

Motorized Tripod Head Helps Better Safeguard Home & Business



Shenzhen, Sep 15, 2020 (Issuewire.com) - ZHAOWEI Drive has designed and developed a [geared tripod head solution](#) with a built-in three-axis mechanical pan/tilt, which enables a stable, flexible and incredible panoramic shooting experience. It makes it possible to better safeguard home and business.

Modern electronic cameras are opening the door for totally new photographic possibilities, both for photos taken in situ and for video processing. By combining the high resolution and rapid photographic frequency that can be achieved with a “rotating turntable”, so-called panorama shots can easily be compiled. Nowadays, crime has been increasing at a fast pace. Take the latest crime statistics for August from NYPD as an example, robberies climbed 4%, and burglaries jumped 22%. This has fueled public concern across the city. Thus, adopting a CCTV Camera has become an important aspect of security to keep a proper check. A tripod head with microdrive motor acts as a perfect match for cameras for spy and surveillance purposes.

With the continuous development of video surveillance technology from information to intelligence, Visual Information Technology (CVIT) has been widely used in various monitoring sites (traffic command center, cargo terminal, station, exhibition hall, etc.). In this process, the pan-tilt security

camera plays an important role. But increasing stringent requirements for image stability and 360° panoramic capturing arise, which fuels the tripod head industry to evolve constantly. The extensive equipment that was once necessary has nowadays been whittled down to better lenses, digital zoom technology and compact image storage, yet despite this, the camera still has to be positioned so that it doesn't shake. Besides, enabled with the feature of automatic rotation, the tripod head for the camera can achieve HD image quality and intelligent detection for better AI+ security.

[ZHAOWEI](#), based in China Shenzhen, offers the ideal solution for realizing these types of shot sequences. With the help of its Gear Drive for motorized tripod head, cameras can be equipped for "panoramic view" quickly and cost-effectively. It is also possible to capture a rotating object while keeping the camera at a fixed position. A micromotor supplied by ZHAOWEI serves as the drive mechanism in the miniature auxiliary device featuring compact size, high precision and low noise. Different load-bearing capacities of the tripod head suit for different cameras and protective covers. In order to realize the small volume and high torque requirement of the geared tripod head, ZHAOWEI distributes the modification coefficient to motorized camera tripod gear structure reasonably, optimizes the calculation of the meshing angle and checks the slip ratio and overlap ratio, thus improving the efficiency, service life and precision of the motorized pan-tilt head gearbox.

In recent years, most PTZ cameras have adopted common DC motors which have low operating noise and are relatively balanced but featuring high cost, complicated controlling system, and short service life. Therefore, ZHAOWEI adopts [stepper motors](#) with built-in high-resolution subdivisions that take pride in low manufacturing cost, accurate positioning control and long service life. Together with a geared tripod headbox, such a dedicated structure helps to reduce the image jitter in the low speed and high magnification state. Moreover, the 2-stage, 3-stage and 4-stage transmission are adopted to alter the gear ratio and input speed & torque. Hence, the tripod head can rotate horizontally and vertically for "panoramic" shooting to better capture the desired targets in a wider range. In the process, precision and smooth motor rotation allow a higher resolution than would be possible with manual panoramic heads. The quick rotation speed, combined with the high individual shot frequency also solves the problem of "ghost" images that occurs with moving objects such as people or clouds. No longer hard to realize responsive positioning and tracking of the fast-moving targets with no blind spot. At the same time, this increases the resolution of the encoder on the output shaft of the reducer. Various problems that appear when there is no one else to help during shooting can be solved for active judgment and early warning in the security system.

The comprehensive package provided by ZHAOWEI consists of motor, [planetary gearhead](#) and encoder came out as the drive mechanism of choice given the stipulated characteristics that security fields need. A stepper motor with diameter-compliant gearhead and encoder attachments came out as the drive mechanism of choice given the stipulated characteristics that security fields need. A fitted planetary gearhead reduces the motor's rotational speed as appropriate, increases the output torque, and simultaneously improves the resolution of the encoder fitted to the motor shaft for the output side of the gearhead. This set is of low maintenance and can be operated in a temperature range of between -20 to +80°C. In this way, it is still possible to better safeguard home & business even in a rugged environment.

The cameras used in a security industry must attach great importance to a precise yet at the same time practicable and robust drive mechanism while the ideal motorized tripod gearbox must deliver high performance while taking up the least space possible. ZHAOWEI unlocks such possibilities for motorized tripod head which promotes to safeguard home & business to a higher level.

"We strive to combine the panorama precision with compact drive technology. Users can get a wider

view with the camera and make full use of it to monitor their home as well as business intelligently and easily. What users expect is what we are persistently helping camera manufacturers to design, develop and manufacture.” said the Product Director of ZHAOWEI.



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