



**High sensitivity and stability GPS/SBAS Receiver**

**Model : KA-5M**



**Highlights :**

- 50-channel engine with over 1 million effective correlators
- Less than 1 second Time To First Fix for Hot and Aided Starts
- -160dBm SuperSense® acquisition and tracking sensitivity
- Accelerated startup at weak signals for modules with KickStart feature
- High immunity to jamming, advanced jamming suppression mechanism and innovative RF architecture
- Wide range of operating voltage.

## Specification

### Physical :

- ◆ Enclosure : High compact, corrosion-proof PC (polycarbonate) resin
- ◆ Construction : Hermetically sealed, fully waterproof
- ◆ Dimensions : 90mm(D) X 110mm(H)
- ◆ Weight : 65g (w/o cable & connector)
- ◆ Mounting : Pole mount to 1"-14 threaded pipe

### Environmental :

- ◆ Operating temperature : -30°C ~ +85°C
- ◆ Storage temperature : -40°C ~ +90°C
- ◆ Relative humidity : 95% non-condensing
- ◆ Waterproof : 100% waterproof(IPX-7)

### Antenna Element

- ◆ Center Frequency : 1575.42 Mhz  $\pm$  1.023Mhz
- ◆ Absolute gain zenith : +5dB typical
- ◆ Absolute gain 10° : -1dB typical
- ◆ Axial ratio : 3dB max
- ◆ Output VSWR : 1.5 max
- ◆ Output impedance : 50 ohm

### GPS Performance

- ◆ Receiver Type : 50 channels GPS L1 frequency C/A code
- ◆ Time-To-First-Fix2 :  
Cold Start (Autonomous) : 32 s  
Warm Start (Autonomous) : 32 s  
Hot Start (Autonomous) : <1 s
- ◆ Sensitivity  
Tracking & Navigation : -160 dBm  
Reacquisition : -160 dBm  
Cold Start (Autonomous) : -143 dBm
- ◆ Horizontal Position Accuracy  
Autonomous : < 2.5 m  
SBAS : < 2.0 m
- ◆ Dynamics :  $\leq$  4 g
- ◆ Operational Limits Velocity : 600 m/s

### User Protocol

- ◆ Protocols : NMEA-0183 v2.0 @ 4800 baud, 8N1
- ◆ NMEA Messages : RMC, GGA, GSA, GSV, GLL, VTG

### Interface

- ◆ Output : RS-232
- ◆ Power : 5 to 12V DC

### Wire Link :

| Wire Color | Designation            |
|------------|------------------------|
| Red        | +5V to 12V power input |
| Black      | Ground                 |
| Green      | TX +                   |
| White      | TX -                   |
| Yellow     | NC                     |
| Blue       | NC                     |