With over 30 years of motion control experience, Delta Tau is the leader for innovation and high performance machine control solutions. Controlling over a million axes of motion, Delta Tau is dedicated to providing solutions for the broadest range of applications in the world – from the very simplest, to the most complex, accurate, and high-performance applications.

From the beginning, our main focus has been meeting customer requirements with both the highest reliability and ROI. Operating out of a modern 120,000 square-foot building, Delta Tau takes pride in its manufacturing process, the very latest in SMT manufacturing, and automated inspection and testing. The result is delivering the highest quality products with the fastest lead time.

By developing tomorrow’s technology today, and delivering easy-to-use and cost-effective products, Delta Tau can provide solutions that solve your tough automation problems and keep you a step ahead of your competition.

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New Ideas In Motion …

Providing a Complete Motion Control Solution

From the Simplest Application, to the Most Complex and EVERYTHING in Between…

Industries / Applications

Semiconductor Manufacturing
- Wafer Handling, Slicing, Stepping, Inspection, Die Bonding, Wire Bonding

Aerospace
- Flight Simulations, Turbine Blades, Manufacturing, Machine Tool

Military
- Autonomous Vehicle Control, Positioning Systems, Robotics

Machine Tool
- Mills, Lathes, Grinders, Engravers, EDM, Water Jet Cutting, Turning Centers, Laser Cutting

Robotics
- Pick-and-Place, Process Production, Scara, Delta Robots, Hexapods

Packaging & Assembly
- Mixing, Cutting, Packaging, Sewing, Web Handling, Conveyor Belt Synchronization

Positioning
- Telescope, Synchrotron, Inspection, Sub-Micron operations, DNA Sampling

Medical

Specialty
- WindPower, Hexapod, Robotics, Remote Machinery Control, Printing on the Fly, Autonomous Vehicle Control

From Machine Logic to High Performance Motion Control
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Control Everything That You Want

Delta Tau’s Open Architecture Platform provides complete flexibility to choose multiple types of motors, feedback devices, encoders, and fieldbuses, etc.

... for a totally integrated solution that fits all of your application needs.

The Delta Tau Difference

Dynamic Multi-Block Lookahead
- Evaluates planned trajectory against motor limits
- Slows just enough to stay within position, velocity, acceleration limits
- Executes fastest possible traversal within machine constraints

Forward and Inverse Kinematics
- Simplifies programming for non-Cartesian mechanisms
- User routines convert between tool tip and actuator mechanisms
- Permits direct specification of tool tip path

S-curve Acceleration
- Automatically limits rate of change of acceleration (jerk)
- Specified by jerk magnitude or S-curve time
- Provides smooth profiles with reduced high-frequency content

Gantry Control with Skew Correction
- Multiple motors automatically slave commanded trajectory
- Automatic removal of power-on skew in homing search sequence
- Optional cross-coupling servo correction

Cascaded Servo Loops
- With this technique, the output of one servo loop (one Power PMAC “motor”) is used as an input to another servo loop, bringing the capabilities of both loops to bear on a single actuator. The outer loop does not directly drive an actuator; instead, it dynamically modifies the set point of the inner loop in an effort to drive its own error to zero. This technique has many possible uses; the most common is to be able to close an auxiliary loop around a standard position loop. The auxiliary loop controls some quantity affected by the position loop’s motion, such as torque or force applied, or distance from a surface. The coupling of the loops can be turned on or off, permitting easy switching between control modes. Common uses of this technique include: web tensioning, torque-limited screwdriving, metal bending, controlled-force part insertion, height control over uneven surface (e.g. for auto-focus).

Trajectory Prefilter
- A 4th-order Trajectory Prefilter is included as a standard feature of Power PMAC. The Trajectory Prefilter acts on the desired instantaneous trajectory of a motor in order to band-stop, or “notch out”, certain frequencies that may excite low frequency mechanical resonances. The Trajectory Prefilter operates as a discrete-time recursive filter with its own programmable sampling period.

Advanced Standard PID and High Order Filters
- Power PMAC’s standard servo loop control algorithm includes both feedback and feedforward paths. In the feedback path, a position loop PID filter is combined with a velocity loop (dual-sensor) PI, acceleration feedback and a second-order low-pass filter. In addition, a 2-degree-of-freedom 7th order discrete time filter is implemented in cascade in the position loop. This 2 degree-of-freedom filter may be used for implementation of classical observers or frequency-based notch filters. These include up to 3 notch filters and a low pass filter. The feedforward path includes velocity and acceleration feedback combined with a second-order low-pass filter independent of the feedback path.

Custom Servo Algorithms
- Power PMAC permits custom servo control algorithms to be implemented instead of its standard algorithm. Power PMAC IDE software includes a C-cross compiler that provides an easy and quick tool for generation and implementation of custom servo algorithm implementation for any number of motors. C-code can be automatically generated from tools such as Matlab/Simulink®

Fieldbuses
- EtherCAT
- Modbus
- USB
- Ethernet 1Gb
- CAN
- CC-Link (Slave)
- CanOpen (Master/Slave)
- Profibus (Master/Slave)
- DeviceNet (Master/Slave)
- EtherNetIP Adapter (Server)

Servo Interface
- brush DC
- Brushless AC/DC
- Voice Coil
- Galvanometer
- Piezo
- AC Induction
- Stepper
- Sinusoidal phase current
- Pulse and Direction (Stepper)

Feedback
- Digital
- Analog
- 12V - 24VDC @ 600mA
- In: 12- or 16-bit A/D
- Out: 12-, 16-, 18-bit
- 0-10V, +/- 5V, or +/- 10V input range
- Sin/Cos encoder
- Feedback input range
- 0-10V, +/- 5V, or +/- 10V
- Quadrature encoder
- Resolver
- MLDT’s

Motors & Actuators
- Brush DC
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Communication
- Ethernet 1Gb
- USB
- MACRD
- EtherCAT
- Modbus
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**Servo Interface**
- +/- 10V
- Velocity, Torque
- Direct PWM
- Sinusoidal phase current
- Pulse and Direction (Stepper)

**Motors & Actuators**
- Brush DC
- Stepper
- Brushless AC/DC
- Hydraulic
- Voice Coil
- Galvanometer
- Pneum

**Feedback**
- Quadrature encoder
- Sin/Cos encoder
- Absolute encoder
- Serial Encoders: EnDat 2.1/2.2, Sigma IV, Hiperface, Biss-B/C, SSI
- Resolvers
- MLDT’s

**Communication**
- Ethernet 1Gb
- USB
- MAC/ID
- EtherCAT
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**Fieldbuses**
- EtherCAT Adapter (Server)
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**I/O**
- Digital
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- Optional cross-coupling servo correction

**Electronic Gearing and Cams**
- Powerful master/slave techniques
- Position following (gearing) requires no program for motion
- External time base (ca) keeps full trajectory flexibility

**Multiple Coordinate Systems**
- Axes acting together should be in same Coordinate System
- Axes acting independently should be in separate Coordinate Systems
- Separate Coordinate Systems act as independent machines

**Blended and Splined Moves**
- Automatic on-the-fly transition for multiple programmed moves
- Controlled, specified, acceleration of transitions
- For single-axis profiles or multi-axis paths

**Adaptive Control**
- Power PMAC servo loop’s stiffness and damping factor may be adjusted automatically as the effective reflected load inertia changes without the need for special test inputs. This optional feature enables a form of Adaptive Control in the presence of load inertia changes of bounded nature (typically 1 to 5 times a normal value).

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Delta Tau’s broad motion control product line leads the industry with highly customizable embedded controllers and components through complete totally integrated automation systems.

Put the power of Delta Tau to work for you with your next application.

**Complete Line of Machine Control Products**

**Embedded Controllers**
- Board level controllers with all of the power of Delta Tau’s industry leading motion control.
- May be stand-alone or embedded in a PC or custom interface board.
- Low cost, robust, and expandable, offering a wide variety of input control and communication protocols.
- For controlling up to 356 axes with unparalleled depth in features for any motion application.
- Easily digital control provides both the highest possible throughput and accuracy as well as low maintenance cost.

**Modular Rack Systems**
- Based on Delta Tau’s UMAC format – Universal Motion and Automation Computer – providing the highest levels of flexibility, scalability and expandability.
- User extendable UMAC (UMAC) fiber optic interface as well as dual control tower A, B, and communication interfaces such as USB, Ethernet, RS-232, etc.
- Standard and highly customized machine functions performed with a rich variety of available accessories.
- Racks are available in many sizes, providing a U, L, and CE compliant, rugged and integrated system.

**Drives**
- Delta Tau Servo Amplifiers complement the controller product line and provide the power amplification to drive and support a wide variety of motors and power ranges.
- Amplifiers are available in embedded format (PCB level), enclosed panel mount, and UMAC rack mount formats.
- Virtually all interfaces are supported including +/- 10V, Torque, Velocity, Direct PWM, Encoder Phase, and Pause and Direction (Stepper).
- Complete motor protection is provided including: over/under voltage, over temperature, PWM frequency limit, minimum dead time, and motor over temperature.

**Intelligent Drives**
- Delta Tau’s intelligent amplifiers combine the controller and amplifier in a single fully integrated enclosure package.
- The result is both powerful and versatile, allowing 1 to 8 channels of power amplification for driving a wide variety of motor types.
- GeoBrick A/C – 4/8-Axis (Cont/Peak) 230 VAC, Single or 3-Phase Operation
  - Axis 1-6: 5A/10A (Cont/Peak)
  - Axis 5-6: 15A/30A (Cont/Peak)
- GeoBrick LV – 4-Axis Clipper Drive Stack – 4-Axis 60VDC, 4-phase operation at .25A/.75A, 1A/3A and 5A/15A (Cont/Peak) Servo and Stepper Controller/Amplifier
- GeoBrick LV-Axis Sliding Drive

**Industrial Networks**
- Delta Tau’s Integration Development Environment (IDE) is unsurpassed in the industry and comes standard with every Power PMAC.
- Runs on Windows™ XP, Vista, or 7 with an advanced editor and built-in debugging features.
- Provides extensive project and resource management features, integrated GNU C cross-compiler and an interactive “terminal mode” window.
- Many status and setup windows, along with tuning and graphic plotting screens make design and development, analysis, setup, and implementation a breeze.
- And, all of the above can be directly incorporated in your application with AD Inksim Studio™.
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**Modular Rack Systems**

- Based on Delta Tau’s UMBC format – Universal Motion and Automation Computer – providing the highest levels of flexibility, scalability and expandability.
- User selectable CPU or MACRO fiber optic interface as well as axis control boards, I/O, and communication interfaces (such as USB, Ethernet, RS-232, etc.).
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Controller Specifications

The Motion Computer and Industrial Network Connectivity

Compliment Tails and Methods:
• 15, 20 or 25 Compliments Tails with optional railor
• 10-rod interpolation between points every servo cycle
• Supports up to 250 Compliment Tails
• Torque compensation defined
• Backlash compensation
• Torque and backlash compensation (2 & 3-D)

Number of VI’s:
• Supports up to 4800 points

Servo Features:
• Stepper digital PID feedback filter
• Velocity, acceleration, and torque feedback
• 7th order polynomial filters
• Same design for a single load
• Programmable input, integration, and output limits
• User-driven algorithms in CoE-MATLAB FileLibrary

Connect controller:
• Simultaneous control of AC motors
• Vector control of AC induction motors
• Digital closed-loop control with direct PWM output

Motion Program Features:
• Automatic sequential execution of moves
• Automatic coordination of multiple axes
• Ability to execute Go programs
• Specialized control and synchronization to nearest axis
• Axes programmed in user engineering units
• Motion values as constants or expressions

Coordinate System and Master/Glave Features:
• User-defined coordinate systems for automatic, coordination of axes
• Separate coordinate systems for independent motion of axes
• Multi-rotor axis support (e.g. gasoline engines
• Dynamic axes transitions: e.g. offsets, rotations, reversion
• User-defined kinematic algorithms for non-Cartesian geometries
• Electronic gearing (magnifying required)
• Electronic axis with programmable profiles

Safety Features:
• Parameters and software overload limits
• Acceleration and thrust limiting
• Acceleration and thrust limiting
• Feedback current limit
• Encoder loss detection
• Voltages between motors
• Error correcting memory

CPU Hardware Specifications:
• 64-bit Dual UltraSPARC IIIi
• Full-range Operating System (Unix OS as real-time kernel)
• Fall-back management system (programs, data, files, etc.)
• Efficient dual-core real-time, RT Linux environment
• Full 256-bit architecture
• Dual-core 64-bit dual precision floating point units
• Support for very large memory
• 1 Gb 2 Gb EEPROM active memory with error correction
• 64-bit NEAR memory for dedicated firmware
• 32 MB flash on MACE flash for user executable programs
• 64 MB Flash on USB2.0 interface
• 2 different 1-giga print
• Optional direct video interface (VGA-DVI)

Motion Specifications:
Number of Axes:
• Supports up to 32-bits essentially simultaneously

Number of Coordinates systems:
• Up to 128 independent coordinate systems

Same Line Update Rate:
• 1 axis up to 8KHz
• 4 axis up to 8KHz
• 8 axis up to 8KHz

Encoder/Update Rate:
• 10 MHz line rate and 40 MHz count rate for standard A/B Quad with Encoder Update Rate:
• 8-axis: up to 20kHz
• 4-axis: up to 40kHz
• 1-axis: up to 60kHz

Servo Loop Update Rate:
Up to 128 independent coordinate systems

Number of Coordinate systems:
• Supports up to 256 motors simultaneously

Number of Axes:
• Motion values as constants or expressions

Motion and Control Ring Optical Interface to EtherCAT Amplifiers:
• Supports CoE, FoE, EoE, and specifically the DS402 spec. for COE drives in Cyclic Position, Velocity or Torque modes.

Interface to EtherCAT Amplifier:
• Available with Optical Fiber for Complete Noise Immunity up to 1,000 ft or on 485 Cat-3 Cable for low-cost up to 100 ft.
• 1 to 8 Motors, 16 to 256 Motors
• Supports J230 Motor and J230 I/O Modules
• Centralized Software, Distributed Hardware

Integer to EtherCAT Adapter:
• Supports Real-Time/Reliable Motion Network built on 10/100 Base Ethernet
• Reduces Hardware Cost with Increased Performance
• 10/100 Mb/sec Reverse Data Rate
• Available with Optical Fiber for Complete Noise Immunity up to 1,000 ft or on 485 Cat-3 Cable

PLC/RJ45 System

• EtherCAT technology Group

Interfacing to EtherCAT Network:
• Any EtherCAT I/O Device, Bridge module, etc...

Fieldbus Connectivity:
• EtherCAT Adapter (Server)
• DeviceNet (Slave Type)
• PROFIBUS (Master/Slave)
• CANopen (Master/Slave)
• CC-Link (Slave)
• Modbus

The Power PMAC is capable of communicating simultaneously to most real-time motion systems and field-buses.

… a universal GPIB is a format that’s right for you.

Controller to Host Computer

Interface to PLC/PAC System

PLC/RJ45 System

Fieldbus Connectivity:

Real-Time motion networks: MACRO or EtherCAT

1Gb Ethernet

• Centralized Software, Distributed Hardware

The Power PMAC can provide an embedded operator interface, eliminating the need for a separate FC.

• EtherCAT or RJ45

Up to 256 Axes

Drives and Motors

The Power PMAC

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Drives and Motors

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• Centralized Software, Distributed Hardware

The Power PMAC can provide an embedded operator interface, eliminating the need for a separate FC.
Controller Specifications

CPU/Hardware Specifications
• Up to 1.2 GHz Dual-Core CPU
• Full real-time Operating System (Linux OS or real-time kernel)
• Full file management system (programs, data, files, etc.)
• Full system architecture
• Hardware, full double precision floating point math
• Support for very large memory
• ±1 V/div. ±150 kHz active memory with error correction
• USB 2.0/3.0 for SIMM memory for standard file transfer
• USB 2.0 hub on MANG flash for user memory expandability
• 1x USB2.0 interface
• 2 different 4-lane print
• Optional direct video interface (DVI-HDMI)
Motion Specifications
Number of Axes
Supports up to 500 motions simultaneously
Number of Coordinate systems:
Up to 128 independent coordinate systems
Same Leap Update Rate:
• 5 axes: up to 20 kHz
• 4 axes: up to 40 kHz
• 1 axis: up to 60 kHz
Encoder Update Rate:
• 8-axis: up to 20 kHz
• 4-axis: up to 40 kHz
• 1-axis: up to 60 kHz
Servo Loop Update Rate:
• Up to 128 independent coordinate systems
Motion Program Features
• Automatic sequenced execution of moves
• Automatic coordination of revolutions
• Ability to route G-code programs
• Scalability and F/I transformation to move
• Axes programmed in user engineering units
• Motion values as constants or expressions
• Coordinate Systems and Master slave features
• User-defined coordinate systems for automatic coordination of moves
• Separate coordinate systems for independent motion of axes
• Multi-axis error support (e.g. gearing, eccentric, and conical error)
• Dynamic axis transformation, p.g. offsets, rotation, reversion
• User-defined kinematic algorithms for use with Cartesian geometries
• Electronic gearing (proportional rendezvous)
• Electronic cams with programmable profiles
Safety Features
• Hardware and software overload limits
• Interpolated external/flash hardcapping
• Following error limits
• Integrated current limit
• Encoder-less detection
• Watchdog function
• Error correcting memory

The Motion Computer and Industrial Network Connectivity

The Power PMAC is capable of communicating simultaneously to most real-time motion systems and fieldbuses.

Controller to EtherCAT Amplifiers
• Supports CAN, EtherCAT, and the only 24-bit EtherCAT bus
• Reduces hardware cost with increased performance
• 125 Megabytes/Second Data Rate
• Available with Optical Fiber for Complete Noise Immunity, plus a 1-to-1 ratio or 4C-2-C Cables for Low Cost up to 10 feet
• 1 to 16 Motors, 16 to 256 Drives
• Supports J1939 Motion and SAE J1939-4
• Central Line (Silent) Modbus

Interface to EtherCAT Peripheral:
Any EtherCAT I/O Device, Bridge module, etc...

Fieldbus Connectivity:
- EtherCAT Adapter (Server)
- DeviceNet (Master/Slave)
- PLC/PAC System
- CANopen (Master/Slave)
- CC-Link (Master/Slave)
- Modbus TCP
- Modbus
- Modbus TCP

Motion And Control Ring Optical Drive and Motor Interface

... a universal G/S in a format that's right for you.

Light Link in Motion...
Controller Specifications

The Motion Computer and Industrial Network Connectivity

CPU/ Hardware Specifications
- up to 128 DigiGeoDash GPUs
- Quad-core Operation System (Linux OS with real-time kernel)
- Fall-back management system (programs, data, files, etc.)
- Evaluate control moves in the PC environment
- Full 32-bit architecture
- Realtime 64-bit double precision floating point math
- Support for very large memory
- > 2 GB / 2 GB DDR3PM effective memory with error correction
- 64 MB flash on MAGIC flash for user memory programmable
- 0.1 W/MB talk or 0.1 MB/flash for useable memory programmable
- Bit error USB2.0 interface
- 2 differential 10Gbps ports
- Optional direct slots interface (VH-360)

Motion Specifications
Number of Axes: Supports up to 64 axes simultaneously
Number of Coordinate systems: Up to 128 independent coordinate systems

Same Loop Update Rate:
- 10/20 MHz line rate and 40 MHz count rate for standard A/B Quad
- Encoder Update Rate:
  - 8-axis: up to 20kHz
  - 4-axis: up to 40kHz
  - 1-axis: up to 60kHz

Servo Loop Update Rate:
Up to 128 independent coordinate systems

Number of I/O:
- Tool radius compensation: 2D & 3D
- Backlash compensation
- Torque compensation tables
- Supports up to 256 Compensation tables
- 3rd-order interpolation between points every servo cycle

Compensation Tables and Methods:
- Optional direct video interface (DVI/HDMI)
- 2 ethernet 1 Gbps ports
- Built-in USB2.0 interface
- 64 MB NOR flash memory for standard firmware
- 1 GB / 2 GB DDR3 active memory with error correction
- Hardware 64-bit double precision floating point math
- Full 32/64-bit architecture
- User-Written algorithms in C or MATLAB/ Simulink
- Programmable input, integrator, and output limits
- Gains changeable at any time
- 7th-order polynomial filters
- Velocity, acceleration, and friction feedforward
- Standard digital PID feedback filter
- Supports up to 8,000 points

Motion Program Features
- Standard automatic execution of macros
- Automatic coordination of multiple axes
- Ability to execute G-code programs
- Scheduling and time synchronization in real time
- Aes encryption in user engineering units
- Motion values as constants or expressions
- Coordinate Systems and Master Slave Feature
- Open interface coordinate systems for automatic coordination of axes
- Separate coordinate systems for independent motion of axes
- Multi-axis axis support (e.g. gantries)
- Dynamic axis transformations (e.g. offsets, rotations, reversion)
- User-defined kinematic algorithms for non-Cartesian geometries
- Electronic gearing (no programming required)
- Electronic cams with programmable profiles

Safety Features
- Functions and software overhead limits
- Kinfeless or no feed high speed machining
- Following error limits
- Integrated current limit
- Instant loss detection
- Stall-meg protection
- Error correcting memory

Motion And Control Ring Optical

The Power PMAC is capable of communicating simultaneously to most real-time motion systems and fieldbuses.
... ... a universal GUI is a format that’s right for you.

Controller to EtherCAT Amplifiers
- Supports Can, EtherCAT, and CANopen for real-time communication
- Up to 16 axes

Controller to EtherCAT Interfacing
- Any EtherCAT I/O Device, Bridge modules, etc.
Program in your Favorite language

Programming Languages
Delta Tau controllers can be programmed in several different types of languages simultaneously. Choose your preference for motion and PLC's.

The PMAC Script Language
PMAC Script Language is a "Basic-like" programming language used to write Motion, PLC and sub-routines. The Power PMAC offers an enhanced version with even more flexibility and user friendliness.

Ladder Logic etc. (IEC-61131)
The controllers accept industry standard graphical programming in any of the 5 formats specified in the IEC-61131 international standard, including ladder logic and sequential function charts.

"C" Language
For advanced programmers that prefer to program in C, the Power PMAC gives you the ability to write Servo, Phase, PLC and general-purpose applications.

Other Programming/Software methods available

G-Code
Power PMAC can accept standard RS-274 "G-code" part programs, as generated by CAD/CAM programs. Codes are implemented with customizable subroutines.

MATLAB®/Simulink®
C-code automatically generated from the MATLAB®/Simulink® graphical environment can easily be run on the all controllers for servo, commutation, or other tasks.

LabVIEW™
The communication library and IDE components integrate seamlessly into the NI LabVIEW™ graphical programming environment.

EPICS
The open-source collaborative EPICS scientific experiment management software can be run directly on all controllers, eliminating the need for a separate embedded computer.

Power PMAC Integrated Development Environment (IDE)

Includes all the necessary tools for setting up, developing, managing, and diagnosing your Power PMAC application:

- Microsoft Windows 7 and Vista 32/64-bit operating systems
- Advanced editor with built-in debugging features
- Extensive project and resource-management features
- Integrated GNU C cross compiler
- Interactive terminal window
- Many status and setup windows
- Tuning and plotting graphics screens
- Intelligence and Syntax Checking
- Structured Programming

System Setup
- Hardware Auto-identify
- Easy-to-use Diagnostics
- Step-by-step Motor Setup
- Step-by-step Network Setup
- Expandable & Portable Motor & Amplifier Setup Database

Powerful Tuning Tools
- Simple Auto-Tune
- Advanced Auto-Tuning
- Sensor-Analyzer with Interactive Tuning Tool
- Trajectory Pre-Filter
- Advanced Feedback/Feed-forward Filter Calculator
- Single and Double Notch
- Single and Double Notch + Low Pass
- Low Pass
- Velocity Loop Filter

The IDE was designed using Microsoft Visual Studio™, comprised of several "Net" components which can also be used with your custom application software.
Program in your Favorite language

Power PMAC Integrated Development Environment (IDE)

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- LabVIEW™
The communication library and IDE components integrate seamlessly into the NI LabVIEW™ graphical programming environment.

- EPICS
The open-source collaborative EPICS scientific experiment management software can be run directly on all controllers, eliminating the need for a separate embedded computer.

The IDE was designed using Microsoft Visual Studio™, comprised of several “.Net” components which can also be used with your custom application software.

Program editor with color code, syntax checking and structured programming.
Display windows for Position, Following Error, Velocity, etc…
Intellisense and Auto-completion of programming commands.
Error and status monitors and parameter watch table.
Project Management provides an organized tree structure for each function or structure within the project.

Includes all the necessary tools for setting up, developing, managing, and diagnosing your Power PMAC application:

- Microsoft Windows 7 and Vista 32/64-bit operating systems
- Advanced editor with built-in debugging features
- Extensive project and resource-management features
- Integrated GNU C cross compiler
- Interactive terminal window
- Many status and setup windows
- Tuning and plotting graphics screens
- Intellisense and Syntax Checking
- Structured Programming

System Setup
- Hardware Auto-identify
- Easy-to-use Diagnostics
- Step-by-step Motor Setup
- Step-by-step Network Setup
- Expandable & Portable Motor & Amplifier Setup Database

Powerful Tuning Tools
- Simple Auto-Tune
- Advanced Auto-Tuning
- Sensor Analyzer with Interactive Tuning Tool
- Trajectory Pre-Filter
- Advanced Feedback/Feed-forward Filter Calculator
- Single and Double Notch
- Single and Double Notch + Low Pass
- Low Pass
- Velocity Loop Filter
With over 30 years of motion control experience, Delta Tau is the leader for innovation and high performance machine control solutions. Controlling over a million axes of motion, Delta Tau is dedicated to providing solutions for the broadest range of applications in the world – from the very simplest, to the most complex, accurate, and high-performance applications.

From the beginning, our main focus has been meeting customer requirements with both the highest reliability and ROI. Operating out of a modern 120,000 square-foot building, Delta Tau takes pride in its manufacturing process, the very latest in SMT manufacturing, and automated inspection and testing. The result is delivering the highest quality products with the fastest lead time.

By developing tomorrow’s technology today, and delivering easy-to-use and cost-effective products, Delta Tau can provide solutions that solve your tough automation problems and keep you a step ahead of your competition.