








Product	Standalone Modules					Patch Antenna Modules		
	L20	L26	L70	L70-R	L76	L80	L86	
	Compatible		Compatible			Compatible		
Picture								
GNSS	GPS/ QZSS	GLONASS/ GPS/ QZSS	GPS/ QZSS	GPS/ QZSS	GLONASS/ GPS/ QZSS	GPS/ QZSS	GLONASS/GPS/QZSS	
Packaging	24-pin LCC	24-pin LCC	18-pin LCC	18-pin LCC	18-pin LCC	12-pin LCC	12-pin LCC	
Dimensions	16.0 × 12.2 × 2.4 mm	16.0 × 12.2 × 2.4 mm	10.1 × 9.7 × 2.5 mm	10.1 × 9.7 × 2.5 mm	10.1 × 9.7 × 2.5 mm	16.0 × 16.0 × 6.45 mm	18.4 × 18.4 × 6.45 mm	
Weight(approx.)	1.0 g	1.0 g	0.6 g	0.6 g	0.6 g	6.0 g	7.6 g	
Temperature Range	-40 °C to +85 °C -45 °C to +125 °C	-40 °C to +85 °C -45 °C to +125 °C	-40 °C to +85 °C -45 °C to +125 °C	-40 °C to +85 °C -45 °C to +125 °C	-40 °C to +85 °C -45 °C to +125 °C	-40 °C to +85 °C -45 °C to +125 °C	-40 °C to +85 °C -45 °C to +125 °C	
<b>General Features</b>								
Chip Solution	SiRF IV	MT3333	MT3339	MT3337	MT3333	MT3339	MT3333	
Solution L1 Band Receiver (C/A Code)	Channel Number	48 Track	33 Track/ 99 Acq.	22 Track/ 66 Acq.	22 Track/ 66 Acq.	33 Track/ 99 Acq.	22 Track/ 66 Acq.	22 Track/ 66 Acq.
	SBAS	WAAS/ EGNOS	WAAS/ EGNOS/ MSAS/ GAGAN	WAAS/ EGNOS/ MSAS/ GAGAN	WAAS/ EGNOS/ MSAS/ GAGAN	WAAS/ EGNOS/ MSAS/ GAGAN	WAAS/ EGNOS/ MSAS/ GAGAN	WAAS/ EGNOS/ MSAS/ GAGAN
Sensitivity	Autonomous Acquisition	-148dBm	-148dBm	-148dBm	-148dBm	-148dBm	-148dBm	-148dBm
	Reacquisition	-160dBm	-160dBm	-160dBm	-160dBm	-160dBm	-160dBm	-160dBm
	Tracking	-163dBm	-167dBm	-165dBm	-165dBm	-165dBm	-165dBm	-165dBm
TTFF(Time To First Fix)	Cold Start	<35s, Autonomous 25s typ. With CGEE	<35s, Autonomous <15s, With EASY	<35s, Autonomous <15s, With EASY	<35s	<35s, Autonomous <15s, With EASY	<35s, Autonomous <15s, With EASY	<35s, Autonomous <15s, With EASY
	Warm Start	<35s, Autonomous 10s typ. With CGEE	<30s, Autonomous <5s, With EASY	<30s, Autonomous <5s, With EASY	<30s	<30s, Autonomous <5s, With EASY	<30s, Autonomous <5s, With EASY	<30s, Autonomous <5s, With EASY
	Hot Start	<1s	<1s	<1s	<1s	<1s	<1s	<1s
Position Accuracy (autonomous)	<2.5m CEP	<2.5m CEP	<2.5m CEP	<2.5m CEP	<2.5m CEP	<2.5m CEP	<2.5m CEP	
Velocity Accuracy (without aid)	<0.01m/s	<0.1m/s	<0.1m/s	<0.1m/s	<0.1m/s	<0.1m/s	<0.1m/s	
Maximum Acceleration Accuracy (without aid)	<0.1 m/s <sup>2</sup>	<0.1 m/s <sup>2</sup>	<0.1 m/s <sup>2</sup>	<0.1 m/s <sup>2</sup>	<0.1 m/s <sup>2</sup>	<0.1 m/s <sup>2</sup>	<0.1 m/s <sup>2</sup>	
Timing Accuracy	<500ns	<10ns	<10ns	<15ns	<10ns	<10ns	<10ns	
Max Update Rate	5Hz	10Hz	10Hz	5Hz	10Hz	10Hz	10Hz	
Baud Rate(default)	4800bps	9600bps	9600bps	9600bps	9600bps	9600bps	9600bps	
Anti-jamming	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
<b>Electrical Data</b>								
Power Supply	2.0V to 3.6V	2.8V to 4.3V	2.8V to 4.3V	2.8V to 4.3V	2.8V to 4.3V	3.0V to 4.3V	3.0V to 4.3V	
I/O Voltage	2.0V to 3.6V	2.7V to 2.9	2.7V to 2.9	2.7V to 2.9	2.7V to 2.9	2.7V to 2.9V	2.7V to 2.9V	
Power Consumption	Acquisition	39mA	29mA (GPS+GLONASS) 26mA(GPS)	18mA	16mA	25mA (GPS+GLONASS) 21mA (GPS)	25mA	25mA
	Tracking	36mA	21mA(GPS+GLONASS) 18mA (GPS)	12mA	13mA	18mA (GPS+GLONASS) 15mA (GPS)	20mA	20mA
	Backup	33uA	7uA	7uA	8uA	7uA	7uA	7uA
<b>Interfaces</b>								
UART	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
IIC (NMEA)	No	No	No	No	No	No	No	
DR IIC	Yes	No	No	No	No	No	No	
Reset	No	Yes	Yes	Yes	Yes	Yes	Yes	
Time Pulse	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
<b>Antenna</b>								
Antenna Detection	No	Short circuit detection and protection Open circuit detection	No	No	No	Short circuit detection and protection Open circuit detection	Short circuit detection and protection Open circuit detection	
Antenna Type	Active or passive	Active or passive	Active or passive	Active or passive	Active or passive	Embedded patch antenna or external active antenna	Embedded patch antenna or external active antenna	
Antenna Power	External or internal	External or internal	External or internal	External or internal	External or internal	Internal	Internal	
<b>Certifications</b>								
Certifications	CE	CE	CE/ FCC	CE/ FCC	CE	CE	CE*	
<b>Recommended Applications</b>								
Recommended Applications	Vehicle Tracking and Tracing, Pet Tracking, Asset Tracking, Connected PND, GIS Application, Security, Industrial PDA, Digital Camera, etc.							