

- Gyro technology for superior drive control
- Supports faster drive speeds on front-wheel-drive wheelchairs
- Eliminates spin-out
- Eliminates fish-tailing
- Perfect control on cambers
- Straight line driving over obstacles
- Dual gyros for enhanced safety
- Multiple mounting orientations
- Operates with standard Power Module

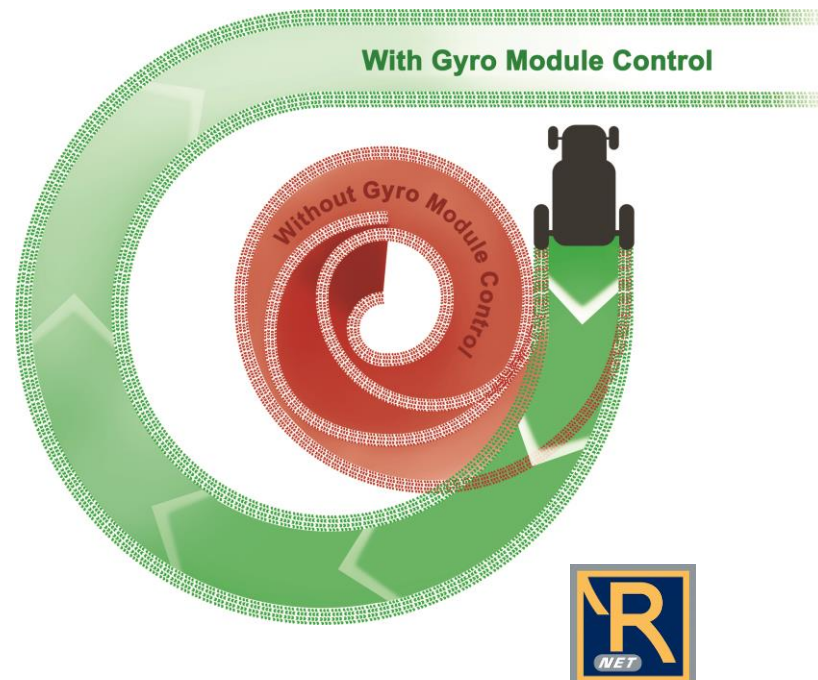
Gyro technology

Gyro technology adds an extra dimension to controlling a wheelchair, by maintaining the desired drive direction irrespective of the external forces acting on the wheelchair.

Typically, it will be high-speed, front-wheel-drive type wheelchairs that will benefit most from the addition of a gyro. However, the technology also offers vastly improved drive performance on rear wheel drive models when they are used with switch-type specialty controls.

Front-wheel-drive control

The R-net Gyro Module helps the wheelchair to maintain direction and control, even at high speeds. One particular issue with some fast, front-wheel-drive wheelchairs, is difficulty in exiting a turn – instead, the wheelchair continues to turn, regardless of joystick position, and enters a spin-out condition. Existing, software based solutions attempt to address this by slowing the wheelchair's turning speed by a set amount, but this often results in a poor drive feel. The Gyro Module offers a more a reactive result, in that the turning



speed will only be reduced by as much as necessary, which results in a more responsive and smoother drive feel as the wheelchair does not need to be slowed down dramatically in order to maintain control.

Additionally, when driving in a straight line, there may be a tendency for the wheelchair to veer to one side or the other, a condition known as fish-tailing. The Gyro Module can effectively eliminate all of these conditions.

Straight line control

If the wheelchair is driving across a non-level surface, for example a camber, then to achieve straight line driving the user has to make frequent steering corrections. This is inconvenient when using a joystick, but becomes difficult when using a switch-type controlling device, such as a switch pad or head array. A further challenge in maintaining straight line driving is presented by obstacles, such as kerbs or door thresholds, particularly if they are of uneven height. The Gyro Module vastly improves control in all of these situations.

Assured safety

Because the Gyro Module offers such drive control benefits, if it malfunctions or becomes disconnected a hazardous situation could potentially occur. For this reason, the module includes two gyro sensors as standard. This means that if one sensor becomes defective the other maintains control, but a clear warning is given to the wheelchair user that a service engineer should be contacted. In the event of a complete gyro failure or module disconnection, the wheelchair's drive speed is automatically limited.

Installation and set-up

The compact size of the Gyro Module means it can be easily accommodated on any wheelchair. However, to offer even greater design flexibility, the module can be mounted in one of four orientations. The overall set-up of the wheelchair chair fitted with a gyro is intuitive and simple, PGDT have documented an easy-to-follow programming procedure, which is included in the R-net technical manual or available as a stand-alone applications note.

Operates with standard Power Modules

The R-net Gyro Module has been designed to work with all existing R-net Modules. All R-net Power Modules will be upgraded to support gyro functionality. One significant advantage of this is the Gyro Module does not require to be matched to a particular Power Module – the gyro functionality can simply be turned on or off as required through programming. As well as being an elegant technical solution, this offers inventory control benefits to the wheelchair OEM.



SPECIFICATIONS

SUPPLY

| | |
|----------------------------|---|
| OUTPUT VOLTAGE | 16-35Vdc |
| REVERSE BATTERY PROTECTION | -40Vdc |
| OPERATING TEMPERATURE | -25°C to 50°C |
| STORAGE TEMPERATURE | -40°C to +65°C |
| SEALING | IPx4 |
| CONNECTOR | 1 x R-net connector |
| SIZE | 55 x 29 x 25mm |
| MOUNTING | M6 clearance hole with 2.5mm orientation spigot at 38.1mm |

PRODUCT CODE

R-net Gyro Module

Note: Not available for sale in USA, Canada or Australia.