

Quectel Wireless Solutions

Company Overview

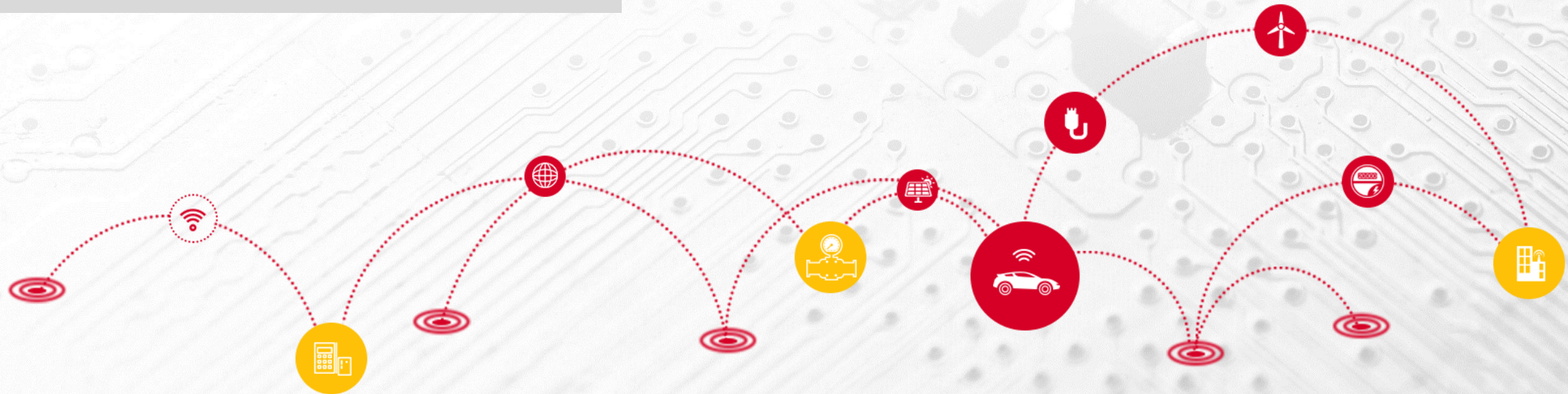
May, 2017

Quectel Overview

Product Portfolio

Technology

M2M Applications

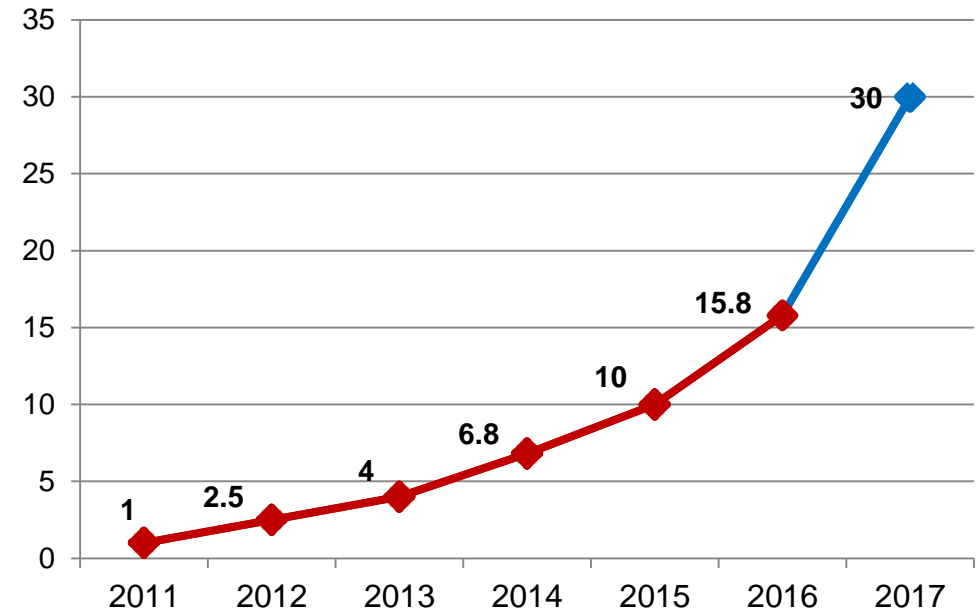


About Quectel



- Founded in October, 2010
- HQ in Shanghai, China. 30+ Sales Offices, 2 R&D Centers, 70+ Distributors Worldwide
- 450+ employees
- Monthly production capacity over **4 Mpcs**
- More than 2000 customers worldwide

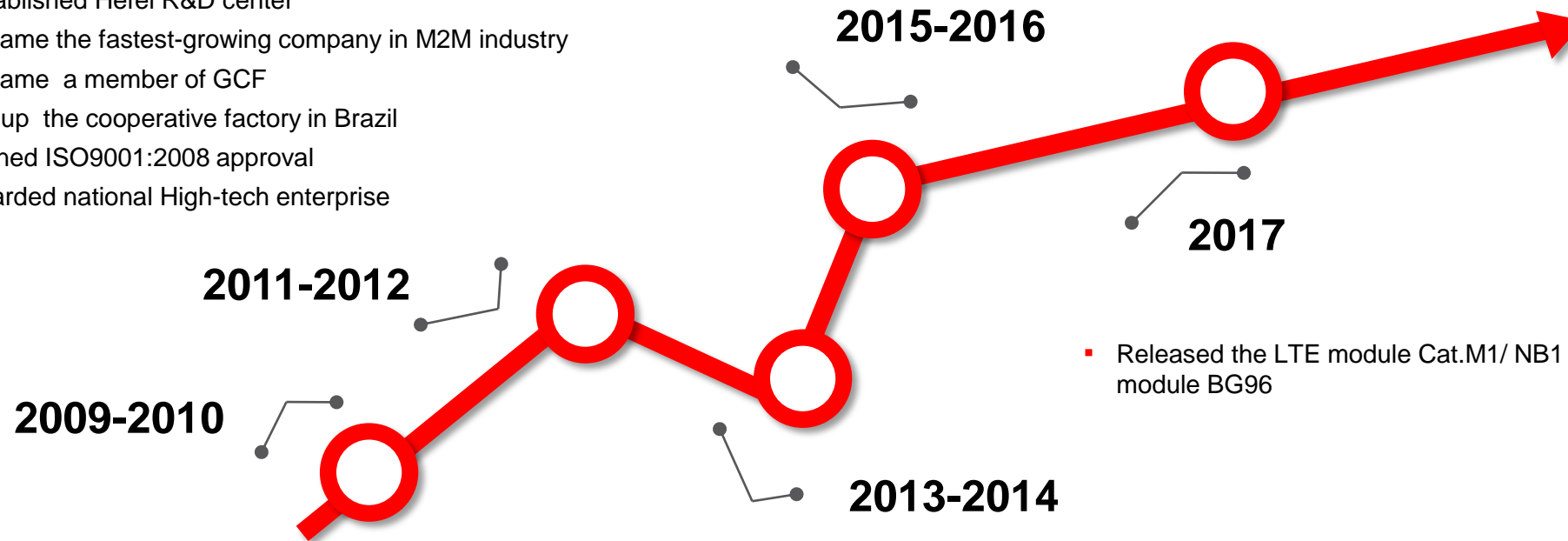
Shipment Growth (Mpcs)



History & Milestone

- Business expanded, HQ moved to new address
- Opened offices in Beijing and Fuzhou, China
- Opened offices in Latin America, Australia, Russia, India and Singapore
- Established Hefei R&D center
- Became the fastest-growing company in M2M industry
- Became a member of GCF
- Set up the cooperative factory in Brazil
- Earned ISO9001:2008 approval
- Awarded national High-tech enterprise

- Opened offices in UK, Hungary, Indonesia and Germany
- Became a member of GSMA association
- Launched oT/M2M optimized LTE EC21 and EC25 modules
- Released the revolutionary smart module SC20 and Cat.NB1 module BC95
- Opened offices in Korea, Israel, Turkey and Poland



- Founded in Shanghai
- The first GSM/GPRS Module M10 achieved mass production
- Established the complete and comprehensive national distribution system and primarily established the global distribution system
- Opened office in Shenzhen, China

- Expanded Hefei R&D center and Lab
- GSM/GPRS M95 module earned Vodafone approval
- Became the member of Shanghai IoT Association
- Earned ISO16949 approval
- Opened offices in North America, Brazil, Denmark, France, Poland and Taiwan
- UC20/UC15/UG95 3G Modules were Approved for AT&T Network

- Released the LTE module Cat.M1/ NB1 module BG96



Associate
Member

Global Presence



- 36 sales offices
- 70+ distributors

Service 2000+ customers
Modules are sold to
150+ countries

Europe

- Russia Moscow
- Poland Warsaw
- Denmark Copenhagen
- Germany Munich
- UK
- Romania
- Turkey Istanbul
- Italy Milan
- France Sophia Antipolis
- Spain Barcelona

Greater China

- Shanghai Headquarters
- Hefei R&D Center
- Shenzhen
- Guangzhou
- Beijing
- Fuzhou
- Chongqing
- Chengdu
- Qingdao
- Ningbo
- Hangzhou
- Taipei

North America

- United States
Phoenix, AZ
Orange County, CA

- Mexico

Shanghai HQ
Hefei R&D Center

Asia Pacific

- Israel Kfar Saba
- India Mumbai/ Bangalore/ Delhi
- Korea Seoul
- Vietnam
- Singapore
- Australia Sydney

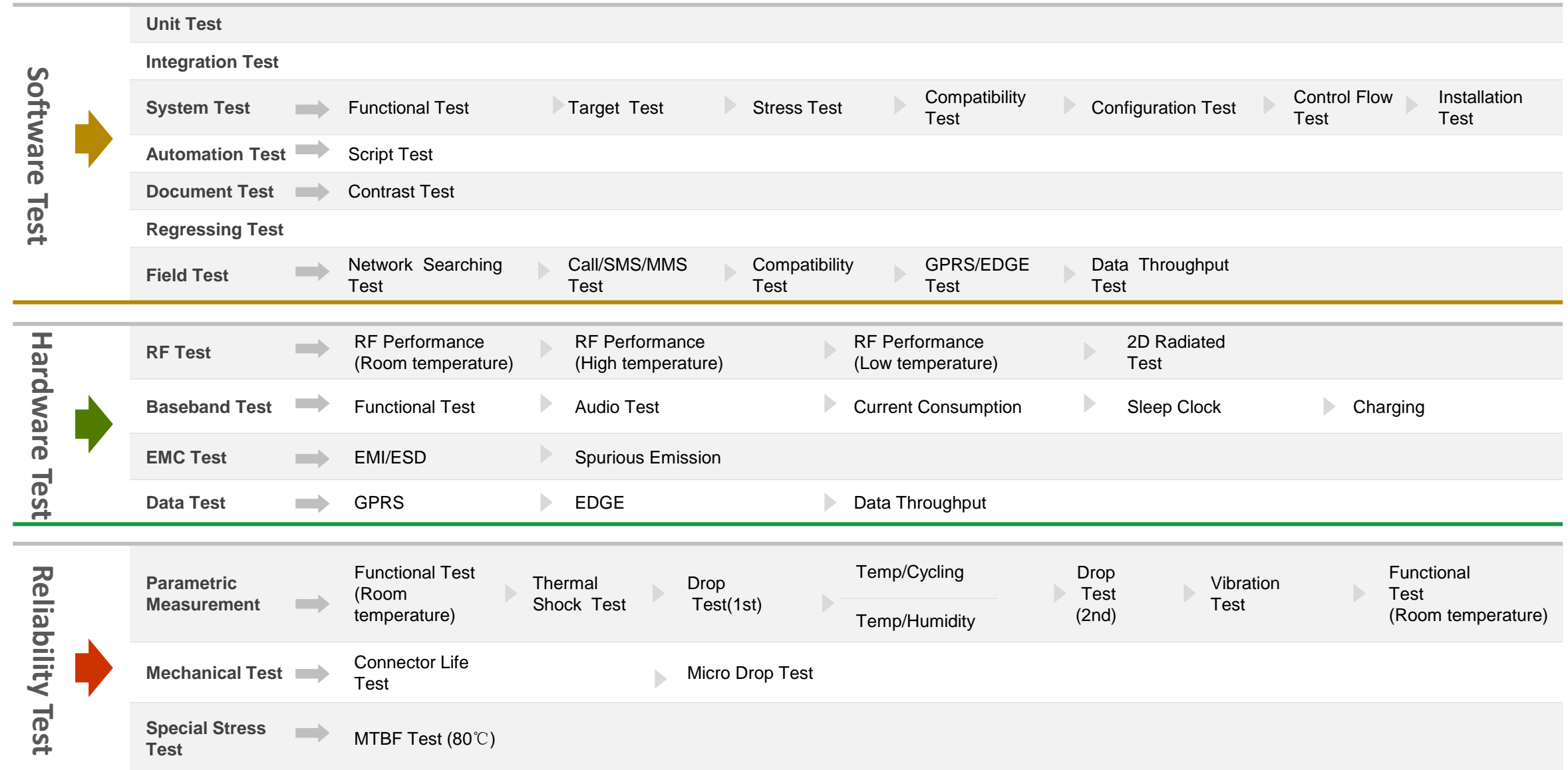
Latin America

- Brazil Sao Paulo
- Argentina Buenos Aires

Technology Partners and Certifications



R&D Quality Control



Test Environment



◀ CMU200 & Agilent DC Source & GPS Signal Generator CMW 500

Micro-drop Tester ▶



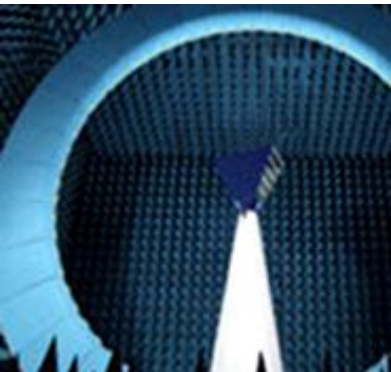
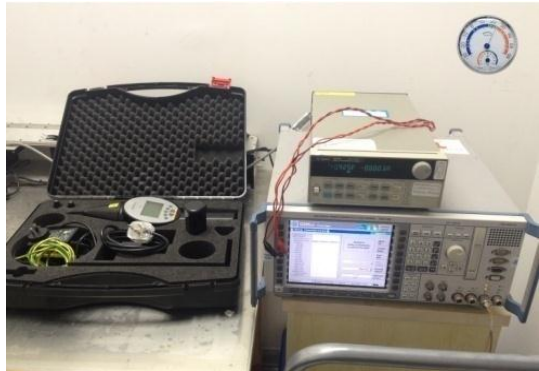
◀ Tumbling Barrel Tester

▶ Art. Mouth, Art. Ear, UPL & ACQUA System



◀ Anechoic Chamber for Audio

ESD Test System ▶



◀ Microwave Unreflected Chamber

Thermal Shock Chamber ▶

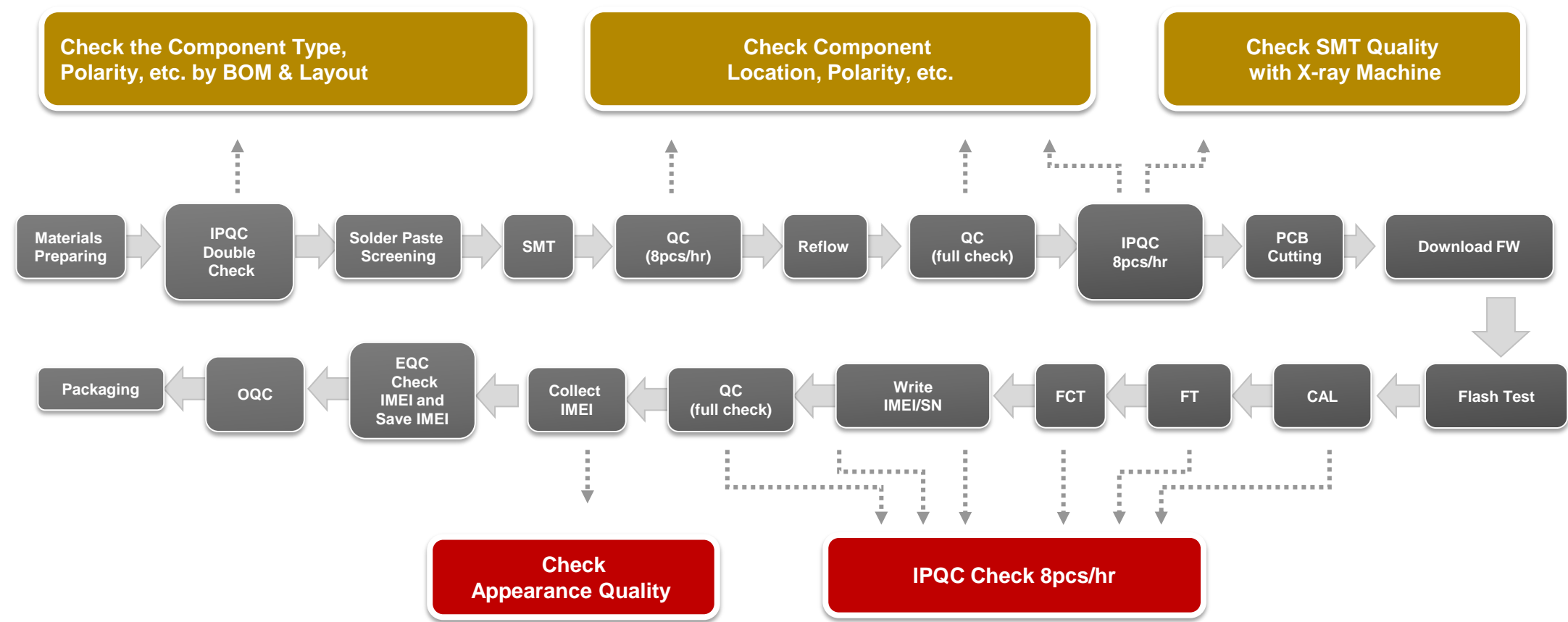


◀ High / Low Temp. & Humidity Chamber

Robot ▶



Manufacturing Quality Control



EMS Partners



Flextronics Suzhou, China

Quectel's modules are manufactured in the **ISO/TS16949**, **ISO14000** and **OHSAS18001** certified factories.



Serdia
Curitiba, Brazil



Qisda
Suzhou, China



Sintave
Dongguan, China

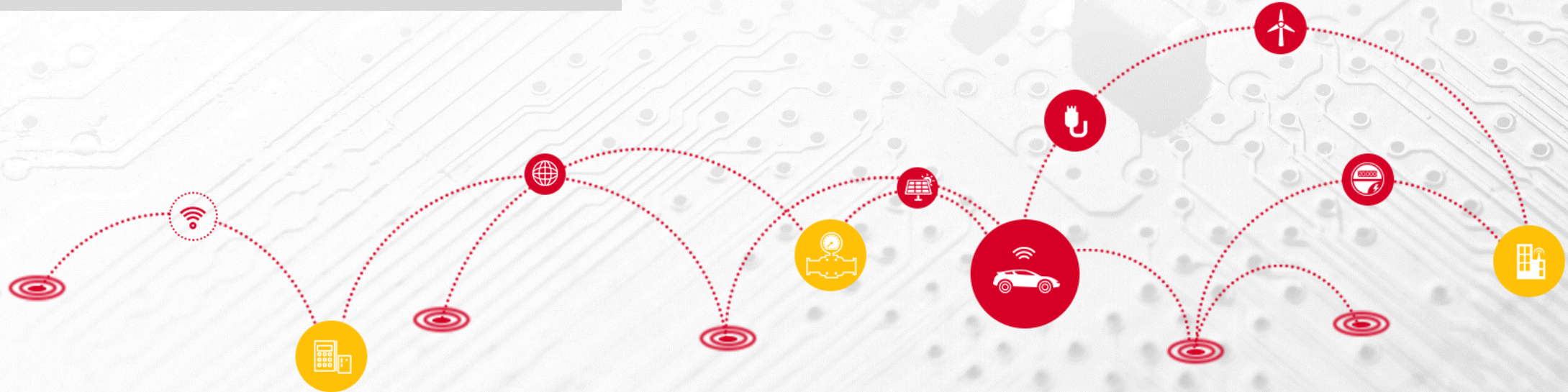
Quectel Overview

Product Portfolio

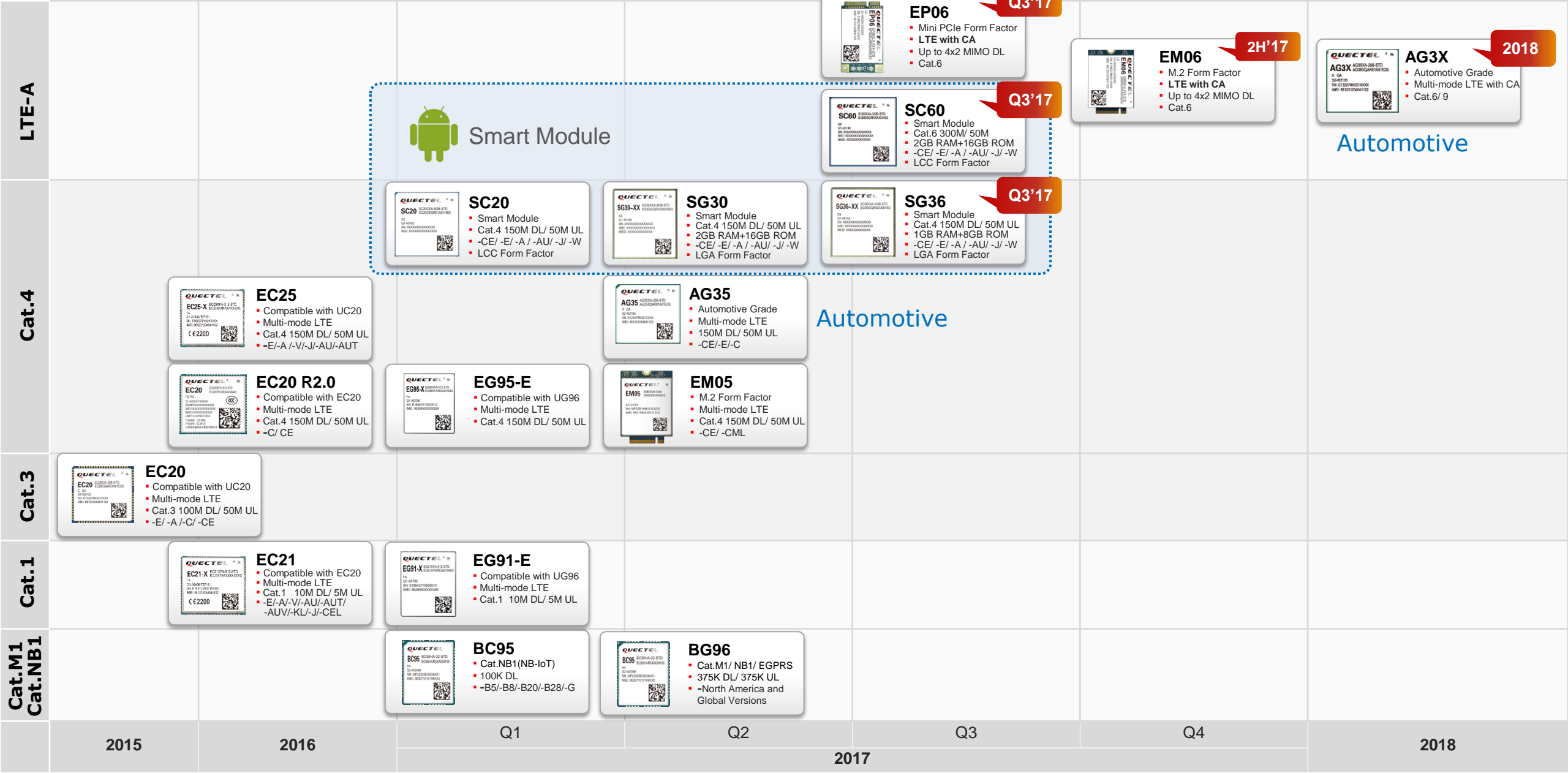
Technology

M2M Applications

QUECTEL[®]
Build a Smarter World



LTE Roadmap



Automotive

Automotive

LTE Module Portfolio

EC20 LTE Module



EC20 Mini PCIe

Max.100Mbps (DL)/ Max.50Mbps (UL)

EC20-E: B1/3/5/7/8/20 @FDD-LTE, B1/5/8 @WCDMA
850/900/1800/1900 @GSM
EC20-A: B2/4/5/12/17 @FDD-LTE,
B2/4/5 @WCDMA, 850/1900 @GSM
EC20-C: B1/3/8 @FDD-LTE, B38/39/40/41 @TDD-LTE
B1/8 @WCDMA, B34/39 @TD-SCDMA,
900/1800 @GSM
EC20-CE: B1/3 @FDD-LTE, B38/39/40/41 @TDD-LTE
B1 @WCDMA, B34/39 @TD-SCDMA,
800 @CDMA2000 1X/EVDO, 900/1800 @GSM

Dimensions: 32.0 × 29.0 × 2.4mm;

Temperature Range: -40°C ~ +85°C

Certifications: CCC/ CE/ NAL/ SRRC/ DoC (for Russia) / KC/
SKT/ NCC/ ICASA/ GCF/ KT*/ FCC/ ANATEL

EC21 LTE Module



EC21 Mini PCIe

Max.10Mbps (DL)/ Max.5Mbps (UL)

EC21-E: B1/3/5/7/8/20 @FDD-LTE,
B1/5/8 @WCDMA, B3/B8@GSM
EC21-A: B2/4/12@FDD-LTE, B2/4/5@WCDMA
EC21-V: B4/13@FDD-LTE
EC21-AU: B1/2/3/4/5/7/8/28@FDD LTE, B40@TDD LTE
B1/2/5/8@WCDMA, B2/3/5/8@GSM
EC21-AUV¹: B1/3/5/8/28@FDD LTE, B1/5/8@WCDMA
EC21-AUT¹: B1/3/5/7/28@FDD LTE, B1/5@WCDMA
EC21-J: B1/3/8/18/19/26@FDD LTE
EC21-KL: B1/3/5/7/8@FDD LTE
EC21-CEL¹: B1/3/5@FDD LTE

Dimensions: 32.0 × 29.0 × 2.4mm;

Temperature Range: -40°C ~ +85°C

Certifications: CE/ FCC/ Vodafone*/ PTCRB/ GCF/ Verizon*/
AT&T*/ RCM/ Telstra/ JATE/ TELEC/ CCC/ SRRC*/ CTA*/ KC/
SKT*

EC25 LTE Module



EC25 Mini PCIe

Max.150Mbps (DL)/ Max.50Mbps (UL)

EC25-E: B1/3/5/7/8/20 @FDD-LTE,
B38/40/41 @TDD-LTE,
B1/5/8 @WCDMA, B3/B8@GSM
EC25-A: B2/4/12@FDD-LTE, B2/4/5@WCDMA
EC25-V: B4/13@FDD-LTE
EC25-AU: B1/2/3/4/5/7/8/28@FDD LTE, B40 @TDD-LTE,
B1/2/5/8@WCDMA, B2/3/5/8@GSM
EC25-AUT: B1/3/5/7/28@FDD LTE, B1/5@WCDMA
EC25-J: B1/3/8/18/19/26@FDD LTE, B41 @TDD-LTE,
B1/6/8/19@WCDMA

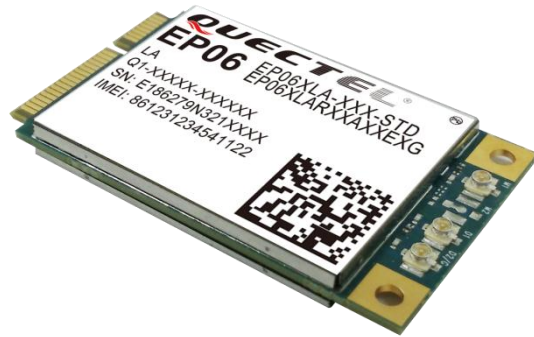
Dimensions: 32.0 × 29.0 × 2.4mm;

Temperature Range: -40°C ~ +85°C

Certifications: CE/ FCC/ PTCRB/ GCF/ Verizon/ AT&T/ RCM/
JATE/ TELEC/ KC/ SKT*

LTE-A Module Portfolio

EP06 LTE Module



Q3'17

Max.300Mbps (DL)/ Max.50Mbps (UL)

EP06-E: B1/3/5/7/8/20/28/32 @FDD-LTE,
B38/40/41 @TDD-LTE, 2x CA @LTE, B1/3/5/8 @WCDMA
EP06-A: B2/4/5/7/12/17/13/25/26/29/30/66 @FDD-LTE,
B41 @TDD-LTE, 2x CA @LTE, B2/4/5 @WCDMA
EP06-LA: B2/3/4/7/8/20/28 @FDD-LTE, 2x CA @LTE,
B2/3/4/5/8 @WCDMA
EP06-APAC: B1/B3/B5/B7/B8/B26/B18/B19/B21 @FDD-LTE,
B38/B39/B40/B41 @TDD-LTE, 2x CA @LTE,
B1/B5/B6/B8/B9/B19 @WCDMA, B39 @TD-SCDMA,

Dimensions: 30.0 x 51.0 x 4.3mm ;

Temperature Range: -40°C ~ +85°C

Certifications: TBD

EG06 LTE Module



Q3'17

Max.300Mbps (DL)/ Max.50Mbps (UL)

EG06-E: B1/3/5/7/8/20/28/32 @FDD-LTE,
B38/40/41 @TDD-LTE, 2x CA @LTE, B1/3/5/8 @WCDMA
EG06-A: B2/4/5/7/12/17/13/25/26/29/30/66 @FDD-LTE,
B41 @TDD-LTE, 2x CA @LTE, B2/4/5 @WCDMA
EG06-LA: B2/3/4/7/8/20/28 @FDD-LTE, 2x CA @LTE,
B2/3/4/5/8 @WCDMA
EG06-APAC: B1/B3/B5/B7/B8/B26/B18/B19/B21 @FDD-LTE,
B38/B39/B40/B41 @TDD-LTE, 2x CA @LTE,
B1/B5/B6/B8/B9/B19 @WCDMA, B39 @TD-SCDMA,

Dimensions: 37.0 x 39.5 x 2.8mm ;

Temperature Range: -40°C ~ +85°C

Certifications: TBD

EM06 LTE Module



2H'17

Max.300Mbps (DL)/ Max.50Mbps (UL)

EM06-E: B1/3/5/7/8/20/28/32 @FDD-LTE,
B38/40/41 @TDD-LTE, 2x CA @LTE, B1/3/5/8 @WCDMA
EM06-A: B2/4/5/7/12/17/13/25/26/29/30/66 @FDD-LTE,
B41 @TDD-LTE, 2x CA @LTE, B2/4/5 @WCDMA
EM06-LA: B2/3/4/7/8/20/28 @FDD-LTE, 2x CA @LTE,
B2/3/4/5/8 @WCDMA
EM06-APAC: B1/B3/B5/B7/B8/B26/B18/B19/B21 @FDD-LTE,
B38/B39/B40/B41 @TDD-LTE, 2x CA @LTE,
B1/B5/B6/B8/B9/B19 @WCDMA, B39 @TD-SCDMA,

Dimensions: 30.0 x 42.0 x 2.3mm ;

M.2 Form Factor

Temperature Range: -40°C ~ +85°C

Certifications: TBD

AG35 Automotive Module



Max.150Mbps (DL)/ Max.50Mbps (UL)

AG35-CE: B1/3/5/8/26 @FDD-LTE; B34/38/39/40/41 @TDD-LTE; B1/8 @WCDMA; B34/39 @TD-SCDMA; 8C0 @CDMA2000 1X/EVDO; 900/1800 @GSM

AG35-E: B1/3/7/8/20/28A @FDD-LTE; B1/3/8 @WCDMA; 900/1800 @GSM

AG35-C: B1/3/8 @FDD-LTE; B34/38/39/40/41 @TDD-LTE
B1/8 @WCDMA; B34/39 @TD-SCDMA; 900/1800 @GSM

Dimensions: 33.0 × 37.5 × 3.0mm;

Temperature Range: -40°C ~ +85°C

- **QUALCOMM**® MDM9628 Chipset Solution dedicated for automotive application
- Ideal for automotive applications with IATF 16949 requirement
- Wide operation temperature range (-40° C to +85° C)
- Automotive quality processes (PPAP, 8D, DFMEA, PFMEA...)
- Excellent EMC/ESD protection ensures great robustness even in harsh environments
- Compact SMT form factor ideal for integration in slim and size-constrained automotive solutions
- Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment



Smart Module Portfolio

SC20 Smart Module



Max.150Mbps (DL)/ Max.50Mbps (UL)

SC20-CE: B1/3/8 @FDD-LTE, B38/39/40/41 @TDD-LTE,
B34/39 @TD-SCDMA, BC0 @EVDO/CDMA
B1/8 @UMTS, 900/1800 @GSM
SC20-A : B2/4/5/7/12/13/25/26 @FDD-LTE,
B1/2/4/5/8 @UMTS, 850/900/1800/1900 @GSM
SC20-E : B1/3/5/7/8/20 @FDD-LTE, B38/40/41 @TDD-LTE,
B1/5/8 @UMTS, 850/900/1800/1900 @GSM
SC20-AU: B1/3/5/7/8/28 @FDD-LTE, B40 @TDD-LTE,
B1/2/5/8 @WCDMA, 850/900/1800/1900 @GSM
SC20-J: B1/3/8/18/19/26 @FDD-LTE,
B41 @TDD-LTE, B1/6/19 @UMTS,
SC20-W : Only Wi-Fi and Bluetooth versions

Dimensions: 40.5 × 40.5 × 2.8mm

Temperature Range: -40°C ~ +85°C

Interfaces: TP/ LCM/ Camera/ Audio/ USB/ UART/ USIM/ PCM/
ADC/ I2C/ SPI/ SDIO/ PWRKEY/ Antenna

Certifications: CE*/ FCC*/ CCC/ GCF*/ PTCRB*/ AT&T*/
Verizon*/ ACMA/ RCM*

SG30 Smart Module



Q2'17



Q3'17

SG36 Smart Module

Max.150Mbps (DL)/ Max.50Mbps (UL)

SG30-CE: B1/3/8 @FDD-LTE, B38/39/40/41 @TDD-LTE,
B34/39 @TD-SCDMA, BC0 @EVDO/CDMA
B1/8 @UMTS, 900/1800 @GSM
SG30-A : B2/4/5/7/12/13/25/26 @FDD-LTE,
B1/2/4/5/8 @UMTS, 850/900/1800/1900 @GSM
SG30-E : B1/3/5/7/8/20 @FDD-LTE, B38/40/41 @TDD-LTE,
B1/5/8 @UMTS, 850/900/1800/1900 @GSM
SG30-AU: B1/3/5/7/8/28 @FDD-LTE, B40 @TDD-LTE,
B1/2/5/8 @WCDMA, 850/900/1800/1900 @GSM
SG30-J: B1/3/8/18/19/26 @FDD-LTE,
B41 @TDD-LTE, B1/6/19 @UMTS,

Dimensions: 42.0 × 45.5 × 2.8mm

Temperature Range: -40°C ~ +85°C

Interfaces: TP/ LCM/ Camera/ Audio/ USB/ UART/ USIM/ PCM/
ADC/ I2C/ SPI/ SDIO/ PWRKEY/ Antenna

Certifications: TBD

SC60 Smart Module



Q3'17

Max.300Mbps (DL)/ Max.50Mbps (UL)

SC60-CE: B1/3/8 @FDD-LTE, B38/39/40/41 @TDD-LTE,
B34/39 @TD-SCDMA, BC0 @EVDO/CDMA
B1/8 @UMTS, 900/1800 @GSM
SC60-A : B2/4/5/7/12/13/25/26 @FDD-LTE,
B1/2/4/5/8 @UMTS, 850/900/1800/1900 @GSM
SC60-E : B1/3/5/7/8/20 @FDD-LTE, B38/40/41 @TDD-LTE,
B1/5/8 @UMTS, 850/900/1800/1900 @GSM
SC60-AU: B1/3/5/7/8/28 @FDD-LTE, B40 @TDD-LTE,
B1/2/5/8 @WCDMA, 850/900/1800/1900 @GSM
SC60-J: B1/3/8/18/19/26 @FDD-LTE,
B41 @TDD-LTE, B1/6/19 @UMTS,

Dimensions: TBD

Temperature Range: -40°C ~ +85°C

Interfaces: TP/ LCM/ Camera/ Audio/ USB/ UART/ USIM/ PCM/
ADC/ I2C/ SPI/ SDIO/ PWRKEY/ Antenna

Certifications: TBD

LPWA Module Portfolio

BC95 LTE Cat.NB1



BC95-B8: 900MHz
BC95-B5: 850MHz
BC95-B20: 800MHz,
BC95-G
Future plan to support 1800MHz

LCC package for robust soldering

Dimensions: 19.9 × 23.6 × 2.2mm

Temperature Range: -40℃ ~ +85℃

embedded eSIM PCB footprint.

Compatible with Quectel GSM/GPRS module M95

BG96 LTE Cat.M1/NB1/EGPRS



Cat.M1: Max.375kbps (DL)/ Max. 375kbp (UL)

Cat.NB1: Max.32kbps (DL)/ Max. 72kbp (UL)

BG96-NA: B2/B4/B12/B13 (Cat.M1)

BG96: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 @LTE-FDD
B39 (for Cat M1 only) @LTE-TDD
850/900/1800/1900@GSM

LGA Form Factor

Dimensions: 22.5 × 26.5 × 2.3mm

Temperature Range: -40℃ ~ +85℃

Compatible with Quectel GSM/UMTS Module UG96

UMTS/HSPA+ Module Portfolio

UC20 UMTS/HSPA+



UC20 Mini PCIe

Max.14.4Mbps (DL)/ Max.5.76Mbps (UL)

UC20-E: 900/2100@UMTS, 850/900/1800/1900@GSM

UC20-A: 850/1900@UMTS

UC20-G: 800/850/900/1900/2100@UMTS,
850/900/1800/1900@GSM

Dimensions: 32.0 × 29.0 × 2.5mm

Temperature Range: -40°C ~ +85°C

Certifications: CE/ FCC/ IC/ KC/ NCC/ OFCA/ GCF/
PTCRB/ RCM/ SKT/ AT&T/ Rogers/ ANATEL/ Vodafone/
ICASA/ NBTC/ JATE/ TELEC/ SRRC / NAL/ DoC (for
Russia)

UG95 UMTS/HSPA



Max.7.2Mbps (DL)/ Max.5.76Mbps (UL)

UG95-E: 900/2100@UMTS, 900/1800@GSM

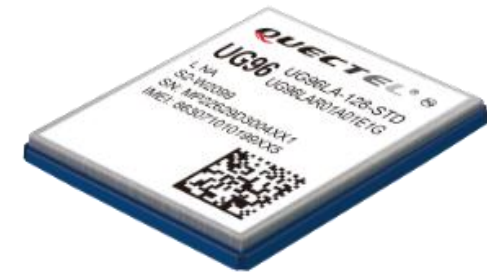
UG95-A: 850/1900@UMTS

Dimensions: 23.6 × 19.9 × 2.2mm

Temperature Range: -40°C ~ +85°C

Certifications: CE/ GCF/ FCC/ IC/ ICASA/ PTCRB/ AT&T/
Rogers/ DoC (for Russia)

UG96 UMTS/HSPA



Max.7.2Mbps (DL)/ Max.5.76Mbps (UL)

800/ 850/ 900/ 1900/ 2100MHz@UMTS
850/ 900/ 1800/ 1900MHz@GSM

Dimensions: 26.5 × 22.5 × 2.2mm

Temperature Range: -40°C ~ +85°C

Pin to pin compatible with M95 & UG95

Certifications: CE/ FCC/ GCF/ PTCRB/ ANATEL/ RCM/
IFETEL/ Movistar*/ ICASA/ DoC (for Russia)

GSM/GPRS Module Portfolio

M95 GSM/GPRS

MEDIATEK



Max. 85.6kbps (DL)/ Max. 85.6kbp (UL)

PPP/ TCP/ UDP/ HTTP/ FTP/ SMTP/ PING
MMS sending/ NITZ/ NTP/ SSL

DualSIM/ eCall/ Jamming Detection/ QuecFOTA/
DTMF/ MUX/ RIL/ QuecLocator

Dimensions: 19.9 × 23.6 × 2.65mm

Temperature Range: -40°C ~ +85°C

Certifications: CE/ GCF/ Vodafone/ PTCRB/ FCC/
IC/ ANATEL/ Rogers/ RCM/ NCC/ TELCEL/ UCRF/
ICASA

M66 GSM/GPRS

MEDIATEK



Max. 85.6kbps (DL)/ Max. 85.6kbp (UL)

PPP/ TCP/ UDP/ HTTP/ FTP/ SMTP/ PING/ NTP/
NITZ/ MMS sending

eCall/ Jamming Detection/ QuecFOTA/ DTMF/
MUX/ RIL/ OpenCPU/ PCM/ QuecLocator

Dimensions: 17.7 × 15.8 × 2.3mm

Temperature Range: -40°C ~ +85°C

Certifications: CE/ ANATEL/ ICASA

MC60 GSM/GPRS/GNSS

MEDIATEK



Max. 85.6kbps (DL)/ Max. 85.6kbp (UL)

TCP/UDP/PPP/FTP/HTTP













eCall/ Jamming Detection/ QuecFOTA/ DTMF/
MUX/ RIL/ PCM

Dimensions: 18.7 × 15.8 × 2.3mm

Temperature Range: -40°C ~ +85°C

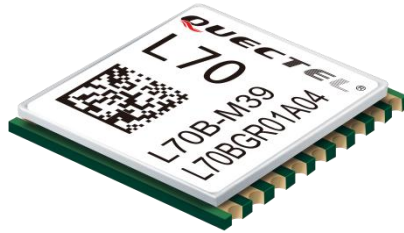
Certifications: CE/ FCC/ Anatel*/ ICASA*

GNSS Module Roadmap

	Standalone Module		Antenna Module	
GPS		<div>  L70 <ul style="list-style-type: none"> 18-pin LCC MT3339 </div> <div>  L70-R <ul style="list-style-type: none"> 18-pin LCC MT3337 </div> <div>  L70-RL <ul style="list-style-type: none"> 18-pin LCC MT3337 Built-in LNA </div>		<div>  L80 <ul style="list-style-type: none"> 12-pin LCC MT3339 </div> <div>  L80-R <ul style="list-style-type: none"> 12-pin LCC MT3337 </div>
GNSS	<div>  L26 <ul style="list-style-type: none"> 24-pin LCC MT3333 </div>	<div>  L76 <ul style="list-style-type: none"> 18-pin LCC MT3333 </div> <div>  L76B <ul style="list-style-type: none"> 18-pin LCC MT3333 </div> <div>  L76-L <ul style="list-style-type: none"> 18-pin LCC MT3333 Built-in LNA </div>		<div>  L86 <ul style="list-style-type: none"> 12-pin LCC MT3333 </div>
	16.0 × 12.2 × 2.4 mm	10.1 × 9.7 × 2.5 mm		16.0 × 16.0 × 6.45 mm (L80) 18.4 × 18.4 × 6.45 mm (L86)

GPS Module Specifications

L70 GPS Module



10.1 × 9.7 × 2.5mm
MT3339

- 18 Pins with LCC
- High Sensitivity: -165dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3V, 3.3V typ.
- Low power consumption:
 - 12mA@Tracking mode
 - 18mA@Acquisition mode
 - 7uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (AlwaysLocate™/Periodic mode/Standby mode/Backup mode)
- FLP mode: only 5mA in static receiving
- LOCUS, innate logger solution
- Support SDK command

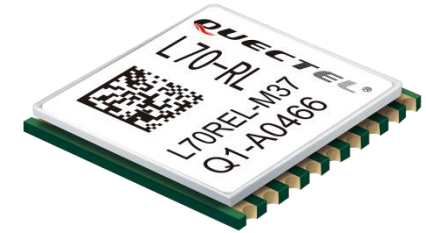
L70-R GPS Module



10.1 × 9.7 × 2.5mm
MT3337

- 18 Pins with LCC
- High Sensitivity: -165dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3V, 3.3V typ.
- Low power consumption:
 - 13mA@Tracking mode
 - 16mA@Acquisition mode
 - 8uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (Standby mode/ Backup mode)

L70-RL GPS Module

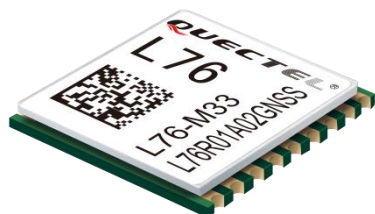


10.1 × 9.7 × 2.5mm
MT3337

- 18 Pins with LCC
- High Sensitivity: -167dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3V, 3.3V typ.
- Low power consumption:
 - 18mA*@Tracking mode
 - 21mA*@Acquisition mode
 - 8uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Built-in LNA
- Multiple power saving mode (Standby mode/ Backup mode)

GNSS Module Specifications

L76 GNSS Module



10.1 × 9.7 × 2.5mm
MT3333

- 18 Pins with LCC
- GPS, GLONASS, Galileo and QZSS
- High Sensitivity: -165dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3V, 3.3V typ.
- Low power consumption:
 - 18mA(GPS+GLONASS)@Tracking mode
 - 25mA(GPS+GLONASS)@Acquisition mode
 - 7uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (AlwaysLocate™/ Period mode/ Standby mode/ Backup mode)
- LOCUS, innate logger solution
- Support SDK command *

L76B GNSS Module



10.1 × 9.7 × 2.5mm
MT3333

- 18 Pins with LCC
- GPS, **Beidou** and QZSS
- High Sensitivity: -165dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3V, 3.3V typ.
- Low power consumption:
 - 18mA(GPS+BeiDou)@Tracking mode
 - 23mA(GPS+BeiDou)@Acquisition mode
 - 7uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (AlwaysLocate™/ Period mode/ Standby mode/ Backup mode)
- LOCUS, innate logger solution

L76-L GNSS Module



10.1 × 9.7 × 2.5mm
MT3333

- 18 Pins with LCC
- GPS, GLONASS, Galileo and QZSS
- High Sensitivity: -167dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3V, 3.3V typ.
- Low power consumption:
 - 22mA(GPS+GLONASS)@Tracking mode
 - 29mA(GPS+GLONASS)@Acquisition mode
 - 7uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Built-in LNA
- Multiple power saving mode (AlwaysLocate™/ Period mode/ Standby mode/ Backup mode)
- LOCUS, innate logger solution
- Support SDK command *

L26 GNSS Module



16.0 × 12.2 × 2.4mm
MT3333

- 24 Pins with LCC
- GPS, GLONASS and QZSS
- High Sensitivity: -167dBm
- Default baud rate: 9600bps
- Voltage 2.8V to 4.3 V, 3.3V typ.
- Low power consumption:
 - 21mA(GPS+GLONASS)@Tracking mode
 - 29mA(GPS+GLONASS)@Acquisition mode
 - 7uA@Backup mode
- AGPS function: EASY™ technology, EPO
- Built-in LNA
- Multiple power saving mode (AlwaysLocate™/Periodic mode/Standby mode/Backup mode)
- LOCUS, innate logger solution
- Short-circuit protection and detection for active antenna
- Support SDK command

GNSS Patch Antenna Module Specification

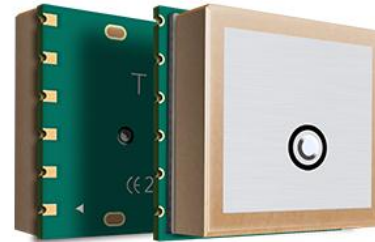
L80 GPS Module



16.0 × 16.0 × 6.45mm
MT3339

- 12 Pins with LCC
- Patch Antenna(15.0*15.0*4.0mm) on the top of module
- High Sensitivity: -165dBm
- Default baud rate: 9600bps
- Voltage 3V to 4.3V, 3.3V typ.
- Low power consumption
 - 20mA@Tracking mode
 - 25mA@Acquisition mode
 - 7uA@Backup mode
- Short-circuit protection and detection for active antenna
- Active antenna switching function
- Built-in LNA
- Concave feed point
- Large size of Pin (Length=1.5mm; Width=1.0mm)
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (AlwaysLocate™/Periodic mode/Standby mode/Backup mode)
- FLP mode: only 50% power consumption of normal mode
- LOCUS, innate logger solution
- Support SDK command

L80-R GPS Module



16.0 × 16.0 × 6.45mm
MT3337

- 12 Pins with LCC
- Patch Antenna(15.0*15.0*4.0mm) on the top of module
- High Sensitivity: -165dBm
- Default baud rate: 9600bps
- Voltage 3V to 4.3V, 3.3V typ.
- Low power consumption
 - 20mA@Tracking mode
 - 25mA@Acquisition mode
 - 7uA@Backup mode
- Built-in LNA
- Concave feed point
- Large size of Pin (Length=1.5mm; Width=1.0mm)
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (Standby mode/Backup mode)

L86 GNSS Module



18.4 × 18.4 × 6.45mm
MT3333

- 12 Pins with LCC
- Patch Antenna(18.4*18.4*4.0mm) on the top of module
- High Sensitivity: -167dBm
- Default baud rate: 9600bps
- Voltage 3V to 4.3V, 3.3V typ.
- Low power consumption
 - 26mA(GLONASS+GPS)@Tracking mode
 - 30mA(GLONASS+GPS)@Acquisition mode
 - 7uA@Backup mode
- Short-circuit protection and detection for active antenna
- Active antenna switching function
- Built-in LNA
- Concave feed point
- Large size of Pin (Length=1.5mm; Width=1.0mm)
- AGPS function: EASY™ technology, EPO
- Multiple power saving mode (AlwaysLocate™/Periodic mode/Standby mode/Backup mode)
- LOCUS, innate logger solution
- Support SDK command

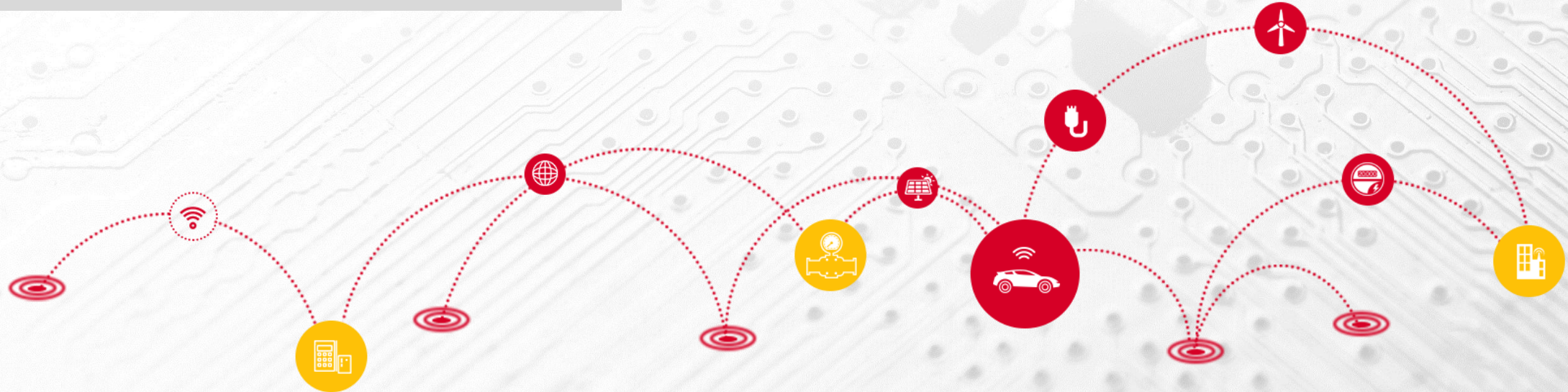
Quectel Overview

Product Portfolio

Technology

M2M Applications

QUECTEL[®]
Build a Smarter World



Software Advantages

USB Serial Drivers

- Windows XP/Vista/7/8/8.1/10
- Linux 2.6 or later
- Android 4.0/4.2/4.4/5.0/5.1/6.0

Quality Guarantee

- Reliable network protocols
- Steady flash protection mechanism
- Superior audio algorithms
- High sensitivity

Special Features

- QuecOpen[™]*
- PSM*

NDIS & RIL Drivers

- RIL Driver:
Android 4.0/4.2/4.4/5.0/5.1/6.0
- NDIS Driver:
Windows XP,
Windows Vista/7/8/8.1/10

Flexible Applications

- eCall
- (U)SIM card detection
- DTMF

Enhanced AT Commands

- Standard V.25ter AT commands
- 3GPP TS 27.007 (GSM 07.07)
- 3GPP TS 27.005 (GSM 07.05 SMS)
- TCP/IP stack AT commands
- STK (SIM Application Toolkit)

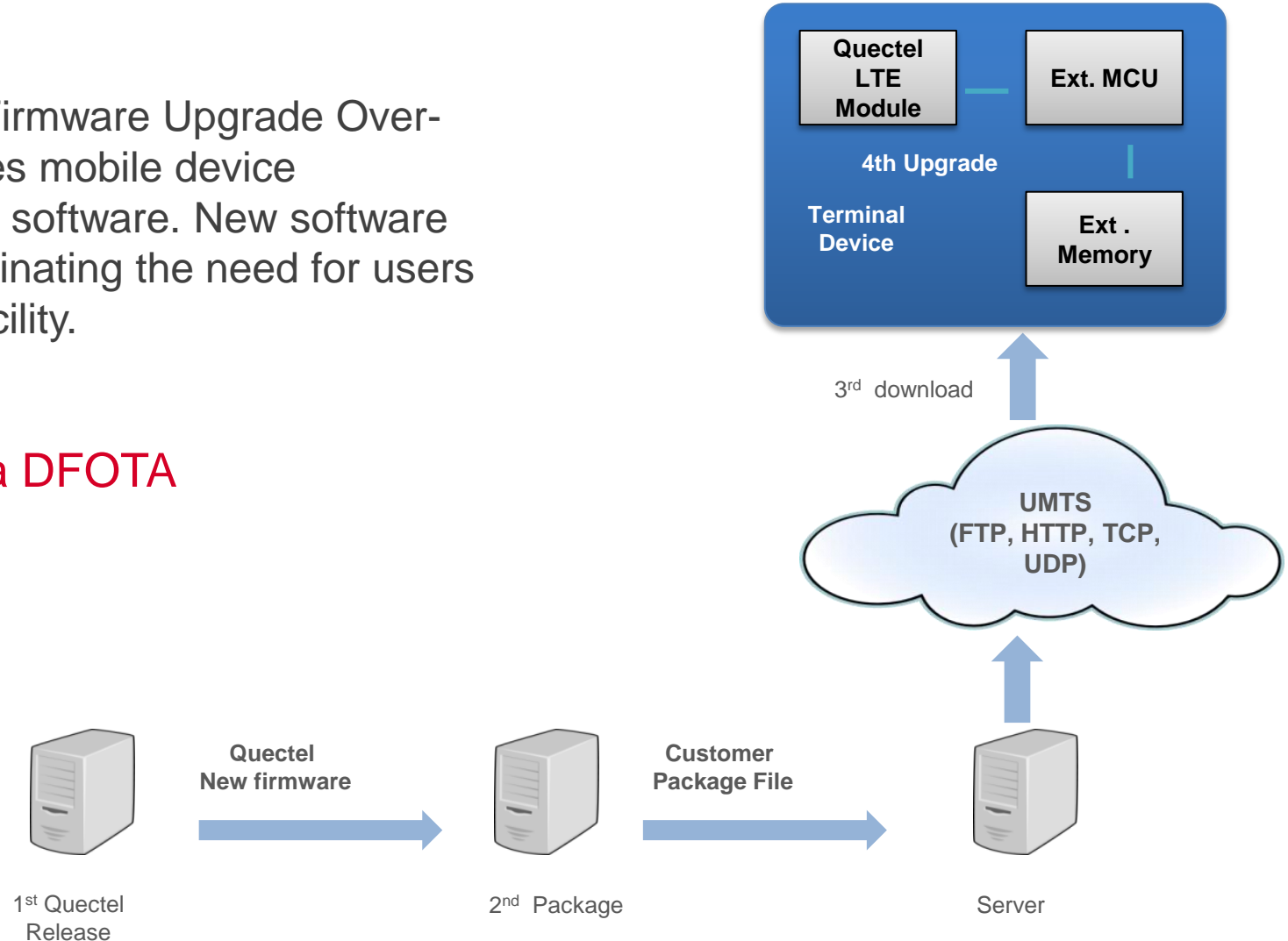
** Under development*

DFOTA

DFOTA is an acronym for Delta Firmware Upgrade Over-the-Air. DFOTA technology enables mobile device manufacturers to remotely update software. New software can be delivered over the air, eliminating the need for users to bring the device to a service facility.

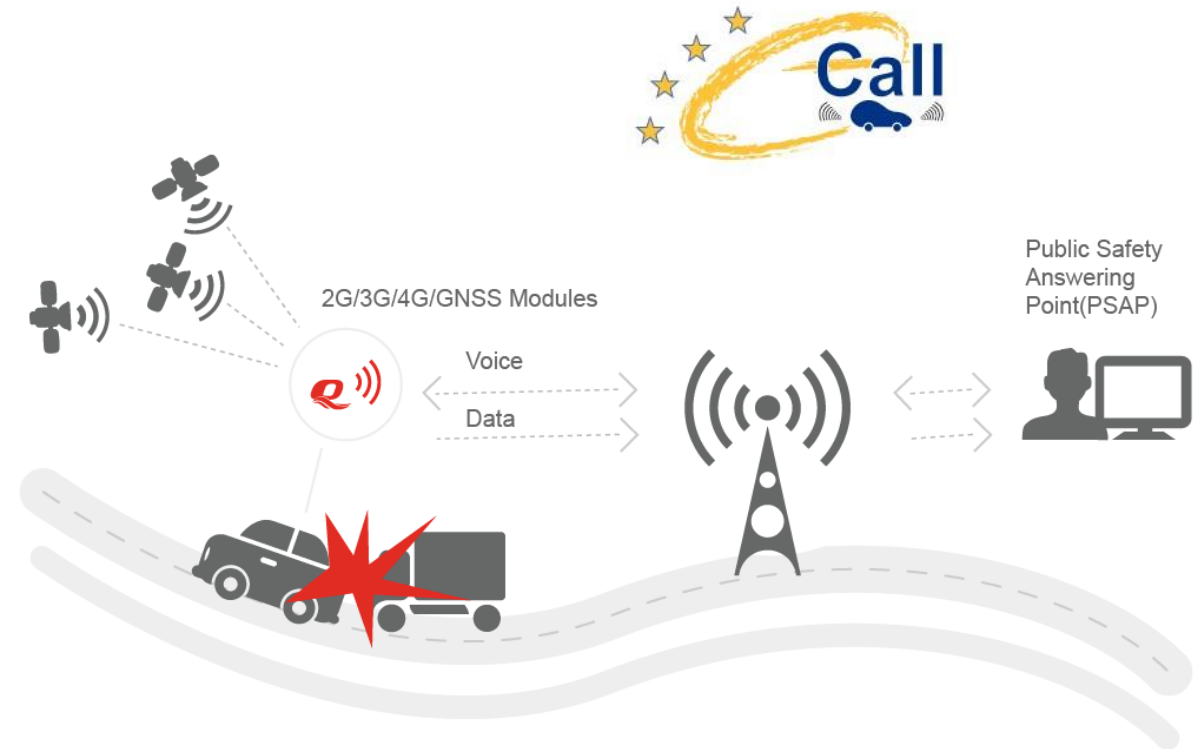
Firmware Upgrade Process via DFOTA

- DFOTA Sync
- DFOTA Packet
- DFOTA Upgrade Error Handle



eCall Function

A car will have an electronic safety system automatically calling emergency services in case of a serious accident. Even if the driver is unconscious, the system will inform rescue workers of the crash site's exact whereabouts, and the rescues will be on its way within minutes. The system is named as "**eCall**".



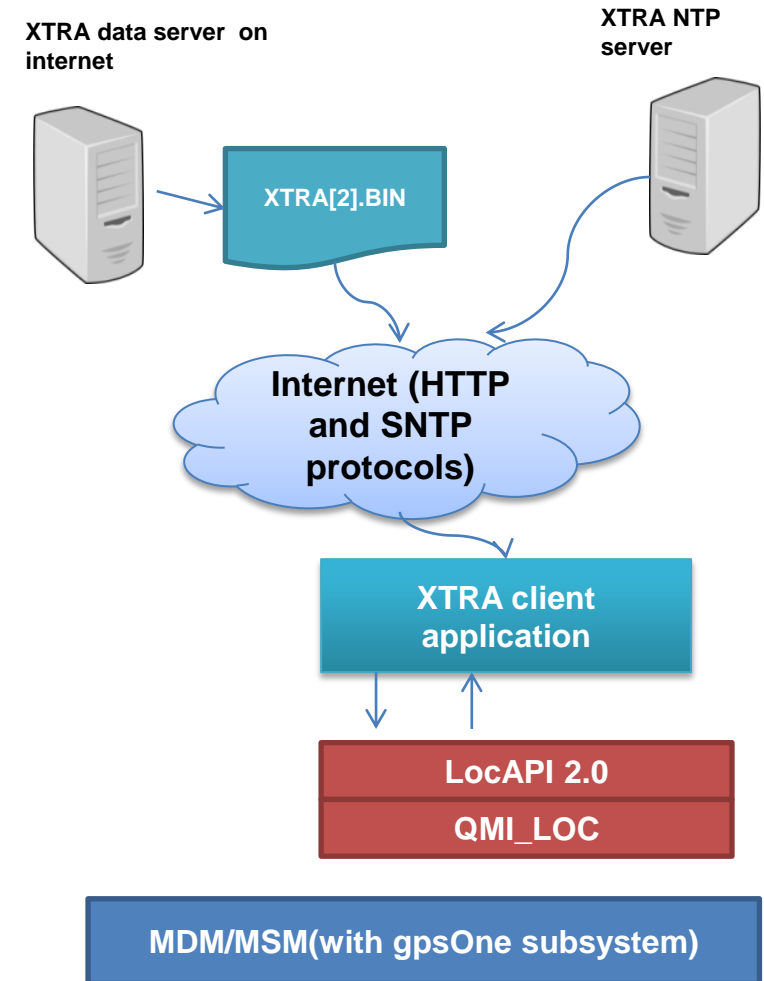
- *Quectel supports eCall in 2G/3G/4G/GNSS modules and has been working on eCall since late 2011.*
- *Quectel has enough development experience on eCall to support and assist customers with eCall application development.*

Qualcomm GpsOne Gen8

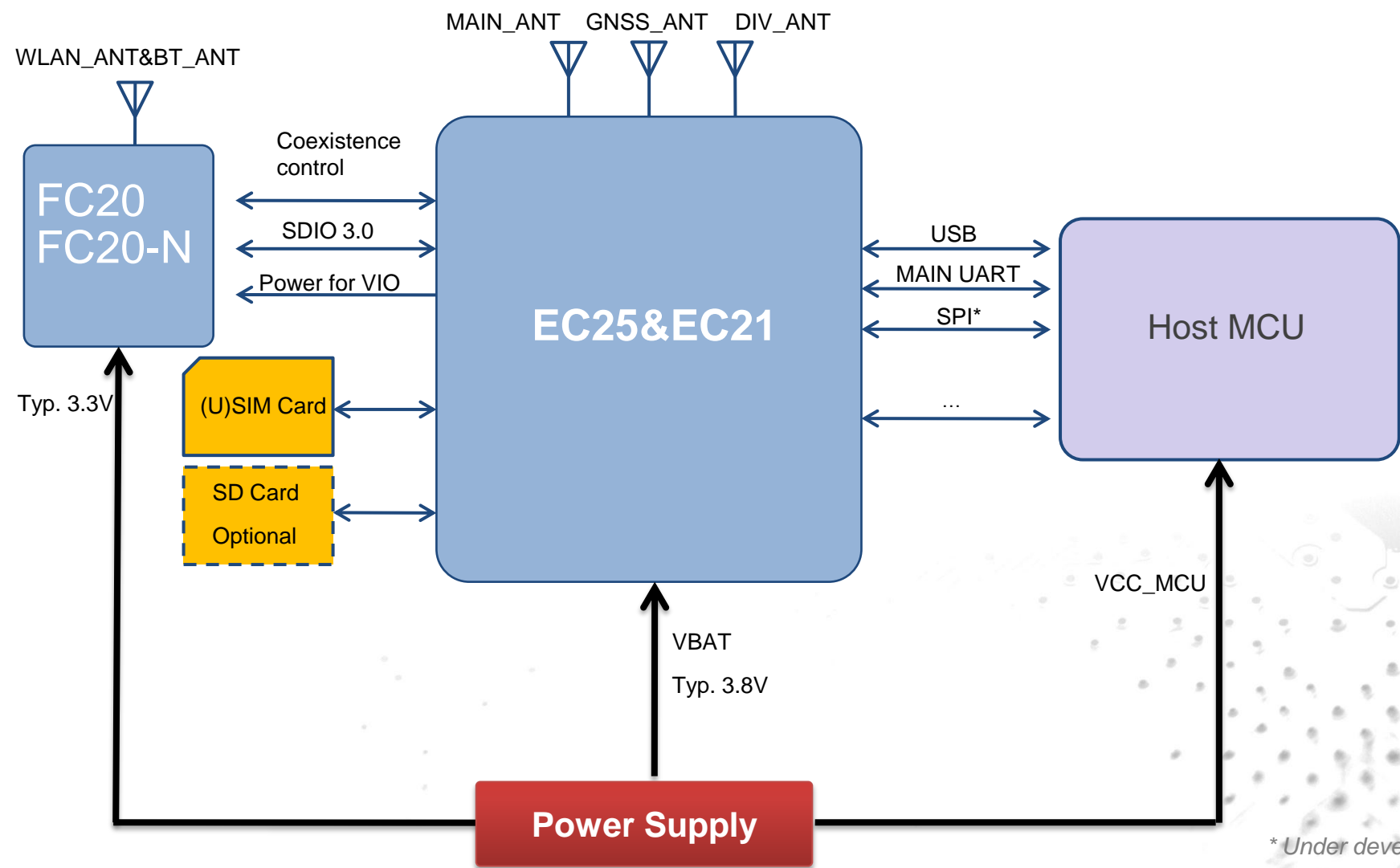
XTRA Assistance Technology

Qualcomm's new GpsOne XTRA Assistance technology provides enhanced operation by enabling a user to download a small assistance data file through a brief Internet access session.

This technology delivers more accurate positioning with greater sensitivity than otherwise possible with standalone GPS receivers, especially in challenging areas such as indoors and in dense urban canyons.



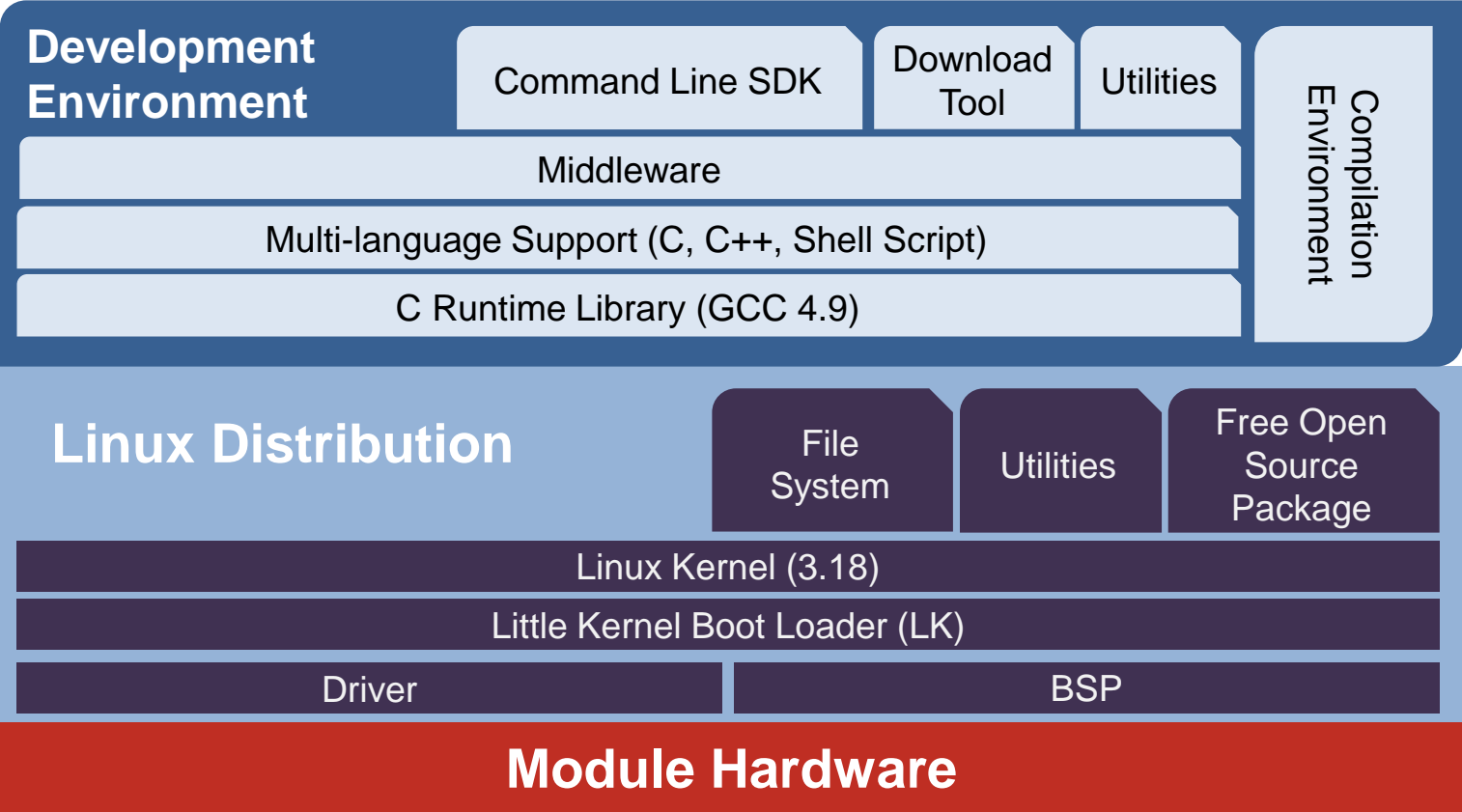
LTE + Wi-Fi&BT Solution



Wi-Fi&BT Module Features

Feature	FC20	FC20-N
Dimensions	16.6mm × 13.0mm × 2.1mm	16.6mm × 13.0mm × 2.1mm
Package	LCC+LGA	LCC+LGA
Function	Wi-Fi 2.4G/5G & BT4.1*	Wi-Fi 2.4G
Wi-Fi Mode	AP only STA only AP+STA AP+AP	AP only STA only AP+STA AP+AP
Supply Voltage	3.3V+1.8V	3.3V+1.8V
Interface	SDIO+UART&PCM	SDIO
WLAN Technology	802.11 a/b/g/n/ac	802.11 b/g/n
Antenna	Wi-Fi&BT antenna	Wi-Fi antenna
Data Rate	54Mbps @802.11a; 11Mbps @802.11b 54Mbps @802.11g; 150Mbps @802.11n 433Mbps @802.11ac	11Mbps @802.11b; 54Mbps @802.11g 150Mbps @802.11n
AP (access point)	16	16

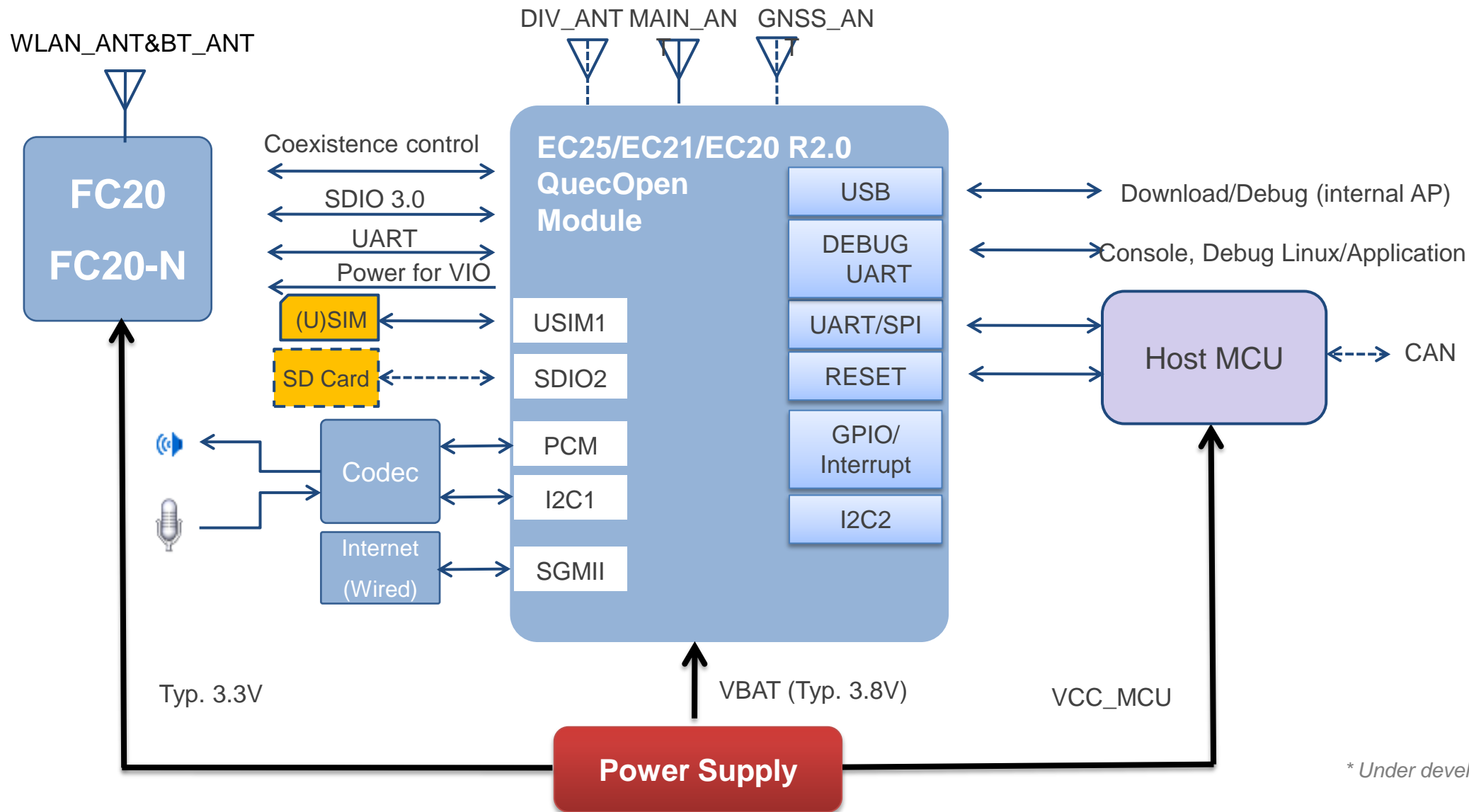
* Under development



QuecOpen™* is an open source embedded development platform based on Linux system, which is intended to simplify the design and development process for IoT applications.

Figure: Framework of QuecOpen™*

QuecOpen™* - Typical Router Solution



* Under development

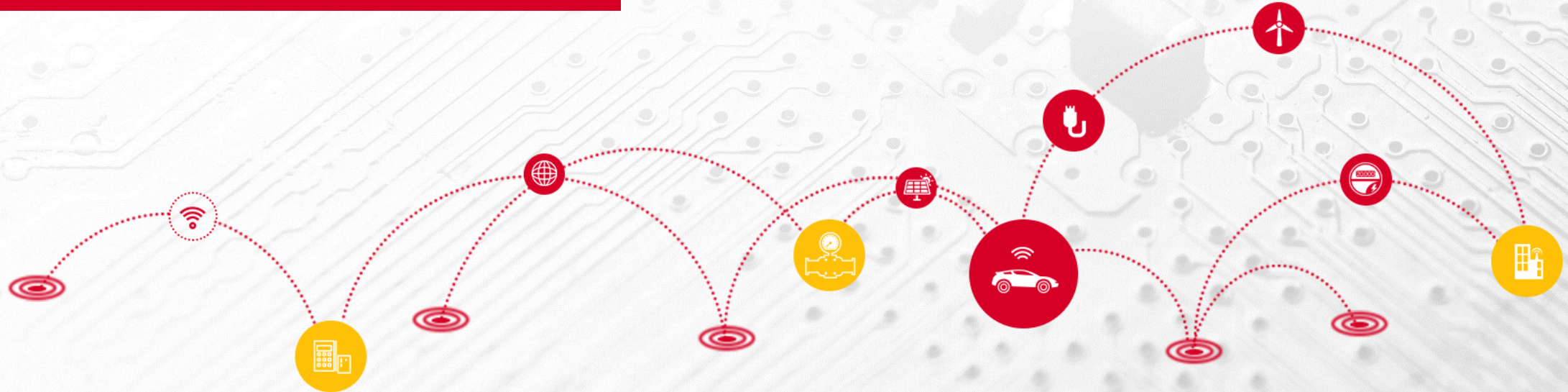
Quectel Overview

Product Portfolio

Technology

M2M Applications

QUECTEL[®]
Build a Smarter World



Target Applications



Telematics & Transport

- Automotive OEM
- Vehicle Tracking
- Container Tracking
- Ship Tracking
- Fleet Management
- OBD
- DVR
- Insurance Box



Energy

- Electricity Meter
- Gas Meter
- Water Meter
- Heat Meter
- Smart Grid
- Wind Turbines
- Solar Panel
- Charging Pile



Payment

- Wireless POS
- Cash Register
- ATM
- Vending Machine
- Top-up Machine



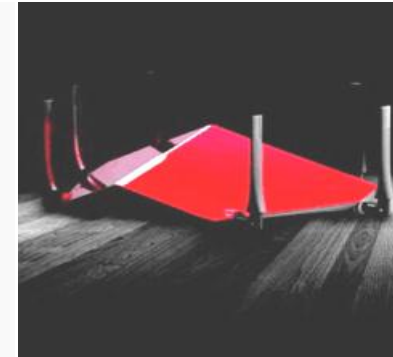
Security

- Alarm
- Camera
- Video Surveillance
- Intrusion detection
- Smoke Detector
- Asset Protection



Smart City

- Street Lighting
- Traffic Light
- Elevator
- Digital Signage
- Advertisement Display
- LED Lighting
- Garbage Bin Monitoring
- Parking



Gateway

- DTU
- Consumer Router
- Industrial Router
- VOIP
- Server
- Wifi Hotspot



Industry

- Industrial PDA
- Rugged Tablet PC
- Pipeline Management
- UAV
- Robot
- Flow Meter
- Refrigerator
- Industrial Control
- Industrial Monitoring



Life & Healthcare

- Personal Tracker
- Household Appliances
- Pet Tracker
- Wearables
- Elderly Monitoring
- Remote Medical Equipment
- Glucometer
- Blood Pressure Monitor
- Gambling Machine

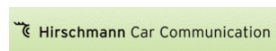


Agriculture & Environment

- Trail Camera
- Food Traceability
- Farm Machinery
- Irrigation
- Meteorological Station
- Wildlife Tracking
- Environment Monitoring
- Pollution Monitoring

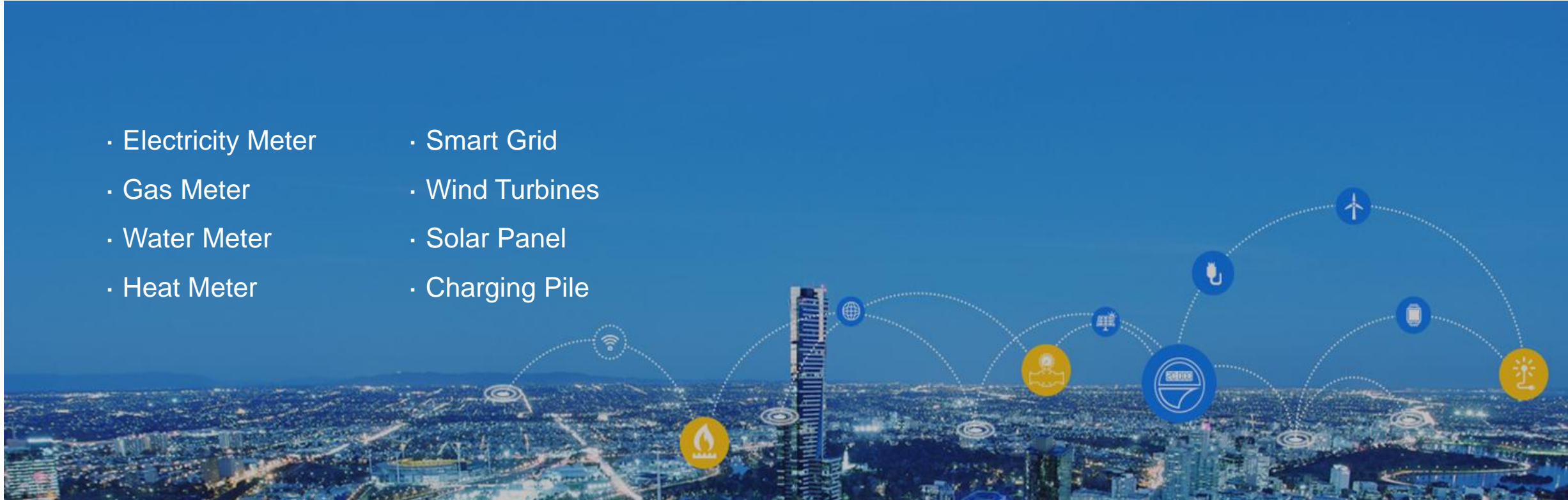
Telematics & Transport

- Automotive OEM
- Vehicle Tracking
- Container Tracking
- Ship Tracking
- Fleet Management
- OBD
- DVR
- Insurance Box



Energy

- Electricity Meter
- Gas Meter
- Water Meter
- Heat Meter
- Smart Grid
- Wind Turbines
- Solar Panel
- Charging Pile



BAYLAN

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NARI
国电南瑞科技股份有限公司
NARI Technology Development Co., Ltd.

**SANXING
ELECTRIC**

华立仪表
HOLLEY METERING

ortem elektronik

威胜集团
Wasion Group

新联电子
股票代码: 002546

DIEHL
Metering

许继电气
XJ ELECTRIC CO., LTD

Payment



Security

- Alarm
- Camera
- Video Surveillance
- Intrusion detection
- Smoke Detector
- Asset Protection



Honeywell

infobric[®]

Silentron

THALES

AREVA
l'avenir pour énergie

eps

Tekelek
Group
Excellence in monitoring and controls

Smart City

- 
- Street Lighting
 - Traffic Light
 - Elevator
 - Digital Signage
 - Advertisement Display
 - LED Lighting
 - Garbage Bin Monitoring
 - Parking

Gateway

- DTU
 - Consumer Router
 - Industrial Router
 - VOIP
- Server



Industry

- Industrial PDA
- Rugged Tablet PC
- Pipeline Management
- UAV
- Robot
- Flow Meter
- Refrigerator
- Industrial Control
- Industrial Monitoring



Life & Healthcare



- Personal Tracker
- Household Appliances
- Pet Tracker
- Wearables
- Elderly Monitoring
- Remote Medical Equipment
- Glucometer
- Blood Pressure Monitor



Agriculture & Environment



Thank you!

Office # 501, Building 13, No. 99 Tianzhou Road, Shanghai, China 200233
Tel: +86-21-5108 6236 Fax: +86-21-5445 3668
Email: info@quectel.com Website: www.quectel.com