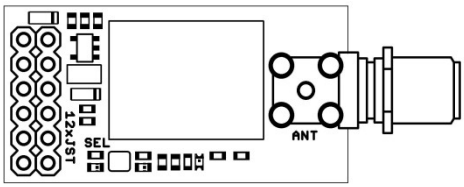
NEO-M8L

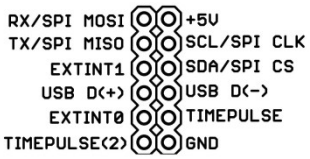
InCase PIN series GNSS ADR RAW receiver board

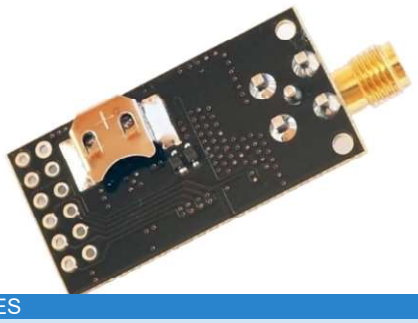
Features:

Reference: ELT0066

- Continuous navigation in urban environment, even at signal loss, with speed or wheel-tick information from the vehicle
- On-board low noise 3.3 V voltage regulator and RF filter for noise blocking
- **USB, I2C, SPI and UART** (Tx, Rx) **RAW** data out available
- **SMA** active antenna connector
- Active GNSS antenna support
- 12 pin 6x2 row holes with pitch 2.54 mm
- Time pulse LED 1, Time pulse LED 2
- u-center GPS evaluation software
- Extensive visualization and evaluation features
- Battery holder for 3 V type 621 Lithium battery
- Dimensions: **36x19 mm**
- Weight: **6.8 gr.**







GNSS FEATURES	
Receiver type	72-channel u-blox M8 engine GPS/QZSS L1 C/A, GLONASS L10F, Beidou B1I, Galileo E1B/C, SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN
GNSS platform	Concurrent GNSS
GNSS bands	L1C/A, L1OF, E1-B/C, B1I
Oscillators	Crystall Oscillator

PERFORMANCE			
Position accuracy (GPS)	1.5 m CEP (with SBAS) 2.5 m CEP (without SBAS)		
Attitude accuracy (GPS)	3.0 m CEP (with SBAS)		
Position error during GNSS loss	Rear wheel ticks Gyro + speed pulse Gyro + speed pulse + accelerometer		12% 3% 2%
Max nav. update rate	30 Hz		
Nav update rate (PVT)	2 Hz		
Navigation latency	<10 ms		
Max sensor output rate	100 Hz		
Acquisition	Cold start	Hot start	Aided start
GPS+GLONASS	26 s	1.5 s	3 s
GPS	30 s	1.5 s	3 s
GLONASS	31 s	1.5 s	3 s
Beidou	39 s	1.5 s	7 s
Galileo	57 s	1.5 s	7 s
Velocity accuracy	0.05 m/s		
Heading accuracy	1 deg		
Sensitivity (GPS+GLO):			
Tracking and Navigation	-167 dBm		
Reacquisition	-160 dBm		
Cold start	-148 dBm		
Hot start	-157 dBm		

OTHER FEATURES		
Anti-spoofing	Spoofing detection	
Memory	Flash	
Operating temperature	0 °C to +50 °C	
Supply voltage	4.5 V to 5.5 V	
Supply current	<70 mA (without external antenna)	
External antenna requirements	Supply voltage	3.0 V
	Consumption current	<50 mA