# 5G RedCap and Asia-Pacific fuel cellular IoT surge to over 5 billion connections by 2030



The cellular Internet of Things (IoT) market is poised for substantial growth over the coming decade, with connections forecast to reach 5.1 billion by 2030 according to new research from Omdia. This rapid expansion is driven largely by the transformative impact of 5G technologies, which are reshaping the cellular IoT landscape. Three key technologies—5G RedCap, 5G Massive IoT, and 4G LTE Cat-1bis modules—have emerged as primary engines of this growth.

Among these, 5G RedCap is poised to play a pivotal role as the mid-tier connectivity solution. It targets 5G devices that do not need the highest performance specifications such as Ultra-Reliable Low Latency Communications (uRLLC) or Enhanced Mobile Broadband (eMBB), making it a practical and futureproof choice, especially as 4G networks gradually phase out beyond 2030. However, its adoption has been slower than anticipated, partly due to earlier delays in 5G standalone network rollouts. As Alexander Thompson, Senior Analyst for IoT at Omdia, explains, "We are beginning to see 5G SA rollouts accelerate again after a brief period of slowdowns, which has delayed 5G RedCap mass adoption by a couple of years." Early 5G RedCap devices have started appearing in the U.S. market, marking the transition of mid-tier connectivity from 4G to 5G.

The Asia & Oceania region is leading the global surge in cellular IoT connectivity, accounting for over 67% of worldwide IoT module shipments and approximately 80% of total IoT connections in 2024. This dominance is underpinned by strong growth in sectors like automotive, where consumer demand for intelligent vehicles with integrated 5G connectivity fuels expansion. Andrew Brown, Practice Lead for IoT at Omdia, underscores the significance of this trend: "The dominance of the Asia & Oceania region in the IoT market cannot be overstated. We’re witnessing a significant shift in global technology leadership that will shape IoT innovation and deployment strategies for years to come."

While Omdia’s projection of 5.1 billion connections by 2030 provides a solid benchmark, other research offers a broader range of forecasts, reflecting the sector’s dynamic nature. Counterpoint Research projects even more rapid growth, estimating over 6.2 billion cellular IoT connections globally by 2030, driven by a 10% compound annual growth rate (CAGR). Their analysis highlights the automotive industry alongside smart meters and smart retail as major application areas that will collectively represent more than 60% of the market’s share by 2030. They also anticipate 5G connections will surpass Narrowband-IoT (NB-IoT) connections, accounting for nearly half of total IoT connectivity revenues worldwide.

Ericsson’s Mobility Report similarly forecasts a robust outlook, predicting over 7 billion cellular IoT connections by the end of 2030 with an annual growth rate of around 11% from 2024 onwards. Ericsson emphasises the role of Massive IoT technologies such as NB-IoT and Cat-M, which are well-suited for large-scale deployments of low-cost, low-power devices in wide-area applications. Their data also show commercial launches of 5G RedCap in multiple markets, with numerous service providers conducting trials, signalling rising confidence in this mid-tier technology.

Market value projections align with these connection forecasts, indicating strong financial growth. Grand View Research estimates the global cellular IoT market, valued at $6.12 billion in 2023, will expand to $31.69 billion by 2030, propelled by increasing demand for secure, efficient connectivity across diverse sectors like healthcare, agriculture, and utilities. The integration of IoT devices into manufacturing is paving the way for smart factories, where autonomous, interconnected equipment drives operational efficiency and cost reductions.

Financial metrics also reveal a shift towards connectivity revenue growth despite some declines in module shipments and revenue. According to IoT Analytics, the global cellular IoT connectivity market reached $15 billion in 2023, accompanied by a 23% year-over-year increase in mobile operators' IoT revenue. This indicates that while hardware sales may fluctuate, operators are successfully monetising expanded IoT connectivity through improved service offerings, particularly harnessing 5G and 5G RedCap technologies.

The upcoming phase-out of older cellular networks like 2G and 3G is accelerating adoption of newer cellular IoT standards. Transforma Insights forecasts that by 2030, the installed base of cellular IoT devices will reach around 5 billion, with 5G massive Machine Type Communications (mMTC)—encompassing NB-IoT and LTE-M—alongside 4G dominating connection numbers. These trends reflect a broadening industry shift as enterprises in utilities, automotive, industrial, retail, and healthcare increasingly embrace cellular IoT to drive digital transformation, improve operational outcomes, and reduce costs.

In summary, the cellular IoT market stands on the brink of transformative growth powered by advanced 5G technologies, led by key regional players in Asia & Oceania, and supported by diverse sectoral demand. While forecasts vary slightly in magnitude, all point to a future where billions of connected devices and rapidly evolving mid-tier technologies like 5G RedCap will underpin a connected ecosystem integral to modern industry and daily life.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.emsnow.com/omdia-forecasts-cellular-iot-connections-to-reach-5-1-billion-by-2030/), [[2]](https://omdia.tech.informa.com/pr/2025/jul/omdia-forecasts-cellular-iot-connections-to-reach-5point1-billion-by-2030)
* Paragraph 2 – [[1]](https://www.emsnow.com/omdia-forecasts-cellular-iot-connections-to-reach-5-1-billion-by-2030/), [[2]](https://omdia.tech.informa.com/pr/2025/jul/omdia-forecasts-cellular-iot-connections-to-reach-5point1-billion-by-2030), [[4]](https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/iot-connections-outlook)
* Paragraph 3 – [[1]](https://www.emsnow.com/omdia-forecasts-cellular-iot-connections-to-reach-5-1-billion-by-2030/), [[2]](https://omdia.tech.informa.com/pr/2025/jul/omdia-forecasts-cellular-iot-connections-to-reach-5point1-billion-by-2030), [[3]](https://www.counterpointresearch.com/insights/global-cellular-iot-connectivity-revenue-2023-vs-2030/)
* Paragraph 4 – [[4]](https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/iot-connections-outlook)
* Paragraph 5 – [[5]](https://www.grandviewresearch.com/industry-analysis/cellular-iot-market)
* Paragraph 6 – [[6]](https://iot-analytics.com/global-cellular-iot-connectivity/)
* Paragraph 7 – [[7]](https://transformainsights.com/research/forecast/highlights)
* Paragraph 8 – [[1]](https://www.emsnow.com/omdia-forecasts-cellular-iot-connections-to-reach-5-1-billion-by-2030/), [[2]](https://omdia.tech.informa.com/pr/2025/jul/omdia-forecasts-cellular-iot-connections-to-reach-5point1-billion-by-2030), [[3]](https://www.counterpointresearch.com/insights/global-cellular-iot-connectivity-revenue-2023-vs-2030/), [[4]](https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/iot-connections-outlook), [[5]](https://www.grandviewresearch.com/industry-analysis/cellular-iot-market), [[6]](https://iot-analytics.com/global-cellular-iot-connectivity/), [[7]](https://transformainsights.com/research/forecast/highlights)

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## Bibliography

1. <https://www.emsnow.com/omdia-forecasts-cellular-iot-connections-to-reach-5-1-billion-by-2030/> - Please view link - unable to able to access data
2. <https://omdia.tech.informa.com/pr/2025/jul/omdia-forecasts-cellular-iot-connections-to-reach-5point1-billion-by-2030> - Omdia forecasts that the cellular IoT market will experience significant growth, with connections projected to reach 5.1 billion by 2030. The study highlights the transformative impact of 5G technologies, particularly 5G RedCap, 5G Massive IoT, and 4G LTE Cat-1bis modules, as primary drivers of this expansion. 5G RedCap is identified as a key development, expected to gain momentum from 2025 onwards, serving as a mid-tier connectivity solution for 5G devices that do not require the high specifications of Ultra-Reliable Low Latency Communications (uRLLC) or Enhanced Mobile Broadband (eMBB). Despite its advantages, the adoption of RedCap has been slower than anticipated. The Asia & Oceania region is projected to contribute over 67% of global IoT module shipments, accounting for approximately 80% of total IoT connections by 2024, underscoring its pivotal role in shaping global IoT deployment strategies. The automotive industry is a significant catalyst in this growth, driven by increasing consumer demand for intelligent vehicles with integrated 5G connectivity features. This regional dominance signifies a substantial shift in global technology leadership, influencing IoT innovation and deployment strategies for years to come.
3. <https://www.counterpointresearch.com/insights/global-cellular-iot-connectivity-revenue-2023-vs-2030/> - Counterpoint Research projects that global cellular IoT connections will exceed 6.2 billion by 2030, growing at a compound annual growth rate (CAGR) of 10%. In 2023, the market saw a 24% year-over-year increase, reaching 3.3 billion connections. Despite challenges in the cellular IoT module sector, connectivity revenues also experienced a 17% year-over-year increase, reaching $13.7 billion. The automotive industry, along with smart meters and smart retail, is expected to collectively account for over 60% of the total market share for cellular IoT applications by 2030. Additionally, 5G connections are anticipated to surpass NB-IoT connections globally by 2030, accounting for nearly 50% of total IoT connectivity revenues.
4. <https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/iot-connections-outlook> - Ericsson's Mobility Report forecasts that cellular IoT connections will surpass 7 billion by the end of 2030, with a compound annual growth rate (CAGR) of around 11% from 2024 to 2030. By the end of 2024, the total number of cellular IoT connections was approximately 4 billion. The report highlights the significant role of Massive IoT technologies, such as NB-IoT and Cat-M, in supporting wide-area use cases involving large numbers of low-complexity, low-cost devices with long battery lives and low-to-medium throughput. Additionally, 5G RedCap has been commercially launched by six service providers in four different markets, with more than 20 leading service providers worldwide currently performing tests and trials, indicating a growing adoption of this mid-tier connectivity solution.
5. <https://www.grandviewresearch.com/industry-analysis/cellular-iot-market> - Grand View Research estimates that the global cellular IoT market size was valued at $6.12 billion in 2023 and is projected to reach $31.69 billion by 2030, growing at a compound annual growth rate (CAGR) of 26.5% from 2024 to 2030. The increasing demand for efficient and secure connectivity solutions across diverse sectors, including healthcare, agriculture, and utilities, is driving this growth. The advancement of 5G network technology, offering high-speed data, low latency, and greater device connectivity, is also contributing to the rapid expansion of the cellular IoT market. IoT devices are being integrated into manufacturing processes to create smart factories, where equipment and systems are interconnected and operate autonomously, enhancing operational efficiency and reducing costs.
6. <https://iot-analytics.com/global-cellular-iot-connectivity/> - IoT Analytics reports that the global cellular IoT connectivity market reached $15 billion in 2023, with 3.6 billion cellular IoT connections. The market is projected to grow at a compound annual growth rate (CAGR) of 18% between 2024 and 2030, driven by the adoption of 5G and 5G RedCap technologies. In 2023, mobile operators' IoT revenue growth rate of 23% year-over-year exceeded that of IoT software companies and hyperscalers. Despite a decline in cellular IoT module shipments and revenue in 2023, the cellular IoT connectivity revenue continued to grow, indicating a shift towards more efficient and secure connectivity solutions across various sectors.
7. <https://transformainsights.com/research/forecast/highlights> - Transforma Insights forecasts that the installed base of cellular connected IoT devices will grow to around 5 billion by 2030. In the later years of the forecast, connection numbers will be dominated by 5G massive Machine Type Communications (mMTC), which includes the NB-IoT and LTE-M technologies, and 4G, driven to a great extent by the phase-out of 2G and 3G networks. This growth reflects the increasing adoption of cellular IoT technologies across various sectors, including utilities, automotive, industrial, retail, and healthcare, as enterprises undertake digital transformation initiatives to enhance operational efficiency and reduce costs.