LIGHTCOUNTING

# Wireless Infrastructure Market Research

Publications ● Calendar ● Subscriptions

2022

# • Publication Dates
# • Report Descriptions
# • Subscription Options

LightCounting Wireless Infrastructure reports and services are designed to help executives plan and run their businesses. We support decision making based on facts and data with realistic projections. Our research covers the global telecommunications industry as well as regional markets such as China and Japan.

This brochure summarizes our coverage of wireless infrastructure with in-depth analysis of the market for radio access, core, network automation, and network disaggregation.

# 2022 Research Publication Calendar



| Report | Description | Date |
|---|---|---|
| 4Q21 & FY21 Wireless Infrastructure | Quarterly 2G/3G/4G/5G market size, shares and regional 5-year forecast | February 24 |
| Disaggregated Open Routers | Ecosystem analysis with market size and regional 5-year forecast | March 31 |
| China Wireless Infrastructure FY21 | Bi-annual update on what's happening in China, including economics, geopolitics, and wireless market size, share and forecast | April 14 |
| Japan Wireless Infrastructure FY21 | Bi-annual update on what's happening in Japan, including economics, wireless market size, share and forecast | April 28 |
| 1Q22 Wireless Infrastructure | Quarterly 2G/3G/4G/5G market size, shares and regional 5-year forecast | May 26 |
| Open vRAN Market | Ecosystem analysis with market size, shares, and regional 5-year forecast | June 23 |
| Telecom Network Transformation Report | Impact of 5G and cloud services on transformation of telecom networks | June |
| 5G Core and Service-based Architecture | Ecosystem analysis with market size, shares, and forecast broken down by network function | July 28 |
| 2Q22 Wireless Infrastructure | Quarterly 2G/3G/4G/5G market size, shares and regional 5-year forecast | August 25 |
| China Wireless Infrastructure 1H22 | Bi-annual update on what's happening in China, including economics, geopolitics, and wireless market size, share and forecast | September 15 |
| Japan Wireless Infrastructure 1H22 | Bi-annual update on what's happening in Japan, including economics, wireless market size, share and forecast | September 29 |
| Network Automation: SON, RIC, SD-RAN | Ecosystem analysis with market size, shares, and regional 5-year forecast | October 27 |
| 3Q22 Wireless Infrastructure | Quarterly 2G/3G/4G/5G market size, shares and regional 5-year forecast | December 1 |
| Disaggregated Cell Site Gateways (DCSG) | Ecosystem analysis with market size, shares, and regional 5-year forecast | December 15 |
| *Stéphane Téral's Perspective* | *Insightful powerful research notes about major events and facts occurring in the industry* | *Ongoing* |

# Wireless Infrastructure Market

## **FREQUENCY:** QUARTERLY
## **DATES:** FEBRUARY 24, MAY 26, AUGUST 25, DECEMBER 1



Every quarter, this report analyzes the wireless infrastructure market and covers 2G, 3G, 4G and 5G radio access network (RAN) and core network nodes. It presents historical data from 2016 to 2021, quarterly market size and vendor market shares, and a detailed market forecast through 2027 for 2G/3G/4G/5G RAN, including open vRAN, and core networks (EPC, vEPC, 5GC), for each region (North America, Europe Middle East Africa, Asia Pacific, Caribbean Latin America). The historical data accounts for sales of more than 30 wireless infrastructure vendors, including a few vendors that shared confidential sales data with LightCounting. The market forecast is based on a model correlating wireless infrastructure vendor sales with 20 years of service provider network rollout patterns analysis, upgrades and expansion plans.

COMPANIES INCLUDED: **CISCO, ERICSSON, FUJITSU, HUAWEI, MAVENIR, NEC, NOKIA, SAMSUNG, ZTE**

# Open vRAN Market

## FREQUENCY: ANNUAL
## DATE: JUNE 23



This report takes a deep dive into the virtualization of radio access networks (vRAN) and open RAN/vRAN. It analyzes the various schools of thought ranging from the virtualization of RAN functions to new open RAN architectures developed and proposed by the Telecom Infrastructure Project (TIP) initiative and the O-RAN Alliance, designed to cut the dependency on proprietary RAN equipment supplied by the traditional vendors. Open vRAN market size and forecasts are derived from our existing quarterly RAN size and forecasts and broken down by 2G/3G/4G versus 5G Open vRAN, as well as by vCU, vDU, and RU, for each region, and looks at the potential for indoor DAS replacement. The report covers a wide emerging ecosystem of vendors.

COMPANIES INCLUDED: **AIRSPAN, ALTRAN, ALTIOSTAR, COBHAM WIRELESS, COMMSCOPE, CORNING, ERICSSON, FUJITSU, GIGATERA, JMA WIRELESS, MAVENIR, MOVANDI, NOKIA, NEC, PARALLEL WIRELESS, SAMSUNG, SOLID TECHNOLOGIES**

# 5G Core & Service-based Architecture (SBA)

## FREQUENCY: ANNUAL
## DATE: JULY 28



As 5G goes far beyond mobile and will eventually become THE network that bridges all networks, a new sophisticated service-based architecture (SBA) is being designed by the 3GPP. Although many of the network functions (NFs) featured in the SBA come from existing ones currently active in 2G/3G and 4G networks, novel ones such as the network slice selection function (NSSF) are being introduced and launched. Based on a service provider survey and discussions with many vendors, this report analyzes several of the 5G core SBA network functions and provides global and regional market size and forecasts, for the most imminent NFs to be implemented (UDM, UDR, AUSF, and PCF, BSF, CHF) the report provides market size and forecasts by region, and includes global vendor market shares.

COMPANIES INCLUDED: **AFFIRMED, ALEPO, AMDOCS, CISCO, COMPUTARIS, CSG, DIGITALROUTE, ENEA, ERICSSON, FTS, HPE, HANSEN, HUAWEI, IBM, INTRACOM TELECOM, MAGNAQUEST, MAHINDRA COMVIVA, MATRIXX, MAVENIR, METASWITCH, NEC, NEXIGN, NOKIA, OPENET, OPTIVA, ORACLE, POLARIS NETWORKS, PROTEI, SAMSUNG, ZTE**

# China Wireless Infrastructure

## **FREQUENCY:** BI-ANNUAL
## **DATE:** APRIL 14, SEPTEMBER 15



A subset of our quarterly wireless infrastructure update, this report focuses on 5G developments in China, including macroeconomics, geopolitics, and technology. The publication date is scheduled a few weeks after the 4 services providers (China Broadcasting Network, China Mobile, China Telecom, China Unicom) provide their interim report so that we can gather many details about 2021, 1H22 and provide a 2H22 outlook and a 5-year forecast. This report includes service provider capex, base station (BTS) units, subscriber numbers and RAN vendor market shares and analysis.

COMPANIES INCLUDED: **CHINA INFORMATION AND COMMUNICATION TECHNOLOGIES GROUP (CICT), ERICSSON, HUAWEI, NOKIA, SUNWAVE, ZTE**

# Japan Wireless Infrastructure

**FREQUENCY:** BI-ANNUAL
**DATE:** APRIL 28, SEPTEMBER 29



A subset of our quarterly wireless infrastructure update, this report focuses on Japan's mobile market and analyzes the implications of the introduction of Rakuten Mobile and the Japanese government's open RAN push. The publication date is scheduled a few weeks after the 4 services providers (e.g., KDDI, NTT DOCOMO, Rakuten Mobile, and Softbank) provide their interim report so that we can gather many details about 2021, 1H22 and provide a 2H22 outlook, a 5-year RAN forecast, and a 3-year capex outlook. This report includes service provider capex, base station (BTS) units, subscriber numbers and RAN vendor market shares and analysis.

COMPANIES INCLUDED: **ALTIOSTAR, ERICSSON, FUJITSU, HUAWEI, NEC, NOKIA, SAMSUNG, ZTE**

# Network Automation: SON, RIC, SD-RAN



**FREQUENCY:** ANNUAL
**DATE:** OCTOBER 27

Defined by 3GPP at the beginning of this century, SON (self-organizing network) algorithms configure and optimize mobile networks automatically without human interaction. As networks handle vast amounts of traffic and become more and more sophisticated and complex through the addition of several generations, SON algorithms are blended with machine learning (ML) and artificial intelligence (AI). This report tracks the centralized SON (C-SON) software and services revenue market, provides size, forecast and vendor market shares, and analyzes the evolution of C-SON modules and use cases that are becoming RAN Intelligent Controller (RIC) and rApps/xApps needed in open virtual RAN and software-defined RAN (SD-RAN) architectures.

COMPANIES INCLUDED: **AIRHOP COMMUNICATIONS, ALTRAN, CELLWIZE, CONTINUAL, ERICSSON, HCL TECHNOLOGIES, HUAWEI, INNOVILE, NOKIA, P.I. WORKS**

# Disaggregated Open Routers (DOR)

## FREQUENCY: ANNUAL
## DATE: MARCH 31



As disaggregation advances into the design of the next generation network architecture, this report outlines the nascent market of disaggregated open routers. Disaggregated open routers are new network components based on separated white box hardware and software with cloud enabled software functions for existing 2G/3G/4G and future 5G network architectures. The report analyzes the disaggregated open routers architectures and implementations, including the emerging vendor ecosystem, and tracks white box hardware units and sales, and software sales, all broken down by region (North America, Europe Middle East Africa, Asia Pacific, and Caribbean Latin America). It includes the total number of cell sites worldwide and a 5-year market forecast. As this market is just emerging, it is too early to publish vendor market shares.

*Source: UfiSpace*

COMPANIES INCLUDED: **ALPHA NETWORKS, ARRCUS, CISCO, DATACOM, DELL, DELTA ELECTRONICS, DRIVENETS, EDGECORE NETWORKS, EXAWARE, IP INFUSION, INFINERA, NIRAL NETWORKS, UFISPACE, VOLTA NETWORKS**

# Disaggregated Cell Site Gateways (DCSG)

**FREQUENCY:** ANNUAL
**DATE:** DECEMBER 15



This report explores the emergence of the Disaggregated Cell Site Gateways (DCSG) market. DCSG are white-box cell site gateways or routers based on an open and disaggregated architecture for existing 2G/3G/4G and future 5G network architectures. The report analyzes DCSG architectures and implementations, including its emerging ecosystem, and tracks white box hardware units and sales, and software sales, all broken down by regions (North America, Europe Middle East Africa, Asia Pacific, and Caribbean Latin America). It includes the total number of cell sites worldwide and a 5-year forecast. As this market is just emerging, it is too early to publish vendor market shares.

| Software | |
|---|---|
| ADVA | altran |
| ARRCUS | Aviat |
| DATACOM | DELL Technologies |
| DRIVENETS | exaware |
| Microsoft | NIRAL NETWORKS |
| ip infusion | Infinera |
| Pureport | VOLTA Networks |

| Hardware | |
|---|---|
| ALPHA | |
| DELTA | |
| Edge-corE NETWORKS | DELL Technologies |
| Infinera | ufiSpace |

COMPANIES INCLUDED: **ADVA, ALTRAN, ALPHA NETWORKS, ARRCUS, AVIAT NETWORKS & METASWITCH (MICROSOFT), DATACOM, DELL TECHNOLOGIES, DELTA ELECTRONICS, DRIVENETS, EDGECORE, EXAWARE, IP INFUSION, INFINERA, NIRAL NETWORKS, PUREPORT, UFISPACE, VOLTA NETWORKS**

# Telecom Network Transformation



**FREQUENCY:** ANNUAL
**DATE:** JUNE

Embracing cloud technologies represents a key inflection point for communications service providers (CSPs) as they change how they build and operate their networks. Instead of working with select systems vendors for individual service introductions and network upgrades, the CSPs are turning to software, network disaggregation and even white-box hardware to make their networks open and software-defined.

Another consequence of disaggregation and the software-defined network is the internet content providers' (ICPs) growing role in telecoms. Amazon Web Services, Microsoft Azure and Google Cloud all recognize the opportunity telecoms represent and are partnering with the CSPs as both expand their cloud footprints at the network edge.

COMPANIES PROFILED: **AT&T, BT, CHINA MOBILE, CHINA TELECOM, CHINA UNICOM, COMCAST, DEUTSCHE TELEKOM, KDDI, NTT, ORANGE, SOFTBANK, TELECOM ITALIA, TELEFONICA, VODAFONE, VERIZON**

# Stéphane Téral's Perspective

## FREQUENCY: ONGOING



As this decade starts in a fast-growing 5G world, you cannot afford to miss a piece of this revolution that is expected to change many aspects of our lives.

Stay on top of everything with timely eye-catching insightful entertaining opinion pieces of critical analysis on the events and news that telecom professionals should be aware of and pay attention to.

In the form of short yet straight to the point research notes, we unabatedly inform, inspire and provoke while being honest, fearless and startlingly original.

The following ***Stéphane Téral's Perspective*** notes were published in 2021:

- *A Few Predictions for 2021*
- *With Netsia, Juniper Networks builds a RIC-centric RAN orchestration domain, making RIC more exoteRIC*
- *Slow 5G rollouts and a flawed business model are why the Angry Birds did not Hatch!*
- *Ericsson devours Huawei's European RAN footprint*
- *The rise of Ericsson in Europe is flattening the open RAN linear momentum*
- *The Open RAN Empire of the Rising Sun*
- *Both Huawei and ZTE exhibited and as usual had something interesting to display and tell*
- *MWC21: How open RAN stole the show*
- *AT&T Powers Microsoft's Azure for Operators and Propels it as a World Telco 5G Cloud Core Leader*
- *With its Altiostar Ownership, Rakuten Group Sets the Beginning of a New CSP Era*
- *ECOC 2021: When 5G met F5G*

# SUBSCRIPTION PACKAGES



LightCounting offers six subscription packages — **Platinum Plus, Platinum, Gold Plus, Gold, Silver and Bronze**

Make headway — subscribe to ***Stéphane Téral's Perspective***

The **2022 Wireless Infrastructure** publication calendar includes 6 annual reports, 4 bi-annual reports, and 4 quarterly market report. In addition to these reports, subscribers receive bonus material, including a live webinar presentation highlighting findings from a report (within two weeks after the publication date), unlimited analyst inquiries (access to analyst for further information, discussion and insights), and access to at least 8 research notes from ***Stéphane Téral's Perspective*** during the calendar year.

LEARN MORE
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LIGHTCOUNTING

THE NAME ALONE IS WHAT SETS US APART AND WHAT DEFINES US AS A COMPANY.

Eighteen years ago, LightCounting began with an analyst team focused on research for high-speed interconnects for the datacom, telecom, and consumer communications markets. From that time our research team has grown to cover the whole supply chain supporting Optical Networks and Datacenters. In early 2020, we added coverage of the global Wireless Infrastructure market as well. We have been defining and refining the market intelligence mix ever since, to offer our clients a unique perspective on the industry landscape ahead and a clear roadmap to navigate it with.

THAT'S OUR MARKET INTELLIGENCE. THAT'S HOW IT HELPS OUR CLIENTS GROW.