HITACHI Inspire the Next

PKM-77Ka Mobile Antenna System

Vehicle Mounted / High Performance / SNG/ DSNG Application / Auto Pointing

Ka Band Applications

Hitachi's PKM-77Ka is the latest technology, compact, vehicle mounted antenna system which is designed for professional mission critical applications such as high bit rate/high power news gathering SNG, disaster relief, corporate networks, communications etc....

User Friendly Operation

The operation is extremely easy with antenna sensor kit option and is fitted with a Pals PAC-450 indoor antenna control unit which provides truly user friendly operation.

One touch Auto-stow, Auto-deploy and high precision Autopeak features with fast-mid-slow motor speed control in all three axes makes the antenna system leader in their class.

Reliable Driving & More Space In Vehicle

Optionally provided antenna pod (case) not only provides an aerodynamic and nice looking shape the antenna on the top of the vehicle but also fully accommodates the antenna reflectors, feed arm, antenna mount and RF components. When stowed PKM-77Ka has a very low profile which provides more reliable driving and also it provides more space in the vehicle, reduces high frequency losses, noises and heat.

Easy Installation

The PKM-77Ka DriveNews[™] with special vehicle mounting interface can be installed on almost any vehicle without requiring vital changes or modification on the vehicle. The lightweight design keeps the vehicle center of gravity low, minimizing the effect on the original driving characteristics.

KEY FEATURES

Compatibility

- · Meets different application area standards
- RF characteristic is fully compliant with satellite operator requirements
- Lightweight aerodynamic design to improve vehicle driving performance

Easy Management

- · Easy vehicle integration
- On-Air position within ~3 minutes after deployment
- User friendly no need for technical personnel
- For M&C; one button wirelessly controlled, very robust and modernly designed Antenna Controller Unit (PAC-450) is used
- Responsive web interface for all mobile devices (with PAC-450)

High Efficiency

- · High capacity of gain and low loss
- State-of-art antenna acquisition algorithm (automatic beam selection)

Structural Advantages

- Steel Plate Reflector
- · Glass-fiber reinforced polyester pod
- Fully motorized driving mechanism with low backlash gear system.
- Offset (prime focus) circular antenna and feed system
- Drive gear system could be overridden by manually
- High resistance for toughest weather conditions (wind, rain, sun...)
- The antenna reflector and motor assembly are in-house manufacturing





TECHNICAL SPECIFICATIONS

ANTENNA SPECIFICATION

| Antenna Model | DriveNews™ F | PKM-77Ka | |
|------------------------|---|-------------------------------------|--|
| Antenna Diameter | 77 cm | | |
| Antenna Pointing | Antenna Control Unit PAC-450: Automatic pointing System, supports GPS antenna, com- pass and inclinometer. The PAC 450 ANTENNA CONTROLLER is designed to be easily controlled by mobile devices such as smartphones and tablets. The ease of the reliable and instant wireless com- munication tools eliminates the requirement of handheld devices used in conventional anten- na control units. All in one packaging and the communication with adjustable IP without the need of any software packages. | | |
| Antenna Position | 2-axis motorized pedestal | | |
| Azimuth Travel | ± 195° | | |
| Elevation Travel | 10° to +80° | | |
| Drive Rates | ELEVA- TION: AZIMUTH: | High Speed 1.5°/sec 3.50°/sec | Slow Speed 0.32°lsec (Variable 0.32°lsec to 1.5°lsec) 0.32°lsec (Variable 0.32°lsec (Variable 0.32°lsec to 3.50°lsec) 0.1°lsec |
| | | | |
| Reflector | Offset, Prime Focus | | |
| Reflector Material | Steel Plate | | |
| Polarization | Circular | | |
| PHYSICAL SPECIFICATION | | | |
| Dimensions (L X W x H) | 1399 mm x 830 mm x 329 mm | | |
| Weight | 60 kg without (POD) shell, 67 kg with (POD) shell | | |
| | 1170 mm | | |



ENVIRONMENTAL SPECIFICATION

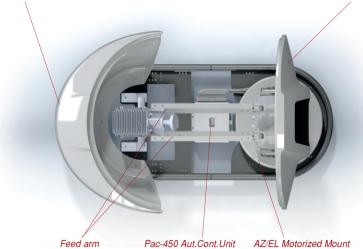
| Temperature Range | -30° to +55°C |
|------------------------------|------------------------------|
| Survival Temperature | -40° to +60°C |
| Humidity | 0% to 100% with condensation |
| Operational Wind Speed | 60 km/h |
| Survival Wind Speed (Stowed) | 130 km/h |

RF SPECIFICATION

| Tx Frequency Range | 28.1 – 30.0 GHz |
|---------------------------|--------------------------|
| Rx Frequency Range | 18.3 – 20.2 GHz |
| Tx Antenna Gain | 45.8 dBi @ 29.75 Ghz |
| Rx Antenna Gain | 42.5 dBi @ 20.2 Ghz |
| G/T | 17.5 dBIK @ 20 Ghz |
| Antenna Noise Temperature | 105K @ 20° Elevation |
| VSWR | Rx: <1.3:1 Tx: <1.3:1 |
| DSNG EIRP | 48.4 dBW1 with 3 W BUC |



Main Reflector



Pac-450 Aut.Cont.Unit AZ/EL Motorized Mount

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