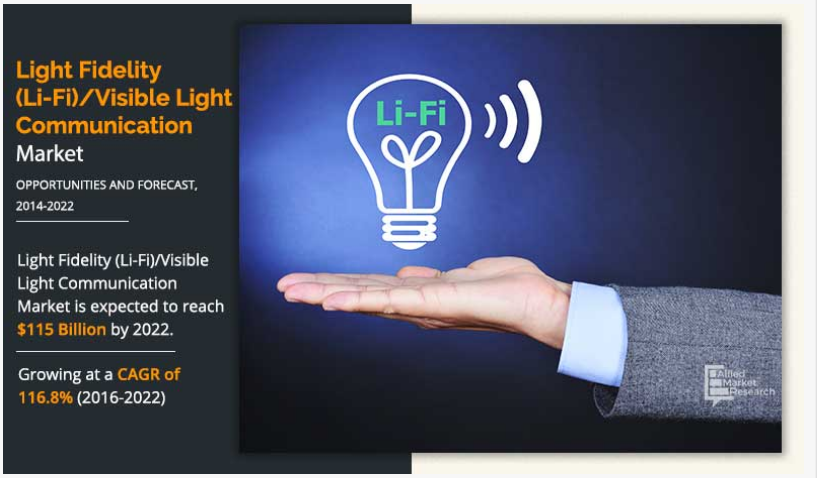
Light Fidelity (Li-Fi)/Visible Light Communication Market Poised for Explosive Growth—What's Driving the Demand?

Light Fidelity (Li-Fi)/Visible Light Communication Market to Reach $115 Billion, Globally, by 2022



Light Fidelity (Li-Fi)/Visible Light Communication Market Growth

WILMINGTON, DE, UNITED STATES, January 29, 2025 /EINPresswire.com/ -- Light Fidelity (Li-Fi) is a very high-speed, two-way wireless communication method that uses visible light from LEDs as the medium for transmitting data by turning them on and off at very high frequencies that human eyes cannot sense. This technology is an apt replacement for currently prevailing Wi-Fi technology as Li-Fi is considerably faster, has almost 10,000 times broader bandwidth because it uses visible light, and is safe to operate in electromagnetic-sensitive areas.

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> Li-Fi is a wireless communication tech like Wi-Fi but uses visible light instead of RF signals, enabling faster, secure, and interference-free data transfer."
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> *Allied Market Research*

Light Fidelity (Li-Fi)/Visible Light Communication Market report, published by Allied Market Research, forecasts that the global market is expected to garner $115 billion by 2022, registering a CAGR of 116.8% during the forecast period 2016 - 2022. In 2015, North America contributed a major share of the market and will continue to lead throughout the forecast period.

Li-Fi incorporates three major components, which are LED, photodetector, and microcontroller. Among the three components, in the year 2015, LED dominated the market by contributing over 40% share of the overall component segment

revenue. Also, this segment is anticipated to grow with the highest CAGR of 118.1% during the forecast period owing to its low cost, and increased adoption in different applications such as households, offices, vehicles, airplanes, and retail stores among others. Furthermore, LEDs are preferred over all other lighting systems as they can easily be turned off and on with the use of a microcontroller.

Under the industry vertical segment, the retail industry contributed over 30% of the overall Li-Fi market, in 2015. Li-Fi enables storekeepers to monitor the positioning of customers by tracing their location to improve the shopping experience and provide notifications on their cellphones. However, the healthcare sector would be the fastest-growing industry and is expected to register the highest CAGR of 125.3% during the forecast period. This is because Li-Fi does not cause any electromagnetic interference and can safely be used with other medical apparatus such as CT scanners, MRI machines, X-ray machines, and ultrasound machines among others.

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North America dominated the market in 2015 by accounting for around 40% of the total market revenue and it is expected to maintain its dominance throughout the forecast period. This is accredited to the presence of various research and development facilities in the region and investment for implementation of this technology by the major companies in the region.

Asia-Pacific is anticipated to be the fastest-growing region among others with a CAGR of 121.7% during the forecast period. This is attributed due to the large electronic market in China and Japan as well as the presence of several developing regions where governments promote the use of LED lights. In Asia-Pacific, China holds about 50% of the market at present and is expected to maintain its leading position throughout the forecast period.

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Li-Fi is a bi-directional wireless communication method that is similar to Wi-Fi technology. However, the former uses visible light for data transmission in place of RF communication used in Wi-Fi and cellular networks. The use of visible light makes the Li-Fi technology 100 times faster than Wi-Fi, less in cost, and it requires no external power source as it operates with the glowing LED light. Furthermore, the absence of RF waves provides Li-Fi with the advantage of being used in electromagnetic-sensitive areas, such as hospitals, aircraft, and nuclear power plants, as it does not cause any electromagnetic interference. All these technical superiorities of Li-Fi over Wi-Fi technology drive its market in various applications such as retail, aerospace & defense, and indoor networking. These technical superiorities of LI-Fi over Wi-Fi are expected to fuel up the demand in the market during the next five to six years.

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- In 2015, LED components led the overall Li-Fi market revenue and is projected to grow at a CAGR of 118.1% during the forecast period.
- The retail industry vertical segment is projected to grow at a CAGR of 112.8% during the analysis period.
- Asia-Pacific is anticipated to be the fastest-growing region growing at a CAGR of 121.7% during the forecast period.

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The key players in the Li-Fi market are focused on intensive research and development such as undergoing research at Edinburgh University and the research facility of pureLiFi in the United Kingdom, to improve their product quality and partnerships to reach untapped regions. Key players in the market have adopted product launches as their key strategy to grow in the market. For instance, the launch of enhanced lighting named Atlanta for precise indoor positioning by acuity brands and the Li-Fi enabled router, LiFi-x by pureLiFi The key players profiled in the report include □□□□□□□□ □□□□□□□□□, □□□□□□□□□ □.□.□, □□□□□□□□ □□□□□□□□□□□□ □□□□□□□□□□□□, □□□□□□□□□, □□□ □□□□□□□, □□□□□□□ □□□□□□□ □□□□□□□□□, □□□., □□□□□□□□□ □□□□□□□□□□□□□ □□□., □□□□□□□□□□□□□ □□□., □□□□□□□□□□□□□ □□□□□□□□ □.□., □□□ □□□□□□□□□□ □□□□□□□□□□□□□.

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