

Harxon

Innovation

to Promote Industrial Progress



HARXON CORPORATION

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HARXON CORPORATION

The Harxon logo consists of a stylized blue 'H' with an orange square at its top left corner, followed by the word 'arxon' in a bold, blue, sans-serif font.

About Harxon

Harxon Corporation is one of the worldwide leading suppliers in satellite positioning area, and focus on the research and manufacture of positioning satellite antenna, mobile satellite receiving system and wireless data transmission products. Now Harxon has grown into a global satellite positioning GPS antenna supplier and will be the main supplier in wireless data transmission area in China.

Harxon Corporation takes technology innovation as the kernel competitive ability of the company's development. From the foundation of the company, we built a top research and development team: many team members were joined in national 863 project and are the key member in NSFC(National Natural Science Foundation of China). Investment of 10% turnover into R&D every year guaranteed Harxon's top vantage at GPS/GLONASS/GALILEO/BDS system, and gradually formed a global leading advantage in some key technology and frontier technology fields.

In 2011 major national science and technology industrialization projects of BDS compatible high accuracy antenna, Harxon won the bid as the first place. In 2012 Harxon got the first prize at 2012 satellite navigation progress in science and technology. All these honors proved Harxon's outstanding technology ability.

Harxon is not only concentrating on self-technology-development but also insisting carrying open and cooperative policy in technology. We have built the close cooperation relationship with R&D departments in USA and Europe to improve our worldwide competitive ability.

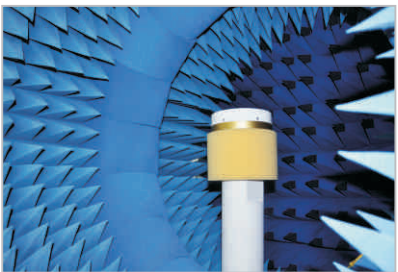
We have already started up the strategy of internationalization and cooperated with the leading clients of the whole world to supply excellent products for them.

In the future, Harxon Corporation will base on international talent, focus on international market and rely on international capital. We will do our best to achieve value and success for our clients, and create the worldwide famous Harxon brand!

Mission and Vision

Mission: Industry-leading technology to promote industrial progress, excellent products to enhance clients' value.

Vsion: To be a pilot in global satellite positioning and communication field.



Efficient R&D Management

Harxon corporation has strong technical strength in satellite antenna area, there are many top antenna technology experts in domestic satellite antenna technology field. Most of the experts are graduated from the famous institutions in China, who have many years experience in technology development. They have a deep understanding of the industrial status and can accurately grasp the development trend, can make active and effective response, thus ensuring our leadership in national even global technology area. At the same time, Harxon corporation prestigious experts of Qinghua University, Zhejiang University and other top experts within the operating system through the establishment of joint laboratories, part-time expert appointed model, in addition to broaden the strategic vision of the company, effectively enhance the strength of research and development to maintain the company's competitiveness.

We've undertook a number of major national projects, including the core technology's research and development of BDS I and BDS II, GPS navigation, surveying and positioning. We've made great contributions to national satellite technology development and breakthrough. Meanwhile the company developed the dual-frequency double-star survey antenna, aviation antenna and attitude antenna and other products, all the technical performance indicators have reached even exceeded the international counterparts. These products have been scale produced and supplied to more than 10 top global customers.

Harxon corporation knows that the quality of products is one of the key elements for a company's survival and development. To provide our customer with high quality, high performance products is always our goal. We attach great importance to quality management and always adhere to "performance first, quality first" principle.

Harxon corporation had set up a complete product quality assurance system and processes. We have a efficient and meticulous quality management processes in all aspects, as well as specific quality standards; on the other hand, we established a quality detection system of environment, through the international first-class quality testing equipment like: dark room, aging room, high temperature box, shaking table, fog chamber and other professional detection equipments, to ensure all of our products are available in a variety of environments.

Our Products

SATELLITE COMMUNICATION SERIES/01

- Marine Satellite TV Antenna /02
- Vehicle Satellite TV Antenna /05

GNSS ANTENNA SERIES/06

- Handheld Antenna/07
- Survey Antenna/08
- Choke Ring Antenna/10
- Aviation Antenna/12
- Anti-jamming Antenna/14
- Timing Antenna/15

WIRELESS TRANSMISSION SERIES/16

- Built-in Wireless Data Radio/17
- External Wireless Data Radio/18

Marine Satellite TV Antenna



Marine Satellite TV Antenna



Application Range

Marine satellite TV antenna combine with satellite communications, automatic controlling, machinery manufacturing, and other fields of high technology, which can automatically search, distinguish, switch, dynamically capture direct broadcast satellite signals.The antenna can receive real-time synchronous orbit satellite television signals in both sailing and static conditions.

Technical Feature

- Biaxial servo intelligent control systems, can automatically search, distinguish and tracking satellite.
- Capture satellite signals in a short time.
- Can receive TV programs of left-handed right-handed Linear polarization at the same time.
- Real-time monitoring system.
- Resistance to corrosion shock and vibration.

| | |
|-----------------------------|---------------------|
| Model | HX-SR2002L |
| Antenna dish diameter | Φ32cm |
| Polarization mode | Vertical/Horizontal |
| Minimum EIRP | 51dBW |
| Azimuth range | 0° ~720° |
| Elevation range | 0° ~90° |
| Turn rate | 60°/s |
| Skew Control | Manual |
| Antenna size | Φ38.5cm×39.5cm |
| Weight | 5.5Kg |
| Operating voltage | 9~30Vdc/220Vac |
| Power consumption | <20W |
| Operating temperature range | -20℃~70℃ |
| Storage temperature range | -25℃~85℃ |
| Humidity | 95% Non-condensing |
| Waterproof level | IPX6 |

Marine Satellite TV Antenna



Marine Satellite TV Antenna

Application Range

Marine satellite TV antenna combine with satellite communications, automatic controlling, machinery manufacturing, and other fields of high technology, which can automatically search, distinguish, switch, dynamically capture direct broadcast satellite signals.The antenna can receive real-time synchronous orbit satellite television signals in both sailing and static conditions.

Technical Feature

- Biaxial servo intelligent control systems, can automatically search, distinguish and tracking satellite.
- Capture satellite signals in a short time.
- Can receive TV programs of left-handed right-handed circular polarization at the same time.
- Real-time monitoring system.
- Resistance to corrosion shock and vibration.

| Model | HX-SR4002L | HX-SR4002T |
|-----------------------------|---------------------|---------------------|
| Antenna dish diameter | Φ45cm | Φ45cm |
| Polarization mode | Vertical/Horizontal | Vertical/Horizontal |
| Minimum EIRP | 49dBW | 49dBW |
| Azimuth range | 0° ~720° | 0° ~720° |
| Elevation range | 0° ~110° | 0° ~110° |
| Skew Control | Manual | Automatic |
| Turn rate | 25°/s | 25°/s |
| Antenna size | Φ51cm×53cm | Φ51cm×53cm |
| Weight | 10.5Kg | 10.5Kg |
| Operating voltage | 9~30Vdc/220Vac | 9~30Vdc/220Vac |
| Power consumption | <20W | <20W |
| Operating temperature range | -20℃~70℃ | -20℃~70℃ |
| Storage temperature range | -25℃~85℃ | -25℃~85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing |
| Waterproof level | IPX6 | IPX6 |

Marine Satellite TV Antenna



Marine Satellite TV Antenna

Application Range

Marine satellite TV antenna combine with satellite communications, automatic controlling, machinery manufacturing, and other fields of high technology, which can automatically search, distinguish, switch, dynamically capture direct broadcast satellite signals.The antenna can receive real-time synchronous orbit satellite television signals in both sailing and static conditions.

Technical Feature

- Biaxial servo intelligent control systems, can automatically search, distinguish and tracking satellite.
- Capture satellite signals in a short time.
- Can receive TV programs of left-handed right-handed circular polarization at the same time.
- Real-time monitoring system.
- Resistance to corrosion shock and vibration.

| Model | HX-SR5002L | HX-SR5002T |
|-----------------------------|---------------------|---------------------|
| Antenna dish diameter | Φ60cm | Φ60cm |
| Polarization mode | Vertical/Horizontal | Vertical/Horizontal |
| Minimum EIRP | 47dBW | 47dBW |
| Azimuth range | 0° ~720° | 0° ~720° |
| Elevation range | 0° ~110° | 0° ~110° |
| Skew Control | Manual | Automatic |
| Turn rate | 25°/s | 25°/s |
| Antenna size | Φ70cm×70cm | Φ70cm×70cm |
| Weight | 20Kg | 20Kg |
| Operating voltage | 9~30Vdc/220Vac | 9~30Vdc/220Vac |
| Power consumption | <20W | <20W |
| Operating temperature range | -20℃~70℃ | -20℃~70℃ |
| Storage temperature range | -25℃~85℃ | -25℃~85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing |
| Waterproof level | IPX6 | IPX6 |

Vehicle Satellite TV Antenna



Application Range

Automatic control system based on GPS/INS, combined with GPS and 6 degrees of freedom inertial measurement unit and magnetic field meter sensor unit, optimization of most robust algorithm and ASL satellite identification algorithm , provides the user with high stability and high reliability satellite antenna , suitable for the installation and use of medium and small sized vehicle.

Technical Feature

- Using GPS/INS fusion and signal tracking technology to calculate precise attitude, ensure the accurate alignment of the satellite in a variety of conditions.
- The high reliability of the loading and unloading design ensure the stability of products.
- Using ASL satellite signal recognition technology, ensure the searching accuracy and enhance the tracking speed.



Vehicle Satellite TV Antenna



GNSS ANTENNA SERIES

| | |
|-------------------|---------------------|
| Model | HX-SF8002T |
| Frequency | Ku 10.7~12.7GHz |
| Polarization | Linear/Circular |
| Dish Caliber | 85cm |
| Gain | 12.5GHz 39.44dB |
| Capture time | <1 min |
| Elevation | 0°~90° |
| Azimuth | 0°~360° |
| Skew | -90°~+90° Automatic |
| Operating voltage | 9~30VDC |

Handheld Antenna



Application Range

The handheld antenna is a series of antenna for GIS handheld, which satisfy the requirement of high precision, and can be matched with various OEM boards.

Technical Feature

- Adopt multi feed design to ensure the superposition of phase center and geometrical center, and minimize the influence to measurement error.
- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- Customizing according to the requirements of customer.



Handheld Antenna

| Model | HX-GH208A | HX-GH219A | HX-GH405A | HX-BH501A |
|-----------------------|--------------------|----------------------|----------------------------|---------------------------|
| Antenna Spec. | | | | |
| Frequency Range | GPS L1/L2 | GPS L1 GLONASS L1 | GPS L1/L2 GLONASS L1/L2 | BDS B1/B2/B3 GPS L1/L2 |
| Impedance | 50ohm | 50ohm | 50ohm | 50ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤1.5 | ≤1.5 | ≤1.5 | ≤2.0 |
| Peak Gain | ≥3dBi | ≥3dBi | ≥3dBi | ≥3dBi |
| LNA Spec. | | | | |
| LNA Gain | 27dB | 27dB | 27dB | 27dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±2dB | ±2dB | ±2dB | ±2dB |
| Current Consumption | ≤45mA | ≤45mA | ≤50mA | ≤50mA |
| Mechanical Spec. | | | | |
| Dimension | 78×78×15mm | 78×78×10mm | 78×78×16mm | 79.9×81.5×16mm |
| Connector | MCX-JE MCX-KE | MCX-JE MCX-KE | MCX-KE | MMCX-KE |
| Weight | 95g | 85g | 105g | 105g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Mini-survey Antenna



Mini-survey Antenna



Application Range

Mini-survey antenna has passed through IGS phase center certification. With the small size and patent-protected design, this antenna has become the preferred product for external antenna of the GIS handheld.

Technical Feature

- Adopt multi feed design to ensure the superposition of phase center and geometrical center, and minimize the influence to measurement error.
- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- Multi-path rejection board inside can eliminate the multi-path influence to measurement error.
- Lightning proof circuit inside can protect the LNA from being damaged by surge immunity.

| Model | HX-GS186A | HX-GS288A | HX-GS488A | HX-BS681A |
|-----------------------|--------------------|----------------------|----------------------------|---|
| Antenna Spec. | | | | |
| Frequency Range | GPS L1 | GPS L1 GLONASS L1 | GPS L1/L2 GLONASS L1/L2 | GPS L1/L2 GLONASS L1/L2 BDS B1/B2 |
| Impedance | 50ohm | 50ohm | 50ohm | 50ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤1.5 | ≤1.5 | ≤1.5 | ≤1.5 |
| Peak Gain | ≥4.5dBi | ≥4.5dBi | ≥4.5dBi | ≥5.5dBi |
| Phase Center Error | ±2mm | ±2mm | ±2mm | ±2mm |
| LNA Spec. | | | | |
| LNA Gain | 28dB | 40dB | 40dB | 40dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±1dB | ±2dB | ±2dB | ±1dB |
| Current Consumption | ≤35mA | ≤45mA | ≤45mA | ≤45mA |
| Group Delay | / | / | <5ns | <5ns |
| Mechanical Spec. | | | | |
| Dimension | Φ147×62mm | Φ147×62mm | Φ147×62mm | Φ147×62mm |
| Connector | TNC-K | TNC-K | TNC-K | TNC-K |
| Weight | 320g | 390g | 400g | 520g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Survey Antenna



Survey Antenna

Application Range

Survey antenna is the traditional RTK product standard antenna, can be widely used in land survey, marine survey, channel survey, seismic monitoring, bridge survey, container operation, etc.

Technical Feature

- Adopt multi feed design to ensure the superposition of phase center and geometrical center, and minimize the influence to measurement error.
- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- Multi-path rejection board inside can eliminate the multi-path influence to measurement error.
- Lightning proof circuit inside can protect the LNA from being damaged by surge immunity.

| | | | | |
|-----------------------|--------------------|----------------------------|---|---|
| Model | HX-GS181A | HX-GS481A | HX-BS682A | HX-CSX601A NEW |
| Antenna Spec. | | | | |
| Frequency Range | GPS L1 | GPS L1/L2 GLONASS L1/L2 | GPS L1/L2 GLONASS L1/L2 BDS B1/B2 | GPS L1/L2/L5 GLONASS L1/L2 GALILEO E5a/E5b/E6 BDS B1/B2/B3 |
| Impedance | 50ohm | 50ohm | 50ohm | 50ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤1.5 | ≤1.5 | ≤2.0 | ≤1.5 |
| Gain at Zenith | ≥5.5dBi | ≥5.5dBi | ≥5.5dBi | ≥5.5dBi |
| Phase Center Error | ±2mm | ±2mm | ±2mm | ±2mm |
| LNA Spec. | | | | |
| LNA Gain | 36dB | 40dB | 40dB | 40dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±2dB | ±2dB | ±2dB | ±2dB |
| Current Consumption | ≤35mA | ≤45mA | ≤45mA | ≤45mA |
| Group Delay | / | ≤5ns | ≤5ns | ≤5ns |
| Mechanical Spec. | | | | |
| Dimension | Φ190×67.4mm | Φ190×67.4mm | Φ190×67.4mm | Φ173.4×62.6mm |
| Connector | TNC-K | TNC-K | TNC-K | TNC-K |
| Weight | 490g | 560g | 580g | 580g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Choke Ring Antenna



3D Choke Ring Antenna

Application Range

The 3D Choke ring antenna to meet the demand of high precision and multi-system compatibility. With the phase center certification by IGS, it can be widely applied in CORS station, land surveying, seismic monitoring, bridge deformation monitoring, etc.

Technical Feature

- Phase center error reaches the millimeter level with good stability and repeatability.
- Adopt dual band choke ring design to ensure the dual band performance.
- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- LNA has high gain which ensures the operation with long cable.
- Unique waterproof design ensures the absolutely seal of kernel part and operation outdoors.

| | | | | |
|-----------------------|----------------------------|---|------------------------|---|
| Model | HX-GG486A | HX-CG7601A NEW | HX-BG483A | HX-BG682A |
| Antenna Spec. | | | | |
| Frequency Range | GPS L1/L2 GLONASS L1/L2 | GPS L1/L2/L5 GLONASS L1/L2 GALILEO E5a/E5b/E6 BDS B1/B2/B3 | BDS B1/B2 GPS L1/L2 | GPS L1/L2 GLONASS L1/L2 BDS B1/B2 |
| Impedance | 50ohm | 50ohm | 50ohm | 50ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤1.5 | ≤2.0 | ≤2.0 | ≤2.0 |
| Gain at Zenith | ≥6dBi | ≥7dBi | ≥7dBi | ≥7dBi |
| Phase Center Error | ±1mm | ±1mm | ±1mm | ±1mm |
| LNA Spec. | | | | |
| LNA Gain | 50dB | 50dB | 50dB | 65dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±2dB | ±2dB | ±1dB | ±1dB |
| Current Consumption | ≤35mA | ≤45mA | ≤50mA | ≤50mA |
| Group Delay | <5ns | <5ns | <5ns | <5ns |
| Mechanical Spec. | | | | |
| Dimension | Φ322×261mm | Φ322×261mm | Φ322×261mm | Φ322×261mm |
| Connector | TNC-K | TNC-K | TNC-K | TNC-K |
| Weight | 4920g | 5150g | 4920g | 5150g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Choke Ring Antenna



Application Range

The Mini choke ring antenna to meet the demand of high precision and multi-system compatibility. With the phase center certification by IGS, it can be widely applied in CORS station, land surveying, seismic monitoring, bridge deformation monitoring, etc.

Technical Feature

- Phase center error reaches the millimeter level with good stability and repeatability.
- Adopt dual band choke ring design to ensure the dual band performance.
- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- LNA has high gain which ensures the operation with long cable.
- Unique waterproof design ensures the absolutely seal of kernel part and operation outdoors.



Choke Ring Antenna

| Model | HX-GG481A | HX-BG481A | HX-BG681A | HX-CGX601A NEW |
|-----------------------|----------------------------|------------------------|---|---|
| Antenna Spec. | | | | |
| Frequency Range | GPS L1/L2 GLONASS L1/L2 | BDS B1/B2 GPS L1/L2 | GPS L1/L2 GLONASS L1/L2 BDS B1/B2 | GPS L1/L2/L5 GLONASS L1/L2 GALILEO E5a/E5b/E6 BDS B1/B2/B3 |
| Impedance | 50ohm | 50ohm | 50ohm | 50ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤1.5 | ≤2.0 | ≤2.0 | ≤2.0 |
| Peak Gain | ≥6dBi | ≥6dBi | ≥6dBi | ≥5dBi |
| Phase Center Error | ±1mm | ±1mm | ±1mm | ±1mm |
| LNA Spec. | | | | |
| LNA Gain | 40dB | 40dB | 50dB | 50dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±2dB | ±1dB | ±3dB | ±2.0dB |
| Current Consumption | ≤45mA | ≤65mA | ≤65mA | ≤60mA |
| Group Delay | <5ns | <5ns | <5ns | <5ns |
| Mechanical Spec. | | | | |
| Dimension | Φ379×312mm | Φ379×312mm | Φ379×312mm | Φ379×312mm |
| Connector | N-K | N-K | N-K | TNC-K |
| Weight | 7120g | 7120g | 7200g | 7320g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Aviation Antenna



Application Range

The circular Aviation Antenna has the features of small size, beautiful appearance, high stability, greatly improve survey accuracy of high speed vehicle. Can be matched with various receivers, widely used in aerospace, agricultural machinery, container operation, monitoring and other.

Technical Feature

- LNA has high gain to ensure operation with long cable.
- Radome uses heat-resistant material to protect internal components.
- Unique waterproof design ensures the absolutely seal of kernel part and long-time operation.



Circular Aviation Antenna

| Model | HX-GA284A | HX-GA283A | HX-GA483A | HX-CA7607A NEW |
|-----------------------|----------------------|--------------------|----------------------------|--|
| Antenna Spec. | | | | |
| Frequency Range | GPS L1 GLONASS L1 | GPS L1/L2 | GPS L1/L2 GLONASS L1/L2 | BDS B1/B2 GPS L1/L2 GLONASS L1/L2 GALILEO E5b |
| Impedance | 50ohm | 50ohm | 50ohm | 50ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | <3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Peak Gain | ≥3dBi | ≥3dBi | ≥3dBi | ≥3dBi |
| LNA Spec. | | | | |
| LNA Gain | 36dB | 36dB | 36dB | 36dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤1.5 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±2dB | ±2dB | ±2dB | ±1dB |
| Current Consumption | ≤45mA | ≤45mA | ≤45mA | ≤45mA |
| Group Delay | / | ≤5ns | ≤5ns | |
| Mechanical Spec. | | | | |
| Dimension | Φ88.9×35mm | Φ88.9×35mm | Φ88.9×35mm | Φ90×41.5mm |
| Connector | TNC-K | TNC-K | TNC-K | SMA Female |
| Weight | 210g | 220g | 250g | 250g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Aviation Antenna

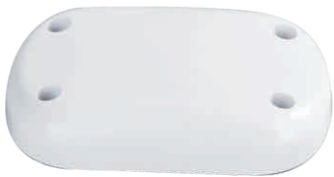


Application Range

The aviation antenna has the features of small size, beautiful appearance, high stability, which can greatly improve the survey accuracy of high speed carrier. It can be matched with various receivers, and used in aerospace, agricultural machinery, container operation, monitoring, etc.

Technical Feature

- LNA has high gain to ensure operation with long cable.
- Radome uses heat-resistant material to protect internal components.
- Unique waterproof design ensures the absolutely seal of kernel part and long-time operation.



Aviation Antenna

| Model | HX-GA181A | HX-GA282A | HX-GA281A | HX-GA482A |
|-----------------------|--------------------|----------------------|--------------------|----------------------------|
| Antenna Spec. | | | | |
| Frequency Range | GPS L1 | GPS L1 GLONASS L1 | GPS L1/L2 | GPS L1/L2 GLONASS L1/L2 |
| Impedance | 50Ohm | 50Ohm | 50Ohm | 50Ohm |
| Polarization | RHCP | RHCP | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° | 360° | 360° |
| Output VSWR | ≤1.5 | ≤1.5 | ≤1.5 | ≤1.5 |
| Peak Gain | ≥3dBi | ≥3dBi | ≥3dBi | ≥3dBi |
| LNA Spec. | | | | |
| LNA Gain | 36dB | 36dB | 36dB | 36dB |
| Noise Figure | ≤2.0dB | ≤2.0dB | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 | ≤2.0 | ≤2.0 |
| Ripple | ±1dB | ±2dB | ±2dB | ±2dB |
| Drain Voltage | 3~18VDC | 3~18VDC | 3~18VDC | 3~18VDC |
| Current Consumption | ≤35mA | ≤45mA | ≤45mA | ≤45mA |
| Group Delay | / | / | ≤5ns | ≤5ns |
| Mechanical Spec. | | | | |
| Dimension | 119.8×76.6×34.5mm | 119.8×76.6×34.5mm | 119.8×76.6×34.5mm | 119.8×76.6×34.5mm |
| Connector | TNC-K | TNC-K | TNC-K | TNC-K |
| Weight | 220g | 230g | 250g | 250g |
| Environmental Spec. | | | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing | 95% Non-condensing |

Anti-jamming Antenna



Application Range

Anti-jamming antenna can work with anti-jamming receiver to eliminate the influence by different kinds of interference, such as pulse wave, wide band interference, continuous wave, etc.

Technical Feature

- The mutual coupling between two adjacent antenna elements is minimized.
- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- Unique waterproof design ensures the absolutely seal of kernel part and operation outdoors.
- Small size and easy to be installed.



4-element Anti-jamming Antenna

| Model | HX-GPA182A |
|-----------------------|--------------------|
| Antenna Spec. | |
| Frequency Range | GPS L1 |
| Impedance | 50Ohm |
| Polarization | RHCP |
| Axial Ratio | ≤3dB |
| Azimuth Coverage | 360° |
| Output VSWR | ≤1.5 |
| Peak Gain | ≥3dBi |
| Array Element | 4 |
| LNA Spec. | |
| LNA Gain | 30dB |
| Noise Figure | ≤2.0dB |
| Output VSWR | ≤2.0 |
| Ripple | ±1dB |
| Drain Voltage | 3~18VDC |
| Current Consumption | ≤35mA×4 |
| Mechanical Spec. | |
| Dimension | Φ186×34.5mm |
| Connector | SMA-K |
| Weight | 840g |
| Environmental Spec. | |
| Operating Temperature | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ |
| Humidity | 95% Non-condensing |

Timing Antenna



Application Range

Timing antenna can work well with many kinds of receivers produced by different brands to provide precise reference clock for base station, electric network, etc.

Technical Feature

- Antenna element has high gain and wide beamwidth to ensure the signal receiving performance of satellite at low elevation angle.
- Adopt pre-filtering technology to reject out-of-band interference and ensure operation at critical electromagnetic environment.
- Lightning proof circuit inside can protect the LNA from being damaged by surge immunity.
- Radome uses UV-proofing material to ensure long term operation outdoors.

| Model | HX-GT181A | HX-GT281A |
|-----------------------|--------------------|----------------------|
| Antenna Spec. | | |
| Frequency Range | GPS L1 | GPS L1 GLONASS L1 |
| Impedance | 50Ohm | 50Ohm |
| Polarization | RHCP | RHCP |
| Axial Ratio | ≤3dB | ≤3dB |
| Azimuth Coverage | 360° | 360° |
| Output VSWR | ≤1.5 | ≤1.5 |
| Peak Gain | ≥3dBi | ≥3dBi |
| LNA Spec. | | |
| LNA Gain | 40dB | 40dB |
| Noise Figure | ≤2.0dB | ≤2.0dB |
| Output VSWR | ≤2.0 | ≤2.0 |
| Ripple | ±2dB | ±2dB |
| Drain Voltage | 3~18VDC | 3~18VDC |
| Current Consumption | ≤45mA | ≤45mA |
| Mechanical Spec. | | |
| Dimension | Φ102×116mm | Φ102×116mm |
| Connector | N-K | N-K |
| Weight | 165g | 210g |
| Environmental Spec. | | |
| Operating Temperature | -40℃~+85℃ | -40℃~+85℃ |
| Storage Temperature | -55℃~+85℃ | -55℃~+85℃ |
| Humidity | 95% Non-condensing | 95% Non-condensing |



Timing Antenna



WIRELESS TRANSMISSION SERIES

Built-in Wireless Data Radio

External Wireless Data Radio



Built-in Wireless Data Radio



External Wireless Data Radio



Application Range

Wireless data radio is an advanced wireless transmission/receiving modem, which can provide a compact and flexible solution for many different long range applications , such as power supervisory control and data acquisition (SCADA), classification of automation, automation of air, water and wastewater monitoring and data acquisition (SCADA) and online transaction processing application.

Technical Feature

- High receiving sensitivity, long transmission distance.
- Output power stability, high reliability.
- With ESD and short-circuit protection.
- The built-in radio has the advantages of compact size , which is convenient for integration design.

Application Range

Wireless data radio is an advanced wireless transmission/receiving modem , which can provide a compact and flexible solution for many different long range applications , such as power supervisory control and data acquisition (SCADA), classification of automation, automation of air, water and wastewater monitoring and data acquisition (SCADA) and online transaction processing application.

Technical Feature

- High receiving sensitivity, long transmission distance.
- Output power stability, high reliability.
- With ESD and short-circuit protection.
- Water-proof design to ensure long-time outdoor operation.

| | |
|--------------------------------|---|
| Model | HX-DU1006D |
| Transceiver | |
| Frequency Range | 410MHz~470MHz |
| Tuning Range | 60MHz |
| Channel Spacing | 25kHz |
| Frequency Stability | ±1.0PPm |
| Type Of Emission | F1D |
| Communication Mode | Half-Duplex |
| Transmitter | |
| Carrier Power | 0.5W/1W@50ohm |
| Carrier Power Stability | ±1dB |
| Harmonics | <-30dBm@3rd harmonics |
| Receiver | |
| Sensitivity | -115dBm@BER10E-3 9600bps |
| Adjacent Channel Selectivity | 52dB@25KHz |
| Intermodulation Attenuation | |
| Same Co-Channel Rejection | >12dB |
| Data Modem | |
| Electrical Interface | UART |
| Data Speed Of Serial Interface | 19200bps/38400bps/115200bps optional |
| Data Speed Of Radio Interface | 9600bps/19200bps optional |
| Data Format | Asynchronous data |
| Data Connector | 0.5 mm spacing 30 pin double row connector |
| General | |
| Operating Voltage | 3.3v |
| Power Consumption | Receiver Mode: 0.4W Transmitter Mode: 3.3W |
| Operation Temperature | -40°C ~ +70°C |
| Store Temperature | -40°C ~ +85°C |
| Antenna Connector | IPEX or MMCX |

| | |
|--------------------------------|---|
| Model | HX-DU8602T |
| Transceiver | |
| Frequency Range | 410MHz~470MHz |
| Tuning Range | 60MHz |
| Channel Spacing | 25kHz |
| Frequency Stability | ±1ppm |
| Type Of Emission | F1D |
| Communication Mode | Simplex |
| Transmitter | |
| Carrier Power | 5W/25W@50ohm |
| Carrier Power Stability | ±1.5dB |
| Harmonics | <-30dBm |
| Continuous Emission Ratio | |
| Data Modem | |
| Electrical Interface | RS232 |
| Data Speed Of Serial Interface | 19200bps/38400bps optional |
| Data Speed Of Radio Interface | 9600bps/19200bps optional |
| Data Format | Asynchronous data |
| Data Connector | LEMO 5pin connector |
| General | |
| Operating Voltage | 9~16V DC |
| Power Consumption | Standby Mode: 1.5W Transmitter Mode: 75W |
| Operation Temperature | -30°C ~ +60°C |
| Store Temperature | -40°C ~ +85°C |
| Antenna Connector | TNC,50ohm,female |