

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 Auto-peak 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™ PKM-77Ka		
Antenna Diameter	77 cm		
Antenna Pointing	<p>Antenna Control Unit PAC-450: Automatic pointing System, supports GPS antenna, compass and inclinometer.</p> <p>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 communication tools eliminates the requirement of handheld devices used in conventional antenna control units. All in one packaging and the communication with adjustable IP without the need of any software packages.</p>		
Antenna Position	2-axis motorized pedestal		
Azimuth Travel	± 195°		
Elevation Travel	10° to +80°		
Drive Rates		High Speed	Slow Speed
	ELEVATION:	1.5°/sec	0.32°/sec (Variable 0.32°/sec to 1.5°/sec)
	AZIMUTH:	3.50°/sec	0.32°/sec (Variable 0.32°/sec to 3.50°/sec)
	Peaking Speed	0.1°/sec	
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		
Deployed Height	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 dBW I with 3 W BUC

