

The HetNet Ecosystem (Small Cells, Carrier Wi-Fi, C-RAN & DAS): 2017 – 2030 – Opportunities, Challenges, Strategies & Forecasts

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Abstracts

Driven by the growing demand for in-building wireless coverage and the huge influx of mobile data traffic, conventional macrocells alone are no longer deemed sufficient to handle the needs of today's wireless subscribers. In addition, the imminent adoption of centimeter and millimeter wave spectrum, to support higher data rates in 5G networks, necessitates the usage of much smaller cell sizes.

To cope with growing capacity and coverage requirements, mobile operators are significantly increasing their investments in a variety of Heterogeneous Network or HetNet infrastructure technologies such as strategically deployed small cells, carrier Wi-Fi and DAS (Distributed Antenna System) networks. Adding further to the heterogeneity is the shift towards C-RAN (Centralized RAN) architecture, where centralized baseband functionality is shared across a large number of distributed radio nodes to deliver benefits such as resource pooling, multi-cell coordination, network extensibility and energy efficiency.

SNS Research estimates that global investments on small cells, carrier Wi-Fi, C-RAN and DAS will reach more than \$15 Billion by the end of 2017, as mobile operators remain committed to tackle the continued growth of mobile data traffic and evolving coverage requirements. At present, the HetNet market is facing a paradigm shift with multiple advancements ranging from small cell virtualization and neutral hosting to the adoption of unlicensed and shared spectrum. In conjunction with 5G and LTE Advanced network rollouts, these advancements will fuel the market to grow at a CAGR of over 18% between 2017 and 2020.

The “HetNet Ecosystem (Small Cells, Carrier Wi-Fi, C-RAN & DAS): 2017 – 2030 –

“Opportunities, Challenges, Strategies & Forecasts” report presents an in-depth assessment of the HetNet ecosystem including enabling technologies, key trends, market drivers, challenges, standardization, regulatory landscape, deployment models, use cases, vertical markets, service provider case studies, opportunities, future roadmap, value chain, ecosystem player profiles and strategies. The report also presents forecasts for HetNet infrastructure investments from 2017 till 2030. The forecasts cover 6 individual submarkets and 6 regions.

The report comes with an associated Excel datasheet suite covering quantitative data from all numeric forecasts presented in the report.

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- 11.48 Kleos

- 11.49 Lemko Corporation
- 11.50 LGS Innovations
- 11.51 Luminare Wireless
- 11.52 Mavenir Systems
- 11.53 MitraStar Technology Corporation
- 11.54 Moseley Associates
- 11.55 Netas
- 11.56 New Postcom Equipment
- 11.57 NewNet Mobile Communications
- 11.58 NuRAN Wireless
- 11.59 Oceus Networks
- 11.60 Omoco
- 11.61 OpenCell
- 11.62 Panda Electronics Group
- 11.63 Parallel Wireless
- 11.64 Phluido
- 11.65 PMN (Private Mobile Networks)
- 11.66 Polaris Networks
- 11.67 Potevio
- 11.68 Quanta Computer
- 11.69 Qucell
- 11.70 Quortus
- 11.71 Range Networks
- 11.72 Redline Communications
- 11.73 Sagemcom
- 11.74 Samji Electronics
- 11.75 SerComm Corporation
- 11.76 SiRRAN Communications
- 11.77 Sistelbanda
- 11.78 SITRONICS
- 11.79 SK Telesys
- 11.80 Sonus Networks
- 11.81 Sooktha
- 11.82 SpiderCloud Wireless
- 11.83 Star Solutions
- 11.84 Starry
- 11.85 Technicolor
- 11.86 Tecom
- 11.87 Tecore Networks

- 11.88 TEKTELIC Communications
- 11.89 Telrad Networks
- 11.90 Telum
- 11.91 Tropico
- 11.92 Vanu
- 11.93 VNL (Vihaan Networks Limited)
- 11.94 WNC (Wistron NeWeb Corporation)
- 11.95 WTL (World Telecom Labs)
- 11.96 Wyttec International
- 11.97 Z-Com

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- 12.1 AAS (Amphenol Antenna Solutions)
- 12.2 Ace Technologies Corporation
- 12.3 AceAxis
- 12.4 ACOME
- 12.5 ADRF (Advanced RF Technologies)
- 12.6 Alpha Wireless
- 12.7 American Tower Corporation
- 12.8 Anertai Communications
- 12.9 Arqiva
- 12.10 Bird Technologies
- 12.11 Black Box Corporation
- 12.12 BlueWaveTel
- 12.13 Boomsense/Bangxun Technology
- 12.14 BTI Wireless
- 12.15 CCI (Communication Components, Inc.)
- 12.16 CCI Systems
- 12.17 Cellcomm Solutions
- 12.18 CellMax Technologies
- 12.19 Cellnex Telecom
- 12.20 Cobham Wireless
- 12.21 Comba Telecom
- 12.22 CommScope
- 12.23 Comtech Korea
- 12.24 Corning
- 12.25 Crown Castle International Corporation

- 12.26 Dali Wireless
- 12.27 DENGYO (Nihon Dengyo Kosaku)
- 12.28 DYNE TECH
- 12.29 Eahison Communication
- 12.30 Ethertronics
- 12.31 ExteNet Systems
- 12.32 Filtronic
- 12.33 Foshan Anderson Communication Equipment
- 12.34 Foxcom
- 12.35 Frog Cellsat
- 12.36 Fujian Helios Technologies
- 12.37 Galtronics Corporation
- 12.38 Gamma Nu
- 12.39 Goodman Networks
- 12.40 GRENTECH
- 12.41 Hansen Technology
- 12.42 Hefei Maniron Electronic and Technology
- 12.43 Hilinks Technology
- 12.44 HUBER+SUHNER
- 12.45 Impower Technology
- 12.46 Innertron
- 12.47 Jiangsu Hengxin Technology
- 12.48 Jiangsu Zhengkai Electronics Technology
- 12.49 JMA Wireless
- 12.50 JQL Electronics
- 12.51 Kaelus
- 12.52 Kathrein-Werke KG
- 12.53 Kisan Telecom
- 12.54 KMW
- 12.55 Maven Wireless
- 12.56 MER Group
- 12.57 Microlab
- 12.58 MTI (Microelectronics Technology, Inc.)
- 12.59 MTI Wireless Edge
- 12.60 Nextivity
- 12.61 OFS
- 12.62 OZC (Optical Zonu Corporation)
- 12.63 Panorama Antennas
- 12.64 Raycap

- 12.65 RF MORECOM KOREA
- 12.66 RF Window
- 12.67 RFS (Radio Frequency Systems)
- 12.68 Rosenberger
- 12.69 R-TRON
- 12.70 Seontech
- 12.71 Shared Access
- 12.72 Shenzhen Huaptec
- 12.73 Shyam Telecom
- 12.74 Skybird Electronic Science & Technology
- 12.75 SOLiD
- 12.76 Sumitomo Electric Industries
- 12.77 Sunwave Solutions
- 12.78 Suzhou Hexagon Communication Technologies
- 12.79 Telnet Redes Inteligentes
- 12.80 TESSCO Technologies
- 12.81 Westell Technologies
- 12.82 Wevercomm
- 12.83 Wilson Electronics
- 12.84 Wuhan Fingu Electronic Technology
- 12.85 Wuhan Gewei Electronic Technologies
- 12.86 Zinwave

13 CHAPTER 13: CARRIER WI-FI SPECIALISTS

- 13.1 4ipnet
- 13.2 ABB
- 13.3 Accuris Networks
- 13.4 Aerohive Networks
- 13.5 Altai Technologies
- 13.6 Alvarion Technologies
- 13.7 Aptilo Networks
- 13.8 Aruba Networks
- 13.9 Autelan
- 13.10 BandwidthX
- 13.11 Browan Communications
- 13.12 BSG Wireless
- 13.13 Carnegie Technologies
- 13.14 D-Link Corporation

- 13.15 Edgewater Wireless Systems
- 13.16 Firetide
- 13.17 Fortinet
- 13.18 GoNet Systems
- 13.19 Handlink Technologies
- 13.20 Kyrio
- 13.21 LigoWave
- 13.22 Linksys
- 13.23 Mojo Networks
- 13.24 NETGEAR
- 13.25 Nomadix
- 13.26 Ruckus Wireless
- 13.27 Senao Networks
- 13.28 Smith Micro Software
- 13.29 Syniverse Technologies
- 13.30 TP-LINK Technologies
- 13.31 Tranzeo Wireless Technologies
- 13.32 TruConnect Technologies
- 13.33 Ubiquiti Networks
- 13.34 Zyxel Communications Corporation

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- 14.1 6WIND
- 14.2 Accedian Networks
- 14.3 Accelink Technologies Corporation
- 14.4 Accuver
- 14.5 ADI (Analog Devices Inc.)
- 14.6 ADLINK Technology
- 14.7 Advantech
- 14.8 Affarii Technologies
- 14.9 Airgain
- 14.10 AirHop Communications
- 14.11 Airrays
- 14.12 AKM (Asahi Kasei Microdevices Corporation)
- 14.13 Akoustis Technologies
- 14.14 ALBEDO Telecom
- 14.15 Allot Communications
- 14.16 Altran

- 14.17 Amarisoft
- 14.18 Amdocs
- 14.19 Anritsu Corporation
- 14.20 Aquantia Corporation
- 14.21 Aricent
- 14.22 ARM Holdings
- 14.23 Artesyn Embedded Technologies
- 14.24 Artiza Networks
- 14.25 Astellia
- 14.26 ASTRI (Hong Kong Applied Science and Technology Research Institute)
- 14.27 ATDI
- 14.28 Azcom Technology
- 14.29 Benetel
- 14.30 Blu Wireless Technology
- 14.31 Blue Danube Systems
- 14.32 BoostEdge
- 14.33 Broadcom
- 14.34 C Squared Systems
- 14.35 Cadence Design Systems
- 14.36 Cambridge Consultants
- 14.37 Cavium
- 14.38 CeedTec
- 14.39 CellMining
- 14.40 Cellwize Wireless Technologies
- 14.41 CelPlan Technologies
- 14.42 Celtro
- 14.43 CEVA
- 14.44 Clavister
- 14.45 Cohere Technologies
- 14.46 Coherent Logix
- 14.47 Collision Communications
- 14.48 Comcores
- 14.49 CommAgility
- 14.50 Creanord
- 14.51 D2 Technologies
- 14.52 Dell Technologies
- 14.53 DigitalGlobe
- 14.54 Direct Beam
- 14.55 eASIC Corporation

- 14.56 EDX Wireless
- 14.57 ENENSYS Technologies
- 14.58 Eoptolink Technology
- 14.59 Ercom
- 14.60 Ethernity Networks
- 14.61 ETRI (Electronics & Telecommunications Research Institute, South Korea)
- 14.62 EXFO
- 14.63 Expway
- 14.64 Faraday Technology Corporation
- 14.65 Federated Wireless
- 14.66 Finisar Corporation
- 14.67 Flash Networks
- 14.68 Flex Logix Technologies
- 14.69 Forsk
- 14.70 Fraunhofer FOKUS (Institute for Open Communication Systems)
- 14.71 Fraunhofer HHI (Heinrich Hertz Institute)
- 14.72 Furuno Electric
- 14.73 Galgus
- 14.74 GenXComm
- 14.75 GigaLight
- 14.76 GlobalFoundries
- 14.77 HCL Technologies
- 14.78 Hisense
- 14.79 HPE (Hewlett Packard Enterprise)
- 14.80 IBM Corporation
- 14.81 iBwave Solutions
- 14.82 IDT (Integrated Device Technology)
- 14.83 IM Technology
- 14.84 Imec International
- 14.85 Infineon Technologies
- 14.86 InfoVista
- 14.87 InnoLight Technology
- 14.88 Intel Corporation
- 14.89 InterDigital
- 14.90 IP Light
- 14.91 iPosi
- 14.92 IS-Wireless
- 14.93 ITRI (Industrial Technology Research Institute, Taiwan)
- 14.94 Juniper Networks

- 14.95 Keima
- 14.96 Keysight Technologies
- 14.97 Koonsys Radiocommunications
- 14.98 Kumu Networks
- 14.99 Lattice Semiconductor
- 14.100 Lime Microsystems
- 14.101 Linker Networks
- 14.102 Lumentum
- 14.103 LuxCarta
- 14.104 MACOM Technology Solutions Holdings
- 14.105 Maja Systems
- 14.106 Mathworks
- 14.107 Maxim Integrated
- 14.108 MaxLinear
- 14.109 Mellanox Technologies
- 14.110 Microsemi Corporation
- 14.111 Mitsubishi Electric Corporation
- 14.112 Mobiveil
- 14.113 Molex
- 14.114 Mosaik
- 14.115 Multiwave Sensors
- 14.116 N.A.T.
- 14.117 Nash Technologies
- 14.118 Netonomics
- 14.119 NETSCOUT Systems
- 14.120 NI (National Instruments)
- 14.121 Node-H
- 14.122 Nomor Research
- 14.123 NXP Semiconductors
- 14.124 Octasic
- 14.125 OE Solutions
- 14.126 Optulink
- 14.127 P.I. Works
- 14.128 Panasonic Corporation
- 14.129 Peraso Technologies
- 14.130 Plasma Antennas
- 14.131 Pletronics
- 14.132 Polystar
- 14.133 PRISMA Telecom Testing

- 14.134 Procera Networks
- 14.135 pureLiFi
- 14.136 Qorvo
- 14.137 Qualcomm
- 14.138 Qulsar
- 14.139 Qwilt
- 14.140 RADCOM
- 14.141 Radio Gigabit
- 14.142 Radisys Corporation
- 14.143 Rakon
- 14.144 Ranplan Wireless Network Design
- 14.145 Red Hat
- 14.146 RED Technologies
- 14.147 RF DSP
- 14.148 Rivada Networks
- 14.149 Rohde & Schwarz
- 14.150 Saguna Networks
- 14.151 SAI Technology
- 14.152 Sarokal Test Systems
- 14.153 SAT (Smart Antenna Technologies)
- 14.154 Sevis Systems
- 14.155 SevOne
- 14.156 Silicon Labs (Silicon Laboratories)
- 14.157 SIRADEL
- 14.158 Sivers IMA
- 14.159 Skyworks Solutions
- 14.160 Source Photonics
- 14.161 Space Data Corporation
- 14.162 SRS (Software Radio Systems)
- 14.163 STMicroelectronics
- 14.164 Tata Elxsi
- 14.165 Tech Mahindra
- 14.166 TEOCO Corporation
- 14.167 TI (Texas Instruments)
- 14.168 Tieto Corporation
- 14.169 TSMC (Taiwan Semiconductor Manufacturing Company)
- 14.170 TTP (The Technology Partnership)
- 14.171 Tulinx
- 14.172 U-blox

- 14.173 Vasona Networks
- 14.174 Vectron International
- 14.175 Vencore Labs
- 14.176 Viavi Solutions
- 14.177 Virtuosys
- 14.178 VMware
- 14.179 WiPro
- 14.180 Wireless Telecom Group
- 14.181 WiSig Networks
- 14.182 XCellAir
- 14.183 Xelic
- 14.184 Xilinx

15 CHAPTER 15: MOBILE BACKHAUL & FRONTHAUL SOLUTION PROVIDERS

- 15.1 3Roam
- 15.2 4RF
- 15.3 Actelis Networks
- 15.4 Actiontec Electronics
- 15.5 Actus Networks
- 15.6 ADTRAN
- 15.7 ADVA Optical Networking
- 15.8 Advantech Wireless
- 15.9 ALAXALA Networks Corporation
- 15.10 Albis-Elcon
- 15.11 ALCOMA
- 15.12 Allied Data Technologies
- 15.13 Allied Telesis
- 15.14 APRESIA Systems
- 15.15 ARRIS International
- 15.16 Avanti Communications Group
- 15.17 Aviat Networks
- 15.18 AVM (AVM Computersysteme Vertriebs)
- 15.19 BluWan
- 15.20 BridgeWave Communications
- 15.21 CableFree (Wireless Excellence)
- 15.22 Calix
- 15.23 Cambium Networks
- 15.24 Canoga Perkins Corporation

- 15.25 Carlson Wireless Technologies
- 15.26 CarrierComm
- 15.27 CBNL (Cambridge Broadband Networks Ltd.)
- 15.28 CCS (Cambridge Communication Systems)
- 15.29 Ceragon Networks
- 15.30 Cielo Networks
- 15.31 Ciena Corporation
- 15.32 Comtech EF Data Corporation
- 15.33 Comtrend Corporation
- 15.34 Corecess
- 15.35 Coriant
- 15.36 DASAN Zhong Solutions
- 15.37 DragonWave
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- 15.51 HFR
- 15.52 Huahuan
- 15.53 Hughes Network Systems
- 15.54 HXI
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- 15.58 Inmarsat
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- 15.64 Ligado Networks
- 15.65 LightPointe Communications
- 15.66 Lindsay Broadband
- 15.67 Loea Corporation
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- 15.72 Nexcomm Systems
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- 15.76 OneWeb
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- 15.78 Polewall
- 15.79 Positron
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- 15.82 RAD Data Communications
- 15.83 RADWIN
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- 15.85 REMEC Broadband Wireless Networks
- 15.86 SAF Tehnika
- 15.87 SES
- 15.88 Shyam Networks
- 15.89 SIAE Microelectronica
- 15.90 Siklu Communication
- 15.91 SkyFiber
- 15.92 SMC Networks
- 15.93 Solectek Corporation
- 15.94 Spectronite
- 15.95 Star Microwave
- 15.96 Tarana Wireless
- 15.97 Telco Systems
- 15.98 Tellion
- 15.99 Tllumat
- 15.100 Telsey
- 15.101 Thuraya Telecommunications Company
- 15.102 Tilgin

- 15.103 Trango Systems
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- 15.106 UTStarcom
- 15.107 ViaSat
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LIST OF COMPANIES MENTIONED

3GPP (3rd Generation Partnership Project)

3GPP2 (3rd Generation Partnership Project 2)

3Roam

4ipnet

4RF

6Harmonics
6WIND
AAS (Amphenol Antenna Solutions)
ABB
Accedian Networks
Accelink Technologies Corporation
Accelleran
Accuris Networks
Accuver
Ace Technologies Corporation
AceAxis
ACOME
Actelis Networks
Actiontec Electronics
Actus Networks
Adax
ADB
ADI (Analog Devices Inc.)
ADLINK Technology
ADRF (Advanced RF Technologies)
ADTRAN
ADVA Optical Networking
Advantech
Advantech Wireless
Aerohive Networks
AeroMobile
Affarii Technologies
Affirmed Networks
Agema Systems
Airgain
AirHop Communications
Air-Lynx
Airrays
Airspan Networks
AKM (Asahi Kasei Microdevices Corporation)
Akoustis Technologies
ALAXALA Networks Corporation
ALBEDO Telecom
Albis-Elcon

ALCOMA
Allied Data Technologies
Allied Telesis
Allot Communications
Alpha Networks
Alpha Wireless
Alphabet
Altai Technologies
Altiostar Networks
Altran
Alvarion Technologies
Amarisoft
Amdocs
America Movil Group
American Tower Corporation
Anertai Communications
Anritsu Corporation
APRESIA Systems
Aptilo Networks
Aquantia Corporation
Arcadyan Technology Corporation
Argela
ARIB (Association of Radio Industries and Businesses, Japan)
Aricent
ARM Holdings
Arqiva
ARRIS International
Artemis Networks
Artesyn Embedded Technologies
Artiza Networks
Aruba Networks
Aselan
Askey Computer Corporation
ASOCS
Astellia
ASTRI (Hong Kong Applied Science and Technology Research Institute)
AT&T
ATDI
Athonet

ATIS (U.S. Alliance for Telecommunications Industry Solutions)

AttoCore

Autelan

Avanti Communications Group

Aviat Networks

AVM (AVM Computersysteme Vertriebs)

Axiata Group

Axxcelera Broadband Wireless

Azcom Technology

Baicells Technologies

BandwidthX

BATM Advanced Communications

Baylin Technologies

Beeline

Belkin International

Benetel

Bharti Airtel

Bird Technologies

Black Box Corporation

BLiNQ Networks

Blu Wireless Technology

Blue Danube Systems

BlueWaveTel

BluWan

Boingo Wireless

Boomsense/Bangxun Technology

BoostEdge

BridgeWave Communications

Broadband Forum

Broadcom

Brocade Communications Systems

Browan Communications

BSG Wireless

BT Group

BTI Wireless

C Squared Systems

CableFree (Wireless Excellence)

CableLabs

Cadence Design Systems

Calix
Cambium Networks
Cambridge Consultants
Canoga Perkins Corporation
Carlson Wireless Technologies
Carnegie Technologies
CarrierComm
Casa Systems
Cavium
CBNL (Cambridge Broadband Networks Ltd.)
CBRS Alliance
CCA (Competitive Carriers Association)
CCI (Communication Components, Inc.)
CCI (Competitive Companies, Inc.)
CCI Systems
CCN (Cirrus Core Networks)
CCS (Cambridge Communication Systems)
CCSA (China Communications Standards Association)
CeedTec
Cellcom (New-Cell)
Cellcomm Solutions
CellMax Technologies
CellMining
Cellnex Telecom
Cellular One
Cellwize Wireless Technologies
cellXica
CelPlan Technologies
Celtro
Ceragon Networks
CEVA
China Mobile
China Telecom
China Unicom
Chunghwa Telecom
Cielo Networks
Ciena Corporation
Cisco Systems
Clavister

ClearSky Technologies
Cloudberry Mobile
CND (Core Network Dynamics)
Cobham Wireless
Cohere Technologies
Coherent Logix
Collinear Networks
Collision Communications
Colt Technology Services Group
Comba Telecom
Comcores
CommAgility
CommScope
Comtech EF Data Corporation
Comtech Korea
Comtech Telecommunications Corporation
Comtrend Corporation
Contela
Corecess
Coriant
Corning
Cox Communications
CPqD (Center for Research and Development in Telecommunications, Brazil)
Creanord
Crown Castle International Corporation
CS Corporation
CTIA
D2 Technologies
Dali Wireless
DASAN Zhone Solutions
Datang Mobile
Datang Telecom
Dell Technologies
Delta Electronics
DENGYO (Nihon Dengyo Kosaku)
DigitalGlobe
Direct Beam
D-Link Corporation
DragonWave

Druid Software
DSA (Dynamic Spectrum Alliance)
DT (Deutsche Telekom)
DYNE TECH
Eahison Communication
eASIC Corporation
E-Band Communications
EBlink
EchoStar Corporation
ECI Telecom
Edgewater Wireless Systems
EDX Wireless
EION Wireless
Ekinops
ELVA-1
Endaga
ENENSYS Technologies
Eoptolink Technology
Ercom
Ericsson
Ethernity Networks
Ethertronics
ETRI (Electronics & Telecommunications Research Institute, South Korea)
ETSI (European Telecommunications Standards Institute)
Eutelsat Communications
EVOLVE
Exalt Wireless
EXFO
Expeto Wireless
Expway
ExteNet Systems
Extreme Networks
Facebook
Fairwaves
Faraday Technology Corporation
FastBack Networks
FCC (U.S. Federal Communications Commission)
Federated Wireless
FiberHome Technologies

FibroLan
Filtronic
Finisar Corporation
Firetide
Flash Networks
Flex Logix Technologies
Fon
Forsk
Fortinet
Foshan Anderson Communication Equipment
Foxcom
Fraunhofer FOKUS (Institute for Open Communication Systems)
Fraunhofer HHI (Heinrich Hertz Institute)
Frog Cellsat
Fujian Helios Technologies
Fujian Sunnada Network Technology
Fujitsu
Furukawa Electric Group
Furuno Electric
Galgus
Galtronics Corporation
Gamma Nu
GCI (General Communication, Inc.)
Gemtek Technology
GENBAND
General Dynamics Mission Systems
Genmix Technology
GenXComm
GigaLight
GIKO GROUP Telecomunicaciones
Gilat Satellite Networks
Global Invacom Group
GlobalFoundries
GoNet Systems
Goodman Networks
Google
GRENTECH
GSMA
GTI

Guangzhou Iplook Technologies
GWT (Global Wireless Technologies)
Handlink Technologies
Hansen Technology
Harris Corporation
HCL Technologies
Hefei Maniron Electronic and Technology
HetNet Forum
HFR
Hilinks Technology
Hisense
Hitachi
HPE (Hewlett Packard Enterprise)
Huahuan
Huawei
HUBER+SUHNER
Hughes Network Systems
HXI
IBM Corporation
iBwave Solutions
IDT (Integrated Device Technology)
IDY Corporation
IEEE (Institute of Electrical and Electronics Engineers)
IM Technology
Imec International
Impower Technology
InCoax
Infineon Technologies
Infinera
InfiNet Wireless
Infinite Electronics
InfoVista
Inmarsat
Innertron
InnoLight Technology
InnoWireless
Intel Corporation
Intelsat
InterDigital

Intracom Telecom
IP Light
ip.access
IPITEK
iPosi
Iskratel
IS-Wireless
ITRI (Industrial Technology Research Institute, Taiwan)
ITU (International Telecommunications Union)
Jiangsu Hengxin Technology
Jiangsu Zhengkai Electronics Technology
JMA Wireless
JQL Electronics
JRC (Japan Radio Company)
Juni Global
Juniper Networks
Kaelus
Kathrein-Werke KG
KDDI Corporation
Keima
KEYMILE
Keysight Technologies
Kisan Telecom
Kleos
KMW
Knowles Corporation
Koonsys Radiocommunications
KPN
KT Corporation
Kumu Networks
Kyrio
Lattice Semiconductor
Lemko Corporation
LG Uplus
LGS Innovations
Ligado Networks
LightPointe Communications
LigoWave
Lime Microsystems

Lindsay Broadband
Linker Networks
Linksys
Lockheed Martin Corporation
Loea Corporation
LTE-U Forum
Lumentum
Luminate Wireless
Luminet
LuxCarta
MACOM Technology Solutions Holdings
Maja Systems
Mathworks
Maven Wireless
Mavenir Systems
MAX4G
Maxim Integrated
MaxLinear
McWane
MDG (Mobility Development Group)
MEF (Metro Ethernet Forum)
MegaFon
Mellanox Technologies
MER Group
Microlab
Microsemi Corporation
Microwave Networks
MIMOon
MIMOftech
MitraStar Technology Corporation
Mitsubishi Electric Corporation
Mitsubishi Group
Mobiveil
Mojo Networks
Molex
Mosaik
Moseley Associates
MRV Communications
MTI (Microelectronics Technology, Inc.)

MTI Wireless Edge
MTS (Mobile TeleSystems)
MulteFire Alliance
Multiwave Sensors
N.A.T.
Nash Technologies
NEC Corporation
Netas
NETGEAR
Netonomics
NETSCOUT Systems
New Postcom Equipment
NewNet Mobile Communications
Nexcomm Systems
Nextivity
NexxCom Wireless
NGMN (Next Generation Mobile Networks) Alliance
NI (National Instruments)
Node-H
Nokia
Nokia Networks
Nokia Technologies
Nomadix
Nomor Research
NTT DoCoMo
NuRAN Wireless
Nutaq Innovation
NXP Semiconductors
O3b Networks
Oceus Networks
Octasic
OE Solutions
OFS
Omnitron Systems
Omoco
ON.Lab (Open Networking Lab)
OneAccess Networks
OneWeb
ONF (Open Networking Foundation)

OpenCell
Optulink
Optus
Orange
OSA (OpenAirInterface Software Alliance)
OZC (Optical Zonu Corporation)
P.I. Works
Panasonic Avionics Corporation
Panasonic Corporation
Panda Electronics Group
Panorama Antennas
Parallel Wireless
Patton Electronics
Peraso Technologies
Phluido
Plasma Antennas
Pletronics
PMN (Private Mobile Networks)
Polaris Networks
Polewall
Polystar
Positron
Potevio
PRISMA Telecom Testing
Procera Networks
Proxim Wireless Corporation
pureLiFi
Qorvo
Qualcomm
Quanta Computer
Qucell
Qulsar
Quortus
Qwilt
RACOM
RAD Data Communications
RADCOM
Radio Gigabit
Radisys Corporation

RADWIN
Raisecom
Rakon
Range Networks
Ranplan Wireless Network Design
Raycap
Rearden
Red Hat
RED Technologies
Redline Communications
REMEC Broadband Wireless Networks
Renaissance Electronics & Communications
RF DSP
RF MORECOM KOREA
RF Window
RFS (Radio Frequency Systems)
Rivada Networks
Rohde & Schwarz
Rosenberger
R-TRON
Ruckus Wireless
SAF Tehnika
Sagemcom
Saguna Networks
SAI Technology
Samji Electronics
Samsung Electronics
Samsung Group
Sarokal Test Systems
SAT (Smart Antenna Technologies)
SCF (Small Cell Forum)
SDP Telecom
Senao Networks
Seontech
SerComm Corporation
SES
Sevis Systems
SevOne
SFR

Shared Access
Shenzhen Huaptec
Shyam Group
Shyam Networks
Shyam Telecom
SIAE Microelectronica
Siklu Communication
Silicon Labs (Silicon Laboratories)
Singtel
SIRADEL
SiRRAN Communications
Sistelbanda
SITRONICS
Sivers IMA
SK Telecom
SK Telesys
Skybird Electronic Science & Technology
SkyFiber
Skyview Capital
Skyworks Solutions
SMC Networks
Smith Micro Software
SoftBank Group
Solectek Corporation
SOLiD
Sonus Networks
Sooktha
Source Photonics
Space Data Corporation
Spectronite
SpiderCloud Wireless
Sprint Corporation
SRS (Software Radio Systems)
ST Engineering (Singapore Technologies Engineering)
Star Microwave
Star Solutions
Starry
STMicroelectronics
Sumitomo Electric Industries

Sunwave Solutions
SuperCom
Suzhou Hexagon Communication Technologies
Syniverse Technologies
Tarana Wireless
Tata Elxsi
Tech Mahindra
Technicolor
Teco Group
Tecom
Tecore Networks
TEKTELIC Communications
Telco Systems
Telecom Italia Group
Telefonica Group
Telenor Group
Telia Company
Tellion
Tellumat
Telnet Redes Inteligentes
Telrad Networks
Telsey
Telstra
Telum
Telus Corporation
TEOCO Corporation
TESSCO Technologies
Thuraya Telecommunications Company
TI (Texas Instruments)
Tieto Corporation
Tilgin
TIM (Telecom Italia Mobile)
Towerstream Corporation
TP-LINK Technologies
Trango Systems
Transition Networks
Tranzeo Wireless Technologies
Tropico
TruConnect Technologies

TSDSI (Telecommunications Standards Development Society, India)
TSMC (Taiwan Semiconductor Manufacturing Company)
TTA (Telecommunications Technology Association, South Korea)
TTC (Telecommunication Technology Committee, Japan)
TTP (The Technology Partnership)
Tulinx
Turk Telekom
Ubiquiti Networks
Ubiquoss
U-blox
UNICOM Global
UTStarcom
Vanu
Vasona Networks
Vectron International
Vencore Labs
VEON
Verizon Communications
ViaSat
Viavi Solutions
Virgin Media
Virtuosys
VMware
VNL (Vihaan Networks Limited)
Vodafone Group
VT iDirect
VT Systems (Vision Technologies Systems)
Vubiq Networks
Wave1
Wavesight
WBA (Wireless Broadband Alliance)
Webpass
Westell Technologies
Wevercomm
WIA (Wireless Infrastructure Association)
Wi-Fi Alliance
WiFiForward
Wilson Electronics
WiMAX Forum

Wind Tre
WinnForum (Wireless Innovation Forum)
WiPro
Wireless Telecom Group
WiSig Networks
WNC (Wistron NeWeb Corporation)
WTL (World Telecom Labs)
Wuhan Fingu Electronic Technology
Wuhan Gewei Electronic Technologies
Wytec International
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