

Chipset architectures for 1.9GHz

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Development



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www.sequans.com

4G Semiconductor Innovation

Sequans Communications

An Overview

Sequans	A leading fabless 4G semiconductor vendor serving LTE and WIMAX device markets worldwide. Shipped over 15 Million chipsets to date. Over 250 employees worldwide.
History	Venture capital-backed operations began in 2004. IPO launched April 15, 2011 on NYSE: SQNS
Headquarters	Paris, France
Global Presence	HQ and main R&D in Paris; R&D centers in UK, Israel, Ukraine, employees in 11 countries Operations, sales, support in China, Taiwan, Japan, India, Korea, Singapore, Hong Kong, Israel, US
Technology	4G SoC solutions for handsets, embedded and external modems, CPE. 4G 'slim modem' architecture delivers low cost, low power, fast TTM and best-of-breed performance.
Market Position	Sequans no. 1 in 4G smart phones, estimated overall 35% market share in 2010 Provides one of the earliest available and most advanced TDD LTE solutions
Operator and Ecosystem Acceptance	Deployed in top WiMAX networks: Sprint, KDDI, KT, Yota, BSNL, Tata, PacketOne, UQC, ... Key customers: HTC, Huawei, ZTE, Gemtek, Ubee, Zyxel, Quanta, Accton, Alvarion, Sagemcom LTE chips targeting trials at China Mobile, Reliance, Airtel, Softbank, Clearwire, NBN, STC, Sprint... IOT Partnerships with: Ericsson, Huawei, ZTE, Alcatel Lucent, Nokia-Siemens Networks, Samsung

Mass-Market 4G Handsets and Tablets

A Sample of Mobile Devices Powered by Sequans 4G Technology



HTC Evo Shift
January, 2011
WiMAX + EVDO



HTC Evo 3D
June, 2011
WiMAX + EVDO



HTC Evo Design 4G
October, 2011
WiMAX + EVDO



HTC Evo 3D
October, 2011
WiMAX + EVDO



HTC Evo WiMAX
April, 2011
WiMAX + EVDO



HTC Evo 4G
June, 2010
WiMAX + EVDO



HTC Evo View 4G
June, 2011
WiMAX + EVDO



HTC Flyer 4G+
July, 2011
WiMAX + HSPA



HTC Evo 4G+
July, 2011
WiMAX + HSPA



Sharp 7" Tablet
December, 2011
WiMAX + EVDO

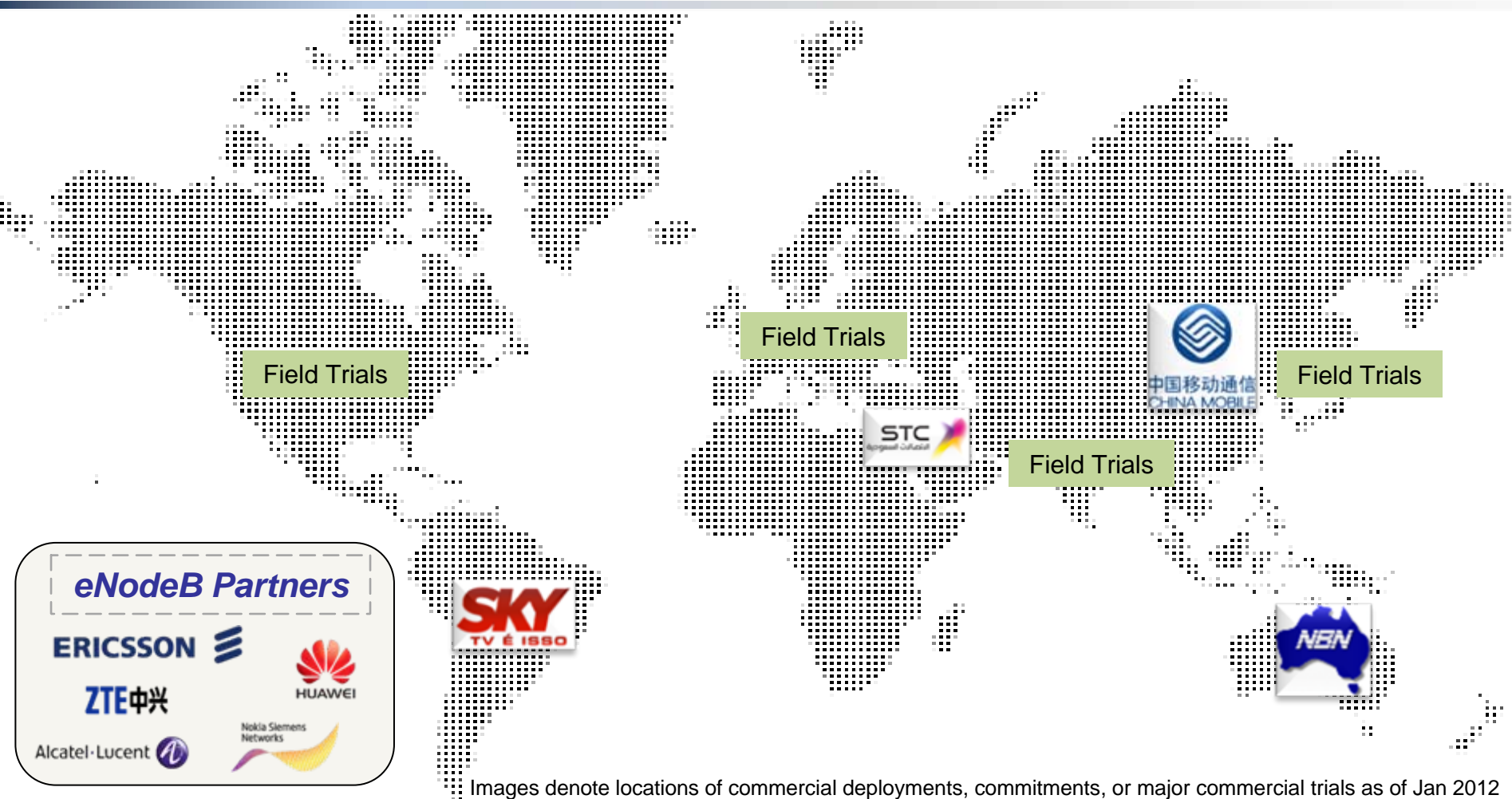


AAEON/Asus ETBW11AA
January, 2012
WiMAX + EVDO



Enabling Mass-Market 4G Globally

Sequans LTE: Global Acceptance



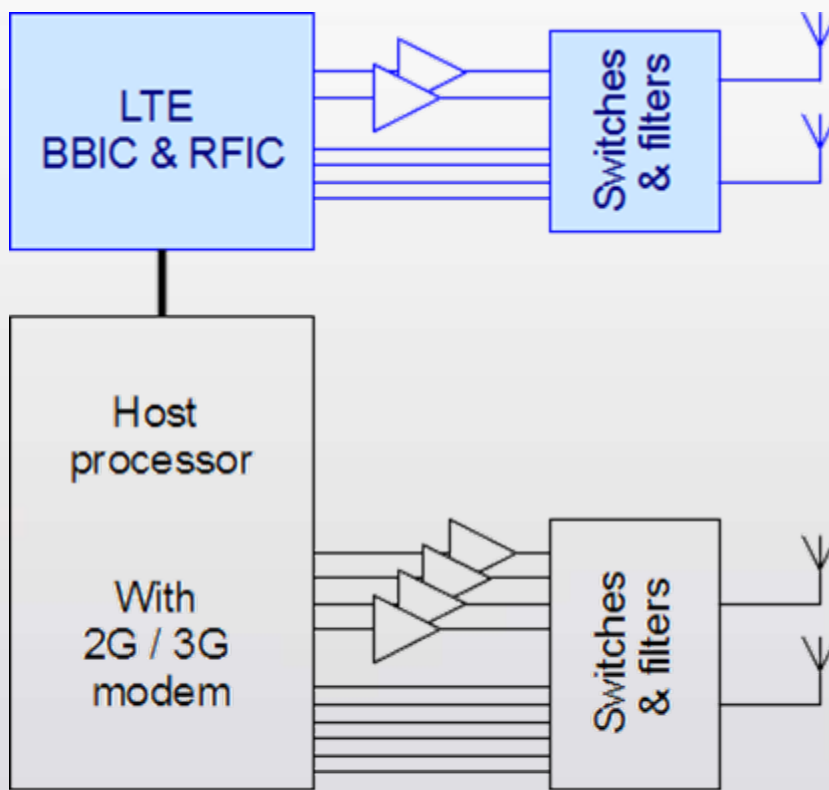
Images denote locations of commercial deployments, commitments, or major commercial trials as of Jan 2012

Introducing “Andromeda” and “Mont Blanc” Next-generation LTE Platforms



- **Leading-edge technology**
 - 3GPP Release 9 compliant
 - Category 4 throughput, up to 150Mbps downlink rate
 - Worldwide FDD and TDD band support
 - 40nm baseband design is power-, size- and cost-efficient
- **Andromeda LTE platform**
 - Designed for smartphones, tablets
 - Slim-modem design enables ultra low power, small form-factor
- **Mont Blanc LTE platform**
 - Designed for data devices
 - Data-friendly interfaces, integrated apps processor enables high performance, low-cost, power-efficient mobile hotspots, USB dongles, CPE

Slim Modem Architecture



LTE slim modem

- Low power
- Cost optimized
- Flexible in bands supported

Leading edge host processor

- With proven 2G / 3G modem
- Multi-band support for roaming

Sequans support for 1.9GHz

- **Sequans has been supporting CMCC for TD-LTE from early days**
 - Supported Shanghai World Expo in May 2010 with B38/B40 USB dongle
 - Completed MIIT Phase 1 testing
- **Sequans has entered into partnership with NationZ to address MIIT Phase 2 testing**
 - Solution based on NationZ Zi2010 RFIC
 - Addressing B38, B39 and B40
- **Sequans & NationZ will continue collaboration for future optimization of multi-band products (including 1.9GHz)**

Nationz LTE RFIC Roadmap

Advanced RF CMOS
Multi-Band, Multi-System
TD-LTE: B38,39,40
LTE FDD: B7



ZI2010

**Apr 2010, TD-LTE
RFIC, support**



ZI2010V2

**Aug 2011, support
TD-LTE/LTE FDD
TD-SCDMA: B34/39/40**



ZI2020

**3Q2012, 2/3/4G multi-band,
multi-system
TD-LTE/LTE FDD
TD-SCDMA
WCDMA
GSM/GPRS/EDGE**

2010

2011

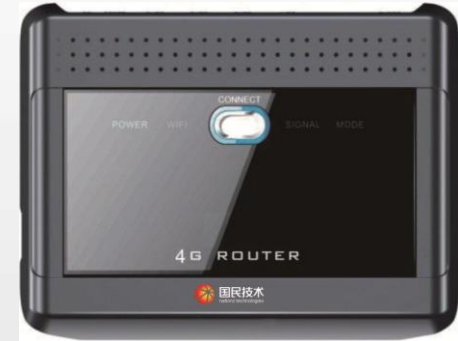
2012

Sequans offering at 1.9GHz, available in middle of 2012

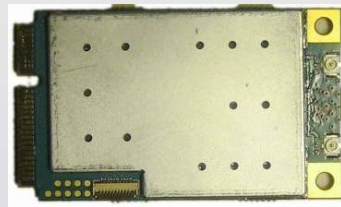
USB Dongle



Indoor CPE



Mini PCI-e Module



Mobile Router



- Sequans current LTE solutions
 - Enable the lowest cost
 - Deliver maximum performance
 - Consume minimal power
- Sequans has strategic investment in 1.9GHz band
 - Fully qualified solution
 - Numerous products available

