Quectel LG69T GNSS Module

Presentation

Oct, 2019

Overview

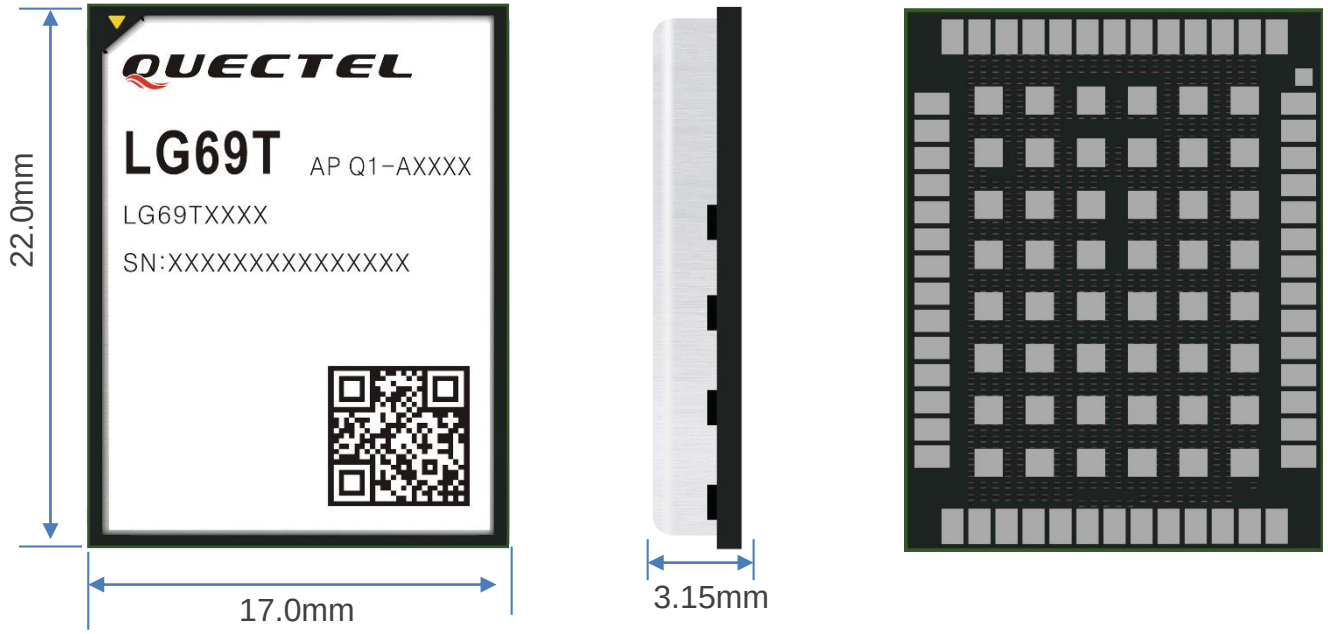
LG69T is a series automotive grade ,dual band ,high precision module. It is based on ST ‘s fifth generation platform, with four variants.

LG69T-AA with raw data output, should work with external processor

LG69T-AF dual band standalone positioning +DR result

LG69T-AP with RTK+DR integrated, send out high precision results

LG69T-AB with raw data output, compliant to ASILB



LG69T Series

Dual-Band Automotive Grade GNSS Modules

Automotive Grade

LG69T (AA)

Raw Data Output

- ST Teseo V
- L1+L5 Dual-Band GNSS
- GNSS Raw Data Output
- Sensor Raw Data Output
- Automotive Grade

Automotive Grade

LG69T (AF)

DR Integrated

- ST Teseo V
- L1+L5 Dual-Band GNSS
- DR Integrated
- Automotive Grade

Automotive Grade

LG69T (AP)

RTK+DR Integrated

- ST Teseo V
- L1+L5 Dual-Band GNSS
- High Performance MCU Embedded
- RTK+DR Integrated for High Precision Positioning (cm level)
- GNSS Raw Data Output
- Sensor Raw Data Output
- Automotive Grade

Automotive Grade

LG69T (AB)

ASIL B Compliant

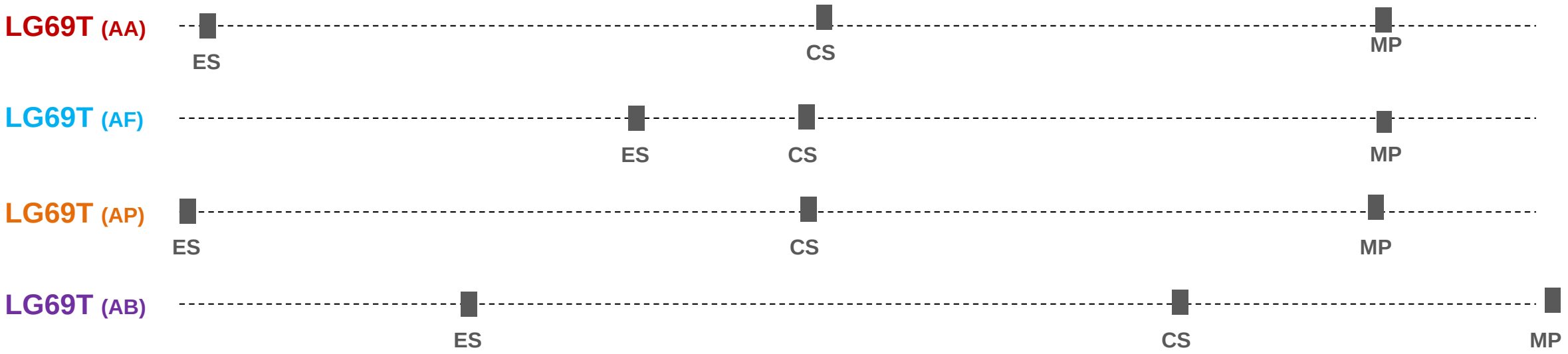
- ST Teseo App
- L1+L5 Dual-Band GNSS
- GNSS Raw Data Output
- Sensor Raw Data Output
- Automotive Grade
- ASIL B Compliant

LG69T series are distinguished from each other with different OCs (ordering codes).

LG69T Timeline

2019			2020									
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.

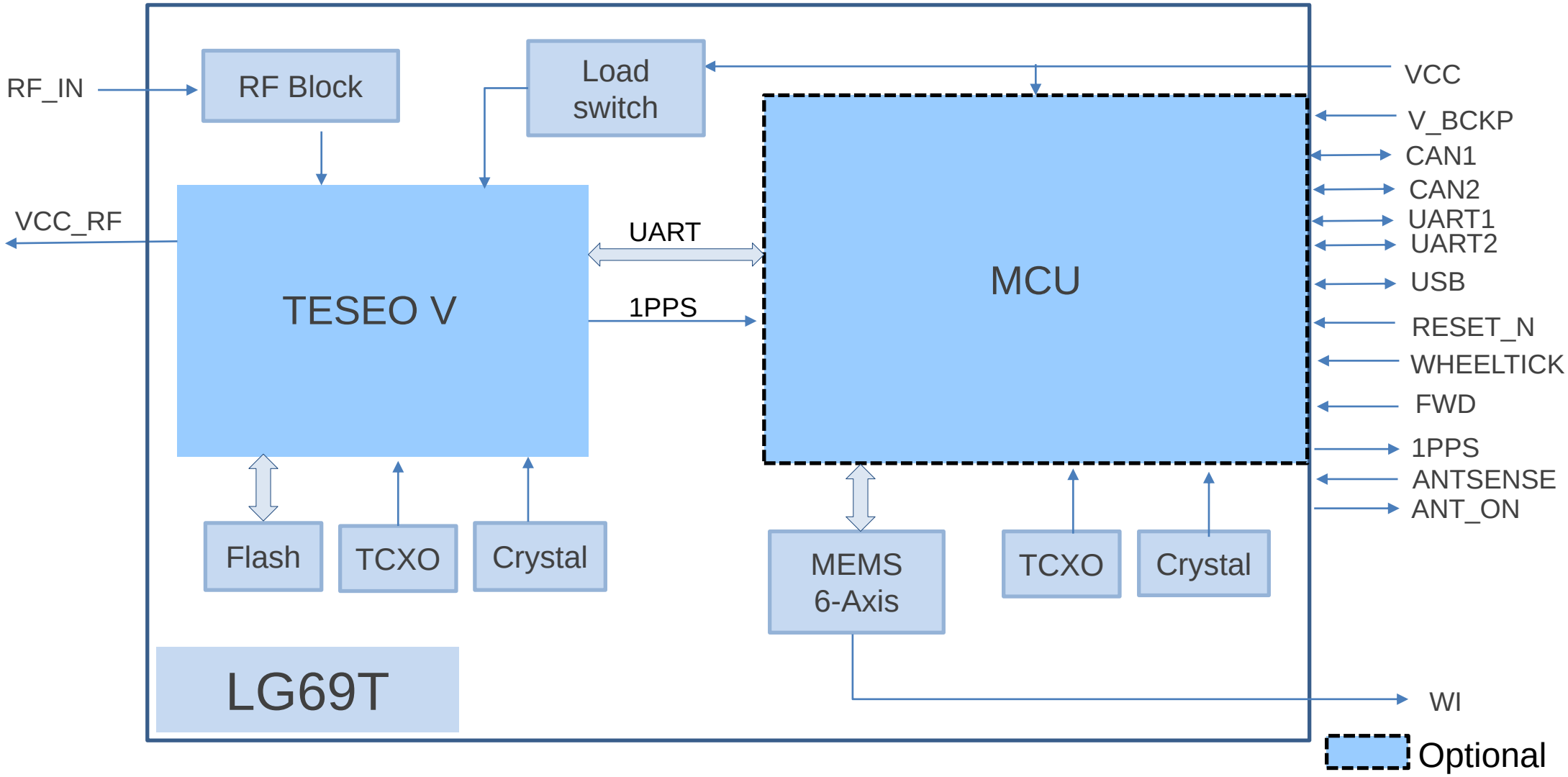
Project Schedule



ES: Engineering samples ready. Basic functions are available for customers' simple demo purpose.
CS: Commercial samples ready. Stable hardware design and quite stable software design. New software features can be added upon request.
MP: Hardware and software ready for mass production. For certification status, please refer to the "certification schedule".

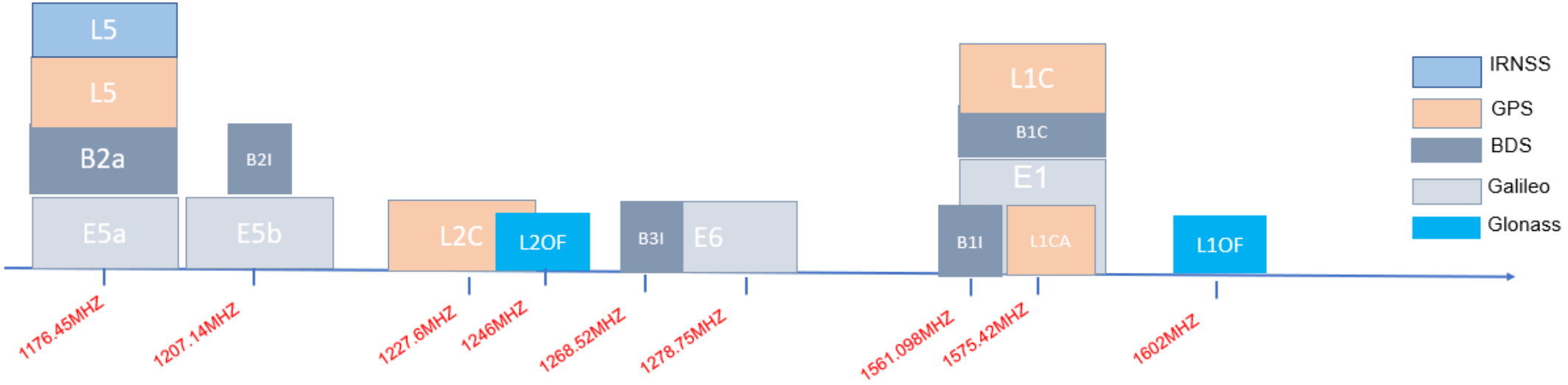
Regulatory Certification Schedule

LG69T HW Block Diagram

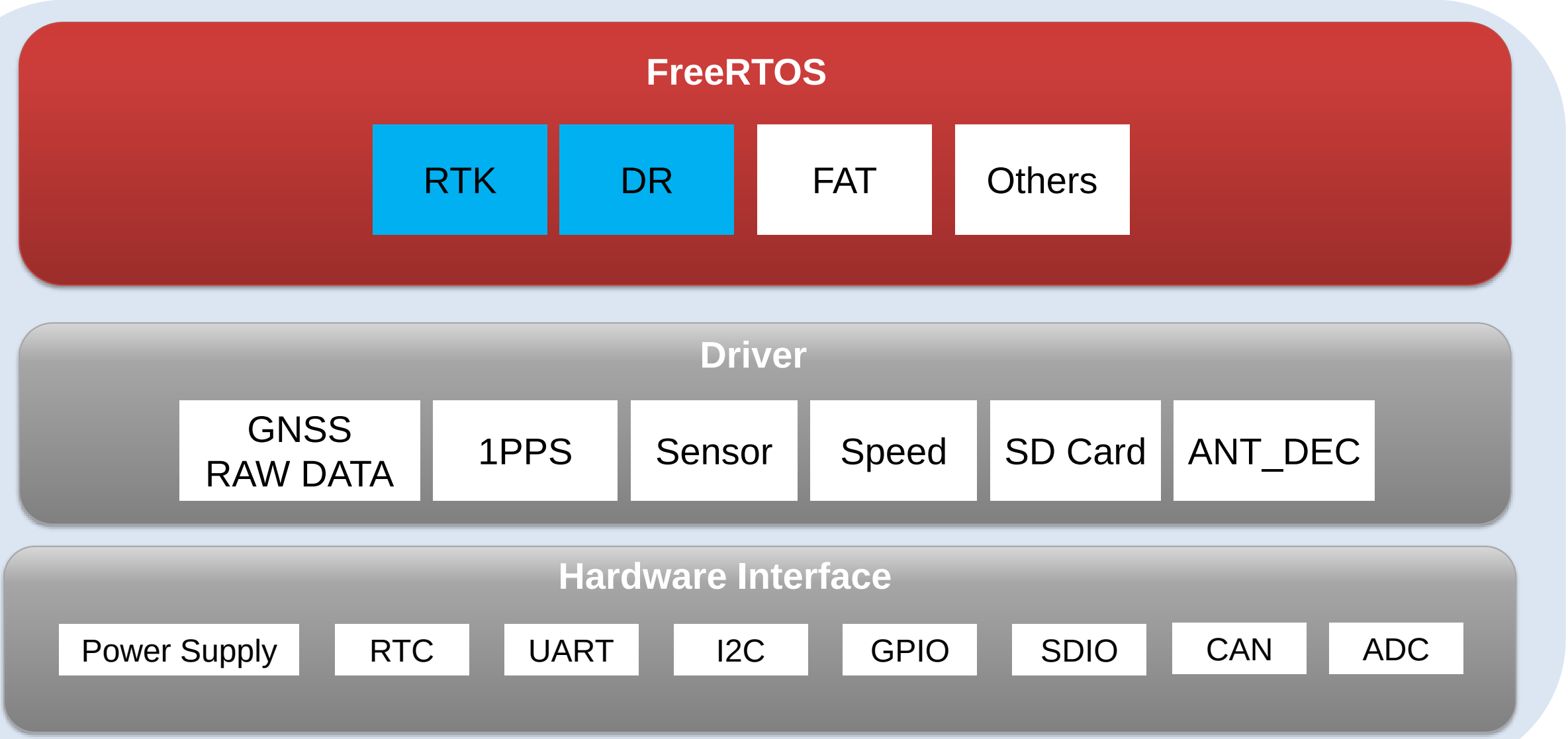


LG69T Supported Band

	GPS/QZSS					Beidou					Glonass		Galileo				IRNSS	SBAS
	L1C/A	L1C	L2C	L5	L6	B1I	B1C	B2I	B2a	B3I	L1OF	L2OF	E1	E5a	E5b	E6	L5	L1
Centrel frequency(MHZ)	1575.42	1575.42	1227.60	1176.45	1278.75	1561.10	1575.42	1207.14	1176.42	1268.52	1602.00	1246.00	1575.42	1176.42	1207.14	1278.75	1176.42	1575.42
LG69TAA	●	●		●		●	●		●				●	●			●	●
LG69TAP	●	●		●		●	●		●				●	●			●	●
LG69TAF	●	●		●		●	●		●				●	●			●	●
LG69TAB	●	●		●		●	●		●		●		●	●			●	●



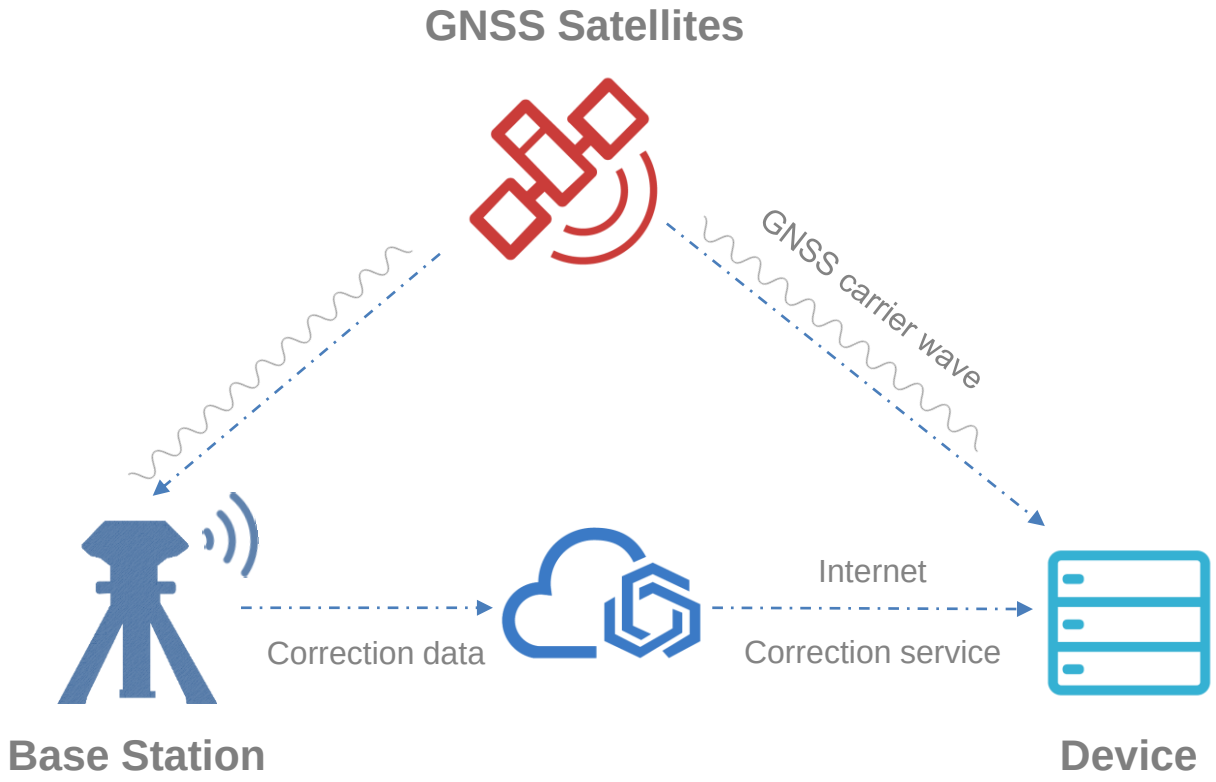
LG69T SW Architecture



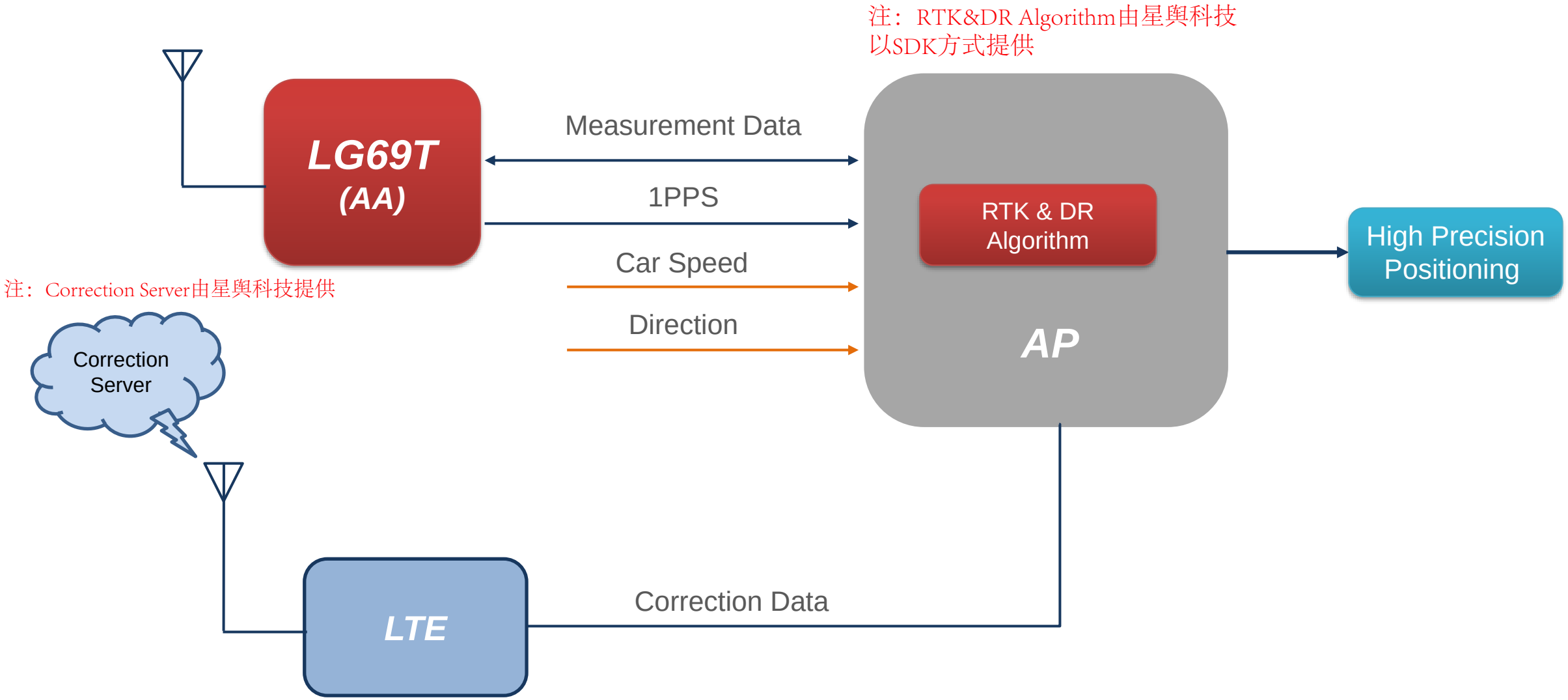
High Precision Positioning - RTK

Real-Time Kinematic (RTK) Positioning Process:

- Satellites broadcast the signal
- The base station calculates the common errors based on carrier phase, and then transfer them to the cloud server
- The device or receiver calculates a precise position with the carrier phase it received and the correction data from correction server



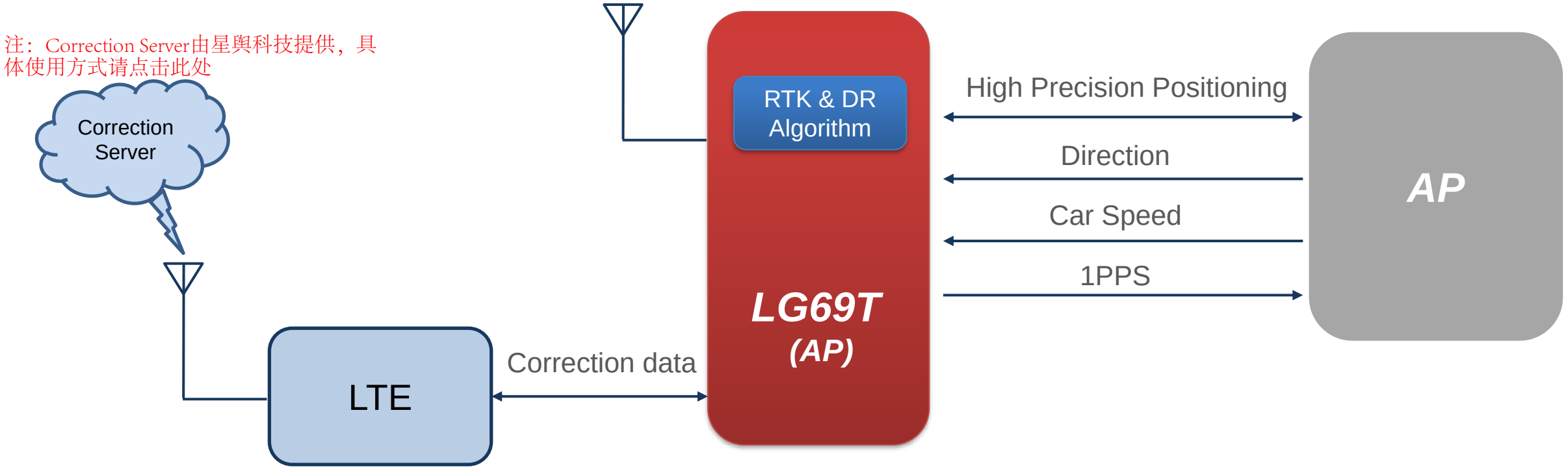
LG69T (AA) Application Architecture



LG69T (AP) Application Architecture

注：RTK&DR Algorithm由星舆科技集成到LG69T(AP)固件中

注：Correction Server由星舆科技提供，具体使用方式请点击此处



Thank you!

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