R&D Outsourcing

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Internet of things in telecom

2021: Internet of things that the head needs to know
Internet of Things, aka IoT (Internet of Things). What is this? How is this different from M2M? How can it be used? What is the price? How to implement? Read more here.

2020: Reduction of the market of cellular IoT modules for 8%, to $3.1 billion - IoT Analytics
The world market of cellular modules of Internet of Things (IoT) in 2020 showed decrease by 8%, to $3.1 billion in terms of money. Such data are given in the IoT Analytics report published at the end of May, 2021.

An analysis of revenue and shipments from 33 IoT cellular module companies shows that the global cellular IoT module market was hit hard in 2020 by the COVID-19 pandemic, with global revenue down 8% year-on-year to $3.1 billion. However, shipments of cellular IoT modules in China in 2020 increased by 14% compared to the same period in 2019, while in the rest of the world these figures decreased.

The market of cellular modules of Internet of Things for 2020 fell by 8%
Experts cite COVID-19 as the reason why the Chinese market has expanded while others have contracted. Many IoT-related initiatives have been suspended or, in some cases, canceled in 2020 precisely because of the coronavirus. However, the deployment of IoT projects in China was less affected - after a temporary block due to COVID-19, their development continued.

IoT Analytics segments the cellular IoT module market by connectivity technologies, including two different 4G sub-segments: LTE-Cat 1 and other 4G standards. One of the main trends identified by the study is that the connectivity picture in China is very different from the rest of the world. Outside of China, the penetration of LTE-Cat 1 is much stronger than, for example, the penetration of narrow-band (NB)-IoT. LTE-Cat 1 accounts for 23% of the market outside of China, but only 12% in China.

Unlike five years ago, as of 2020, the IoT cellular module market is dominated by Chinese providers. Quectel, Fibocom and SUNSEA AIoT have established themselves as market leaders and market expansion in China during 2020 has increased their market positions.

It is expected that 4.5 billion cellular IoT connections will be deployed by 2025. The cellular IoT module market, according to IoT Analytics, is in a long-term cyclical uptrend.[1]

2019
The market of cellular IoT modules jumped by 22% to 265 million pieces
In early June 2020, Berg Insight released a report stating that global shipments of cellular IoT modules grew by 22% in 2019, reaching a new record high of 265 million units. Annual revenue grew more slowly and only increased by 7% due to increased pricing pressure and an increase in the share of low-cost LPWA modules in the assortment.

Analysts note that IoT technologies are undergoing a rapid transformation. The development of the

Chinese market is accelerating the global transition to LTE technologies, while previously almost 40% of annual module shipments were accounted for by 2G technologies. Experts suggest that in the next five years (from 2020 to 2024), the 3GPP specifications for low-power global communications - LTE-M and NB-IoT will make a significant contribution to the growth of this sector.

The market of cellular IoT modules in 2019 jumped by 22%
In Europe, shipments of NB-IoT modules began in 2019 and should accelerate in 2020, with LTE-M rollout also accelerating from 2021. China is moving from GPRS to NB-IoT in the mass market segment, but at the same time, demand for LTE Cat-1 modules is growing in the Asian region as Chinese operators choose it over LTE-M.

Although 5G coverage in developed markets is growing rapidly, 5G-enabled IoT modules will only be available in high volumes in the second half of 2020. The first 5G-enabled products will be routers and gateways, likely to hit the market before the end of 2020. The first passenger cars equipped with 5G IoT modules are planned to be released in 2021. Additional applications for 5G-enabled IoT modules in the future could include video surveillance and other multimedia applications that currently rely on wired connectivity.

Berg Insight's latest cellular IoT module vendor market share results show that the top five module vendors account for 71% of the market in terms of revenue. Fredrik Stalbrand, Senior IoT Analyst at Berg Insight, notes that annual revenues from the sale of IoT modules among the top five players - Quectel, Sierra Wireless, Thales, Sunsea AIoT and Telit - grew by 5% in 2019 and reached $2.2 billion, and their total market value reached approximately $3.1 billion.

In 2019, Quectel became the leading provider of cellular IoT modules, surpassing Sierra Wireless. Thales, which completed its acquisition of Gemalto in April 2019, is in third place, followed by Sunsea AIoT and Telit.

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Analysts predict that cellular IoT module vendors will experience marked fluctuations in end-market sales in 2020 due to the COVID-19 pandemic. Resource providers make up the largest end market in terms of volume, and while projects with the installation of "smart" equipment continue to work, their pace has declined dramatically. Likewise, factory closures by major automakers and lower demand for passenger cars will have a significant impact on sales of cellular IoT modules for automotive applications in 2020.

Despite challenges in the short term, Berg Insight believes that overall the current situation will accelerate the pace of digitalization in the coming years.

Dynamics of deliveries of cellular IoT devices, data of Berg Insight
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Enterprises that have embarked on their digital transformation journey are already at an advantage and are delivering tremendous value to customers today through remote process control of connected devices that avoids unnecessary contact, says Fredrik Stalbrand.[2]
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MTS launched a single protocol for the Internet of things
In December 2019, MTS launched a single protocol for the Internet of Things (IoT) using SCEF (Service Capabilities Exposure Function) equipment from Oracle. The system integration project was carried out by NVision Group (part of the MTS group). Read more here.

2018: Telecom selects various ways for development of Internet of things
In April, 2018 the Ericsson company published results of a research which showed that telecommunication operators use several ways for development of Internet of Things and receiving income from it. By the time the report was published, only a few market participants have full-fledged IoT strategies.

According to an Ericsson survey, more than two-thirds of telecommunications service providers do not have clear plans for implementing IoT technologies in their work. They are just looking for sources of income from IoT solutions, so they are testing different approaches.

Ericsson's research shows that telecom operators are using multiple paths to embrace and generate revenue from the Internet of Things (IoT).
Ericsson conducted a study to find out how international telecommunications companies support IoT initiatives. The report considers 20 leading operators. They all agree on the great potential of the Internet of Things, especially when it comes to new IoT technologies for cellular communications, such as Narrow Band IoT (NB-IoT).

This standard, according to operators, is optimally suited for collecting, analyzing and managing data, remote control of devices. The launch of such networks will allow testing and implementing in the pilot zone high-tech products and services based on the Internet of things for the development of a smart city, including solutions in the field of security, monitoring of transport and the environmental situation, digitalization of various industries, the work of government agencies, etc. According to Ericsson, they want to make money in telecom "outside communications".

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The report confirms the importance of IoT for the current and future business of leading service providers, regardless of where they operate in the world, says Jeff Travers, Head of IoT at Ericsson Effers. “With regard to IoT as a new type of business, operators are investing in new technologies and creating new business models to share revenues and increase the use of indirect channels. They are also developing new models for delivering products as a service and online services, as well as developing innovations together with partners and customers.
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Ericsson distributes the structure of the Internet of Things between four main links:

telecom operators providing the basic infrastructure for connecting IoT services;
communications providers that run and manage IoT services;
service providers providing service platforms for developers of IoT systems;
service developers, who themselves become IoT service providers.
Representatives of the majority of the telecommunications companies surveyed said that they consider the roles of telecom operators and communication providers to be fundamental for the growth of IoT revenue. Additional revenues can be provided either by differentiation of services through intermediate roles, or by the progressive provision of complex IoT solutions to customers.

The study showed that telecommunications companies can play different roles at any given moment, depending on use cases and other factors.

Ericsson also found that carriers launch an IoT business as a stand-alone startup and then evaluate project success based on key performance indicators (KPIs) such as app downloads or number of devices connected to the network.

Operators cite fleet management, logistics, Internet-connectedobili, smart cities and industrial

automation. Consumer projects are less interesting due to "non-obvious advantages" and "competition from major players".[3]

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