ROFS MICROSYSTEM

—The Best Partner of 4G/5G RF Filter Solution

Content

ROFS MICROSYSTEM(TIANJIN)CO,LTD.

ROFS MICROSYSTEM

Founded in 2011
Base in Tianjin

Total registered capital
￥177M

First FBAR Manufacturer in China

2011

Company Founded

2012

Successful pilot run for the first product

2013

Mass production for FBAR GPS chip

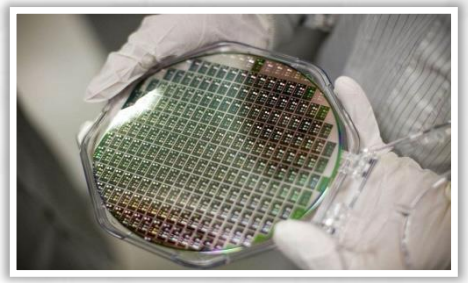
2014

New factory start construction

2015

Mass production for Wi-Fi/B40 filter chip over 10M pcs

2016



Mass production for B3/B7 product

2017

Tianjin 6 inch wafer line begin production

2018

Nanchang dual 6 inch wafer line begin production

Two Production Facility

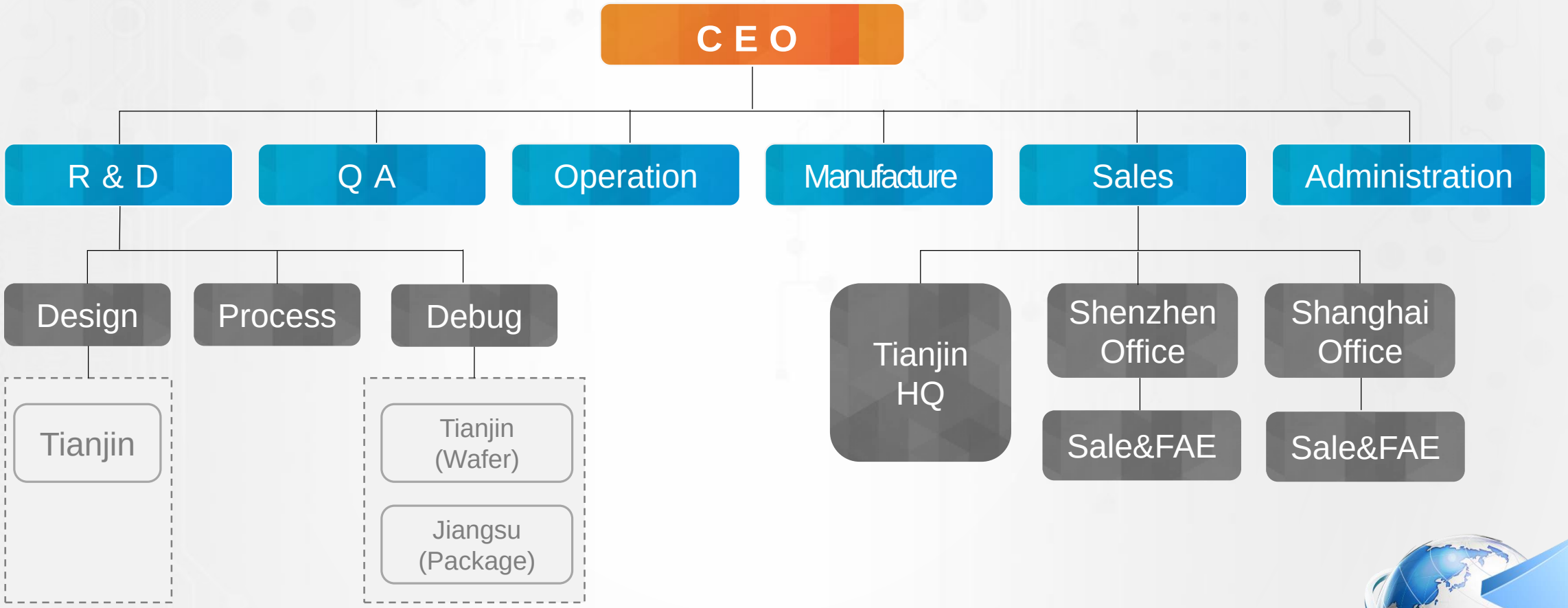
Tianjin Factory

Located in Economic and Technological Development Zone, of Tianjin. The total investment is 750 million RMB. There is one 6 inch production line and a 4 inch process research and development line. The plant and R & D center covers an area of 27 thousand square meters, and the monthly production capacity of the plant is 50M Pcs.

Nanchang Factory

Located in Nanchang Hi-tech Zone. The total investment is 2 billion RMB. There are two 6 inch production lines. The plant and R & D center covers an area of 50 thousand square meters, and the monthly production capacity of the plant is 150M Pcs. Mass production time will be in Q1~Q2 2019.

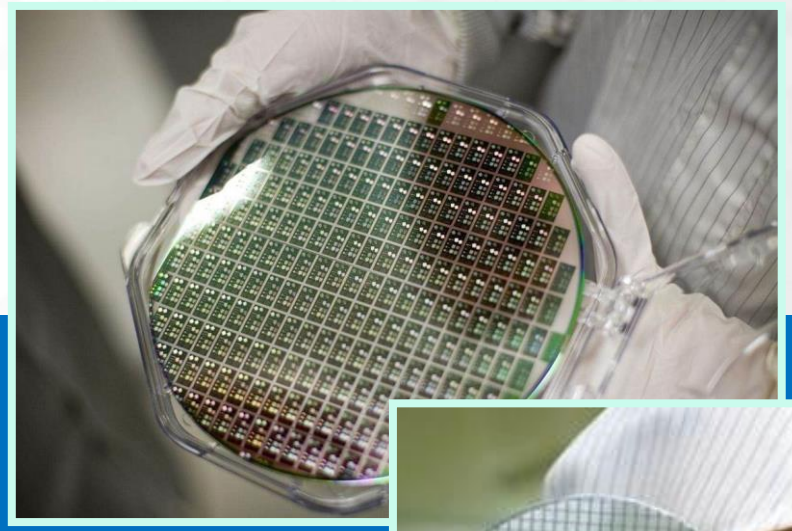
Company Structure



Key Technology

FBAR Technology

FBAR is a new generation solution of radio frequency filter, duplexer and multiplexer developed in recent years, which is widely used in wireless communication. FBAR RF filters using silicon substrate and Micro-Electro-Mechanical System (MEMS) processing are widely favored for their superior performance and small size.



Core Talent Team

- **1** National "thousand people plan" expert
- **4** Doctoral supervisor
- **15** PHD
- **46** Master

- One of the earliest teams to engage in FBAR research and industrialization in the world
- Focus on the field of radio frequency MEMS research for 17 years, including MEMS chip R & D and production, to grasp the complete independent intellectual property rights
- Years of working experience in famous high-tech companies, many years of product development, mass production experience
- Products developed have been adopted by world class mobile phone manufacturers
- More than 300 papers have been published at international conferences and periodicals

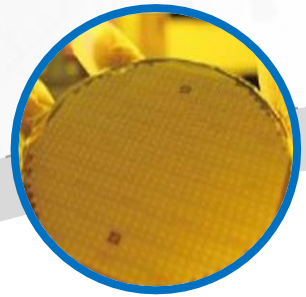
Patents

- **10 patents have been issued and authorized by United States Patent and Trademark Office (USPTO) in OCT. 2016**

- **Over 59 patents have been issued and authorized in China**
- **Patent over design, material, structure, process, package, test etc.**

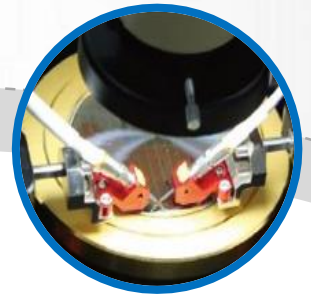
FBAR Device Manufacturing Process

FBAR Device Produce



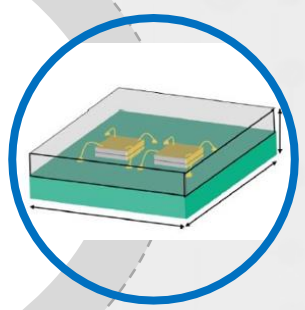
- Miniature package size
- Low insertion loss
- High out band rejection
- Excellent power capacity
- Low temperature drift coefficient
- Excellent ESD ability

Wafer Test



- Adapted to the radiation environment
- Reduce the volume of user products
- Extended call time
- Support more spectrum
- Suitable for the LTE era with close frequency bands
- Compatible with integrated circuit of CMOS process

Product design



Package

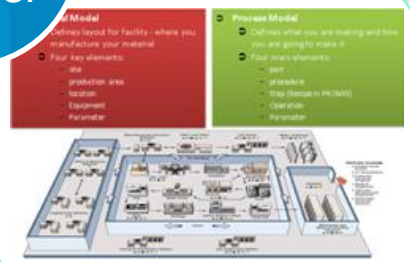
Screening

Inventory

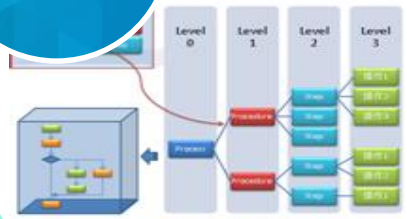
Manufacturing Management

Advanced manufacturing execution system, comprehensive management of product, process, equipment etc

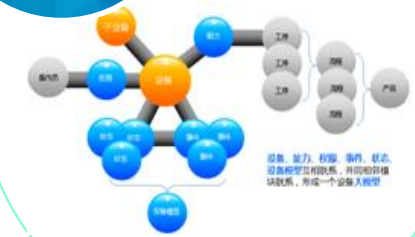
Factory Model



Process Model



Equipment Model

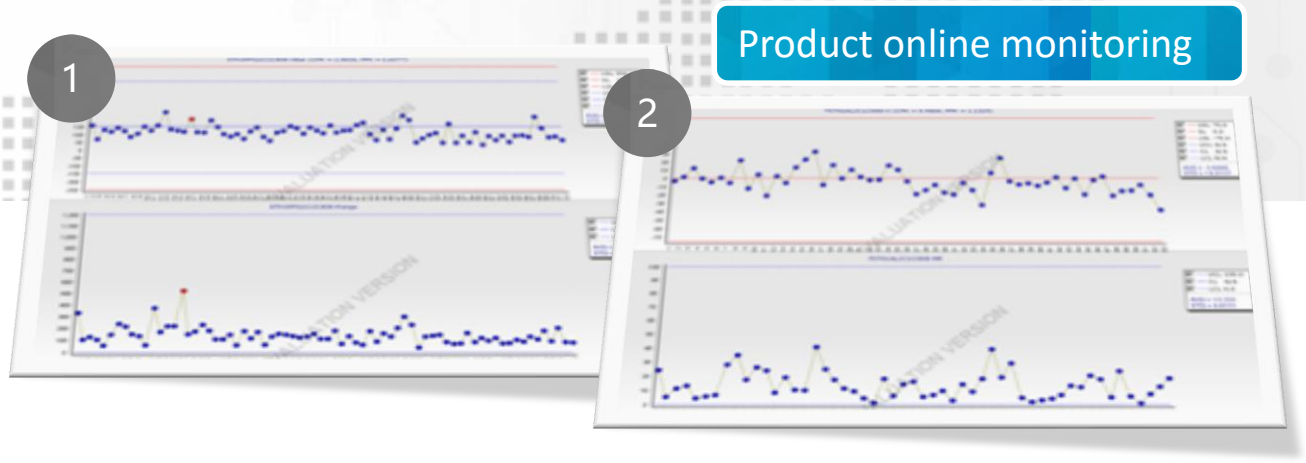


Data Model

Procedure Supervising

- From the product input to the output , each stage has perfect statistical process control, monitoring the product, process and equipment in real-time status and history

Ensure high yield rate



Product online monitoring

Preventive maintenance plan

Daily equipment checklist

Equipment Supervising

Anytime query:

- State of the equipment
- Equipment maintenance records
- The batch of equipment processed at that time

Ensure products consistency

Product History Supervising

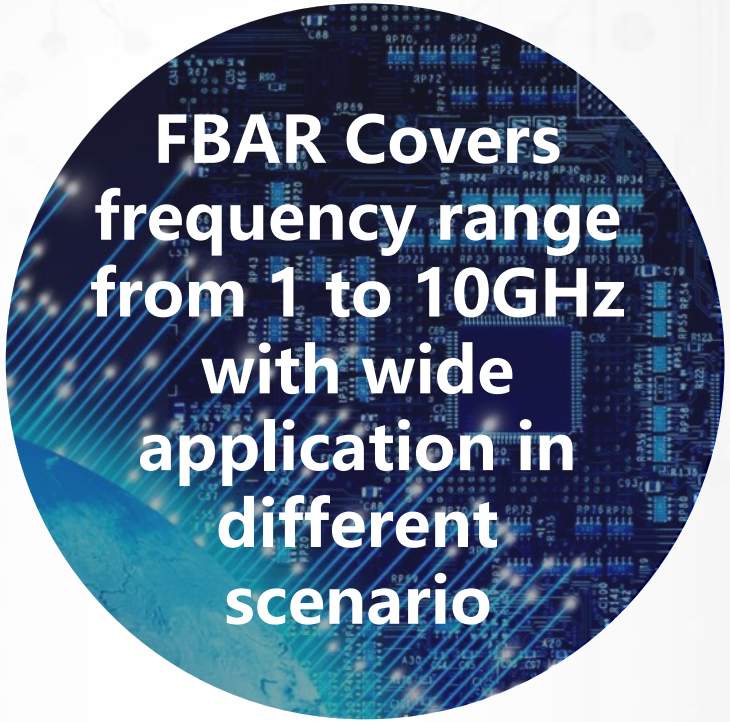
- Able to query the date, time, operator for each part of the product process

Ensure products traceability

Quality Certification

ISO9001 Certification acquired in 2014

Product Application



Cellphone

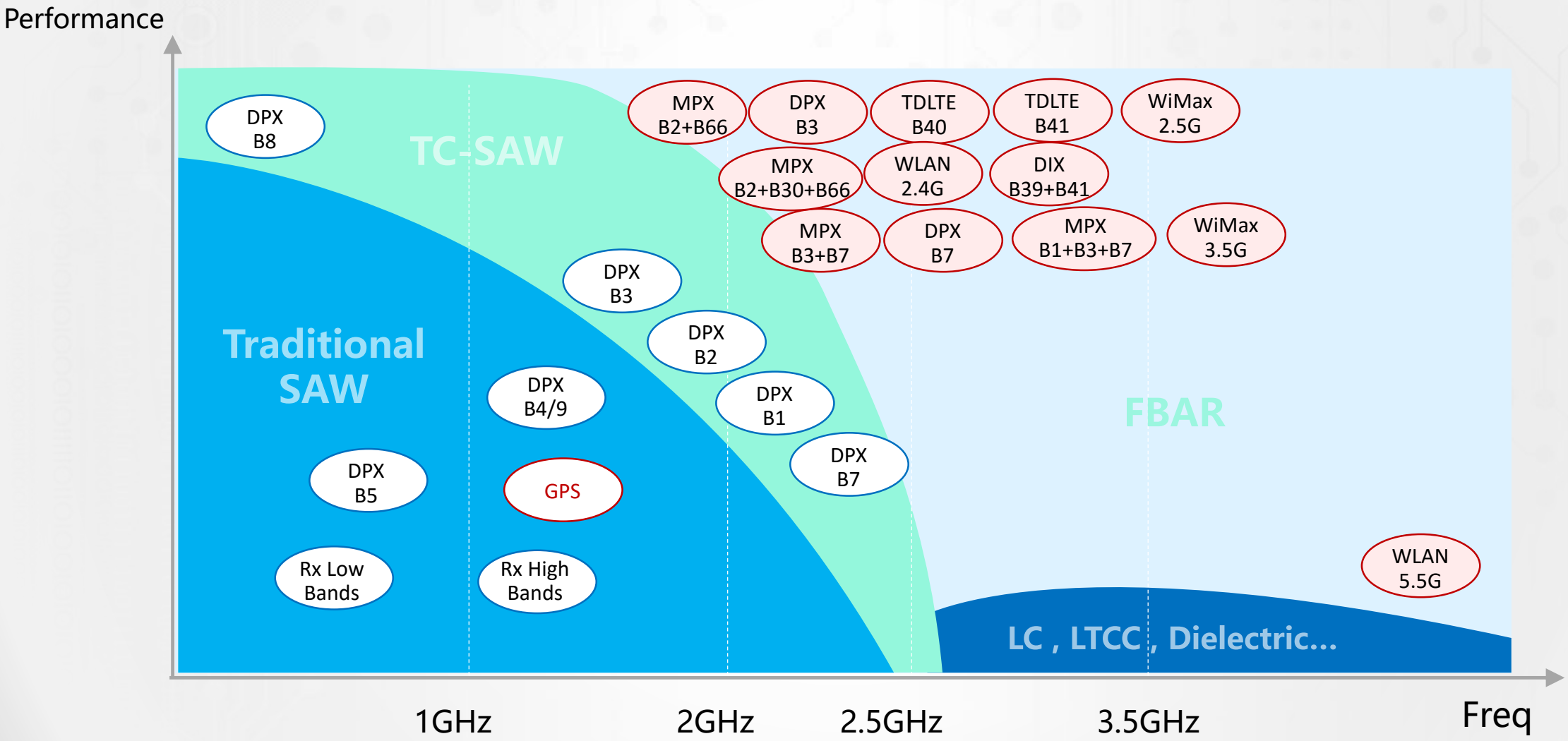
Base station

GPS

Special

WIFI & Bluetooth

FBAR Feature and Advantage



Product Roadmap

2013.7
First FBAR GPS chip production in China

2014.5
First Wi-Fi /B40 Filter production

2015.12
First Band 3 duplexer issued in China

2016.1
First Band 7 duplexer issued in China

2016.7
First Band1+3 multiplexer issued in China

2017.3
First Band 40 filter issued in China

2018
Wi-Fi G2 Filter
B40 HPUE Filter
Band3 G2 Duplexer
Band7 G2 Duplexer
B41 Full band Filter
B41 Narrow band Filter

2019
Band1 Duplexer
Band2 Duplexer
Band5 Duplexer
Band8 Duplexer
Band25 Duplexer
Band39+41N Diplexer
Band1+3 Multiplexer
Band25+66 Multiplexer
5G 3.5GHz Filter
N77/78/79 Filter

Partners


dji
LONGCHEER
MEIZU
SUNSEA AIOT
三旗通信 TRICHEER
步步高
TINNO
QUECTEL
FOXCONN
鼎智通讯 TopWise Communication Co.,Ltd.
WINGTECH PROFESSIONAL SOLUTIONS 闻泰科技股份有限公司
HQ HUAQIN
REACHENG 锐承通讯技术有限公司
海派通讯 Hipad Telecom
HCT hctmobile.com
HUIYE
vanzo
DEWAV
Fibocom 广和通
德明通讯 AsiaTelco
WEWINS
CK Telecom 西可通信
途强 TOUR RUN
uCloudlink
WATER WORLD
ZTE中兴


THANKS!