enhance emergency and public safety communications as it offers an improved range over traditional communication methods, enabling better connectivity in disaster-prone areas. Internet of Things (IoT)-based devices and networks and Machine-to-Machine (M2M) communications can greatly benefit from the efficient utilization of TVWS as their superior propagation characteristics allow for low-power devices to communicate over long ranges while minimizing interference from other wireless technologies. TVWS spectrum is a viable option for smart grid networks due to its ability to penetrate obstacles and provide reliable connectivity over large distances. Utility companies can utilize this

technology for advanced metering infrastructure and effective energy resource management. Transportation and logistics companies are using the TVWS spectrum to optimize operations and reduce costs, as the technology can facilitate real-time data transmission for effective fleet management. The burgeoning urban population and the rising demand for effective communication networks can be effectively managed by the TVWS spectrum. In rural areas associated with poor connectivity, the TVWS spectrum provides an affordable alternative for delivering high-speed connectivity in remote areas with lower population densities. Leveraging TVWS for vehicle broadband access can offer passengers seamless and uninterrupted internet service during their journey.

Regional Insights:

In the United States, the Federal Communications Commission (FCC) has played a pivotal role in facilitating the deployment of the TV White Space (TVWS) spectrum. In the Americas, the success of TVWS in countries such as the US and Canada has largely been driven by favorable policies and regulations by governments. The growing number of industrialization and digitalization activities coupled with the rising number of smart grids has fueled the need for robust communication networks. European Union countries have been actively involved in research and development related to TVWS technology. Collaborative efforts between various industry players have played a significant role in facilitating the utilization of TVWS in Europe. The demand for high-speed internet connectivity is growing exponentially across APAC countries, particularly in rural and remote areas where traditional broadband services are not always available or affordable. The rapid growth of internet users, coupled with the growing adoption of smart devices and other connected, IoT-based equipment, has resulted in surging demand for wireless broadband services in the APAC region.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the TV White Space Spectrum Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the TV White Space Spectrum Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

Key Company Profiles:

The report delves into recent significant developments in the TV White Space Spectrum Market, highlighting leading vendors and their innovative profiles. These include Adaptrum Inc., ATDI S.A., AVIAT NETWORKS Group, BaiCells Technologies Co, Ltd., Carlson Wireless Technologies, Inc., DoubleRadius, Inc., Google LLC by Alphabet Inc., Harmonics Inc., IgniteNet, Key Bridge Global LLC, KTS Wireless, Metric Systems Corporation, Microsoft Corporation, NuRAN Wireless Inc., RADWIN, Ruckus Networks, Shared Access Ltd., and WISILICA Inc..

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Market Segmentation & Coverage:

This research report categorizes the TV White Space Spectrum Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Component, market is studied across Antennas, Backhaul & Services, Cables, Power Supplies, and Radios. The Power Supplies is projected to witness significant market share during forecast period.

Based on Device, market is studied across Fixed TV White Space Devices and Portable TV White Space Devices. The Portable TV White Space Devices is projected to witness significant market share during forecast period.

Based on Application, market is studied across Emergency & Public Safety, IoT & M2M, Rural Broadband, Smart Grid Networks, Transportation & Logistics, Urban Connectivity, and Vehicle Broadband Access. The Urban Connectivity is projected to witness significant market share during forecast period.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway, Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Europe, Middle East & Africa is projected to witness significant market share during forecast period.

Key Topics Covered:

1. Preface

- 2. Research Methodology
- 3. Executive Summary
- 4. Market Overview
- 5. Market Insights
- 6. TV White Space Spectrum Market, by Component
- 7. TV White Space Spectrum Market, by Device
- 8. TV White Space Spectrum Market, by Application
- 9. Americas TV White Space Spectrum Market
- 10. Asia-Pacific TV White Space Spectrum Market
- 11. Europe, Middle East & Africa TV White Space Spectrum Market
- 12. Competitive Landscape
- 13. Competitive Portfolio
- 14. Appendix

The report provides insights on the following pointers:

- 1. Market Penetration: Provides comprehensive information on the market offered by the key players
- 2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets
- 3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments
- 4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players
- 5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:

- 1. What is the market size and forecast of the TV White Space Spectrum Market?
- 2. Which are the products/segments/applications/areas to invest in over the forecast period in the TV White Space Spectrum Market?
- 3. What is the competitive strategic window for opportunities in the TV White Space Spectrum Market?
- 4. What are the technology trends and regulatory frameworks in the TV White Space Spectrum Market?
- 5. What is the market share of the leading vendors in the TV White Space Spectrum Market?
- 6. What modes and strategic moves are considered suitable for entering the TV White Space Spectrum Market?

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