Guidance Motion/GPL

PreciseFlex™ Collaborative Robotics

Benefits

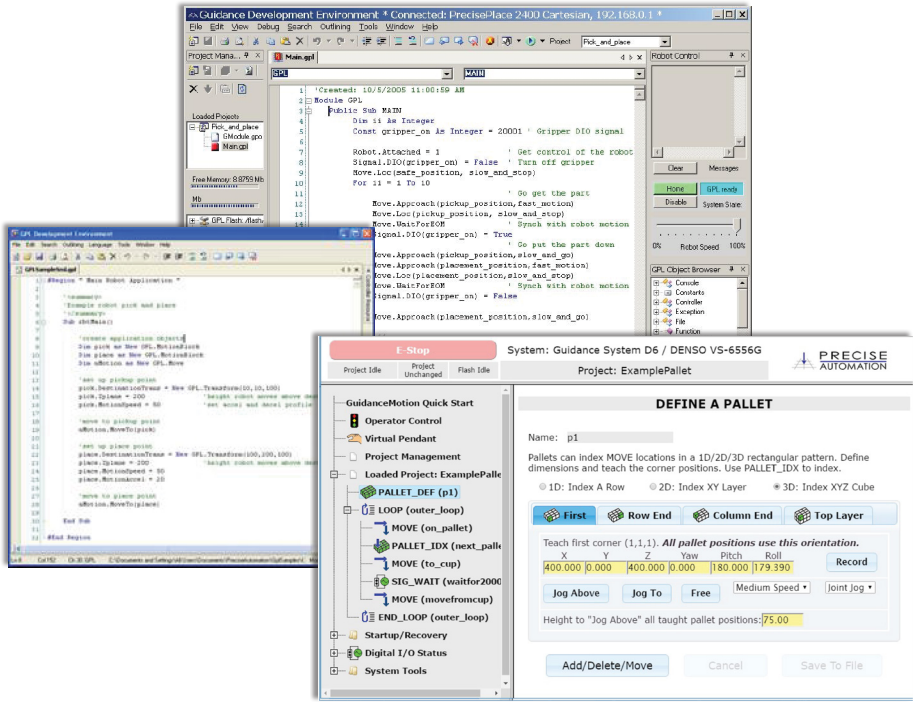
- Includes powerful conveyor tracking software module
- Free, open source OEM software module to support Client/Server operation
- Includes built-in kinematic library for popular robots such as Delta, SCARA and Six-axis mechanisms
- Ease of use enables fast solution implementation
- Environment supports adding ancillary automation such as conveyors, flexible feeders, vision and the like
- Program an unlimited number of cobots and devices
- Quickly programmed via web interface
- Flexible solutions can be created using the very powerful programming language

Powerful programming software with an easy to use interface

Historically, industrial robotic motion control relied on difficult to use proprietary languages that required a robotics expert to program and to teach. Recently, collaborative robot motion control has promoted easy to use programming software that allows users without programming experience to create applications. However, these collaborative robot software packages often lack the powerful motion control tools that are necessary to support applications as they grow in scale and complexity.

The Guidance Programming Language (GPL) is a full-featured language for programming PreciseFlex™'s Guidance Controllers. It is modeled after object-oriented forms of the Basic Language such as Visual Basic.Net and includes built-in support for motion control and machine vision. This results in a language that is simple to use and familiar to many developers, but is still equipped with modern features that promote good programming practices.

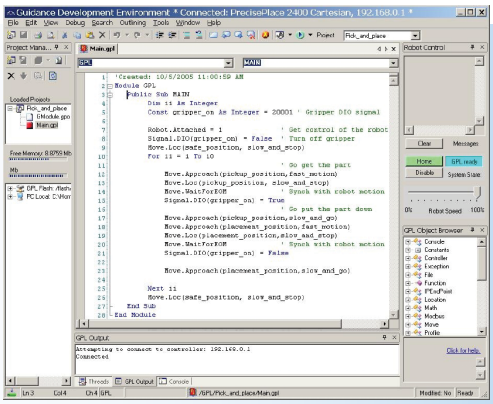
In addition, the Guidance Motion Graphical User Interface (GUI) can be layered on top of the GPL language to create an even easier to use, step by step, "to do list" programming environment. With Guidance Motion, users with little or no programming experience can easily teach elegant, repeatable motions by moving the robot to positions by hand. As applications grow in complexity and users become more comfortable with automation, they still have access to the entire GPL toolkit, which has the same basic concepts and terminology as Guidance Motion.

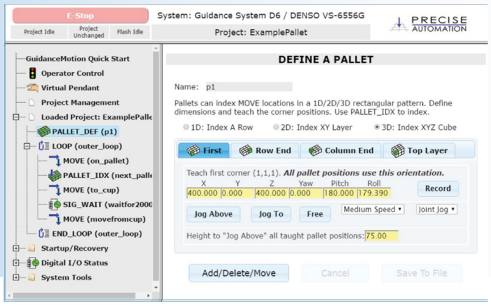


Guidance Motion/GPL

GPL Features

- Easily control a wide range of devices from simple, single axis mechanisms to complex systems with multiple robots operating cooperatively.
- Built-in library of robot geometries (kinematics) makes it easy to control complex mechanisms in simple Cartesian coordinates.
- Motion control facilities include: blending of joint, Cartesian and circular interpolated motions ("continuous path"); s-curve profiles; base and tool offsets; mathematics for manipulating robot and part positions and orientations; and frames of reference including moving reference frames for conveyor tracking.
- Includes extensive Networking and IO capabilities plus the runtime error handling required to implement robust automation applications.



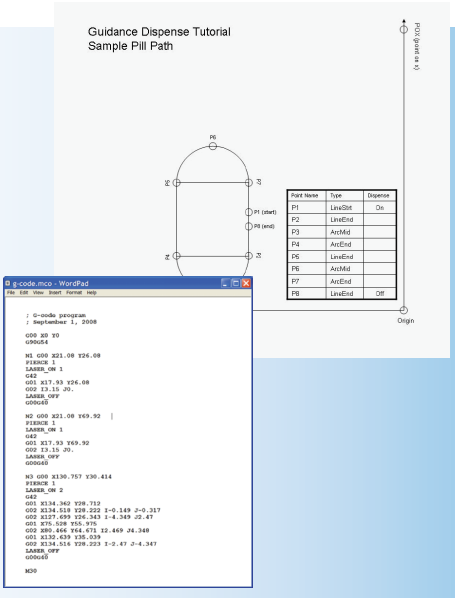


Guidance Motion Features

- Easy to use graphical user interface (GUI) for GPL.
- No programming experience needed.
- Robot motions taught through simple teach and repeat "to do list" programming.
- Preprogrammed application templates to speed development.

Application Packages Include

- TCP Command Server - Allows remote commands to be executed using simple string messages over TCP/IP Ethernet. Once TCS is installed and configured, the PreciseFlex™ controller acts as a command server that supports up to 8 robot devices.
- G Code Interpreter - Interprets standard CNC machine tool programs that contain G-codes and M-codes. This software package will move the tool tip of a robot along a path specified by a CNC program and will concurrently operate associated hardware.
- Conveyor Tracking/Manager - Configure one or more robots with a moving frame of reference for easy integration with conveyor belts and sharing of vision part ID and location data.
- Dispensing - Systems can automatically dispense adhesives, sealants and other fluids along both simple and arbitrarily complex paths. Path programming is performed using simple teach-and-repeat methods that can be augmented by machine vision to automatically correct for deviations in part position and orientation.
- Scalable Controls- Easily add control of additional third party equipment such as conveyor belts, turn tables, flex feeders and more.



For more information, please contact your local Brooks Automation sales representative or visit www.brooks.com.

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