

[PnpNetwork Technologies, Inc.] believes that the HD Radio digital radio broadcast standard for India will significantly benefit listeners with new and enhanced broadcasting services accessible across the entire territory. India would join several other countries in adopting the HD Radio digital radio standard. The United States formally adopted the technology as their digital radio standard in October of 2002. Mexico officially approved a digital radio standard based upon HD Radio technology in June of 2011. AM and FM radio broadcasters in Canada have also deployed HD Radio technology. This standardization across the North American continent has resulted in the massification of HD Radio receiver availability across cars and home products. As of August 2024, more than 150 million cars are available in North America with HD Radio technology.

The standardization of digital radio services reduces the cost and complexity of delivering new audio and data services. Adopting digital radio in India will help broadcasters plan and create a unified set of program and data services compatible across most OEM automotive receivers.

The HD Radio system provides consumers considerable advantages over legacy analog technology. Consumer Electronics (CE) digital transitions have historically given consumers better quality, more choice and more services, and interactivity, benefits that are all realized by the HD Radio system.

Manufacturers and retailers have a strong interest in upgrading radio technology from analog to digital. A uniform digital radio standard across the USA, Mexico and India would incentivize manufacturers that have benefited tremendously from previous digital product upgrades. The broad base of manufacturers building various HD Radio products will capture that same opportunity in radio's digital transition.

HD Radio technology offers the potential to increase device functionality by adding digital radio to these devices with the potential benefit of delivering wireless data and audio services. For automotive OEM and tier 1 suppliers, a North American and India product offering means reduced receiver model inventory and the ability to conduct more thorough testing of a reduced subset of receivers, resulting in better performance and lower costs.

[PnpNetwork Technologies, Inc.] encourages broadcasters and regulators in India to work together to advance the rollout of HD Radio digital radio services across India and to harmonize the use and regulation of digital radio in the AM and FM broadcast bands to create a de facto digital radio standard across North America and India.

***Q1: Do you agree that single digital radio technology adoption is preferable for the entire country? If not, support your reply with justification.***

Yes, adopting a single digital radio technology for the entire country is preferable. A clear direction of the digital radio solution for India will allow uniformity and standardization of products, allow our manufacturing teams to benefit from economies of scale, and simplify the user experience without worrying about compatibility.

***Q2. In case a single digital radio broadcast technology is to be adopted for the entire country, which technology should be adopted for digital radio broadcasting?***

***Please give your suggestions with detailed justification.***

Our team at [PnpNetwork Technologies, Inc.] endorses the HD Radio system as a digital radio broadcast standard. Since the inception of HD Radio operations, we have produced over several million SoC of HD Radio receivers. In our experience, the HD Radio system is stable, robust, and provides reliable coverage and services to our automotive customers.

One of the unique services offered by the HD Radio team is a comprehensive certification program which evaluates many different functional and performance requirements. Achieving the HD Radio certification ensures that our products are fully compatible with the transmission standard and will work correctly in all cities where HD Radio services are offered. As a result, we have experienced very high consumer satisfaction with the HD Radio receiver.

***Q3. In case multiple digital broadcasting technologies are to be adopted, please specify whether it should be left to the market forces to decide the appropriate technologies and what could be the potential problems due to adoption of multiple technologies?***

***Please suggest probable solutions to the problems, with detailed justification.***

Selecting a single digital radio standard is crucial for the automotive industry for several reasons.

Firstly, it ensures **compatibility and interoperability** across different vehicle models and in different locations. This uniformity means that consumers can expect their digital radios to work seamlessly, regardless of where they drive.

Secondly, a single standard reduces **manufacturing complexity and costs**. Car manufacturers can streamline their production processes by focusing on one technology, leading to economies of scale. This reduction in complexity not only lowers production costs but also minimizes the potential for errors and defects, resulting in more reliable products.

Moreover, it enhances the **consumer experience**. Drivers and passengers benefit from a consistent and reliable digital radio experience, with no need to worry about compatibility issues when traveling across different regions or switching between different car brands.

Finally, adopting a single standard fosters **innovation and future-proofing**. With a unified approach, the automotive industry can focus its research and development efforts on enhancing and evolving the technology. This collective focus can lead to more advanced features, better integration with other in-car technologies, and a more robust digital radio ecosystem.

In summary, selecting a single digital radio standard is essential for the automotive industry to ensure compatibility, reduce costs, enhance the consumer experience, simplify regulatory compliance, and foster innovation. This unified approach will ultimately benefit manufacturers, consumers, and the broader broadcasting ecosystem.