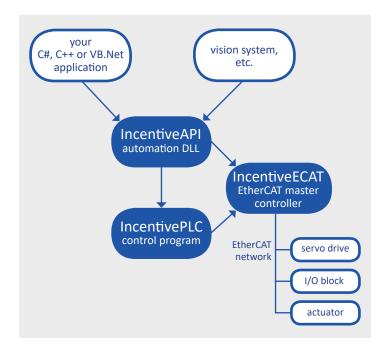
Incentive[™] Software Components

for industrial automation applications

Control Technology Corporation



Incentive[™] is a flexible family of software building blocks enabling comprehensive plant automation strategies.

Major system components include:

- IncentivePLC a multitasking control runtime system executing the powerful QuickBuilder automation language.
- IncentiveECAT a high-performance EtherCAT master controller for direct control of EtherCAT devices from standard PC hardware.
- IncentiveAPI a DLL offering a high-level control API for your code written in C#, C++ or VB.Net.

Incentive provides users a complete solution for high-performance PC-based control of automated industrial processes, whether for standalone equipment or plantwide control architectures.

Incentive has a real-time operating system (RTOS) that enables simultaneous operation of Windows 10 (or Windows 7) and one or more independent real-time processes.

The system combines the responsiveness required of high-speed motion applications and the flexibility of a full-featured operating system to run vision systems, HMIs, data tracking and processing applications, and other high-level programs.

In applications requiring data interchange with peer or higher-level systems, Incentive allows for the implementation of local or remote data aggregation, supporting interfaces to remote database applications, network security provisions and other necessary functions. The addition of IncentivePLC to the system provides the functionality of a programmable automation controller without requiring additional dedicated hardware.

Programmed using the QuickBuilder Programming Environment, running locally or remotely, IncentivePLC can execute the same programs as CTC's series 5300 controllers. This flexibility lets you choose among hardware platform options for each application, without having to adapt to different development environments.

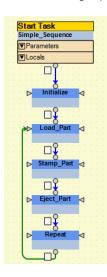
Such a configuration also supports the use of external Modbus/TCP connected devices, increasing the range of supported hardware in a truly open architecture.

Incentive represents a new way to approach and execute automation strategies, using your choice of technologies to create a system optimized for the needs of your project.



IncentivePLC: Highperformance Control Platform

The IncentivePLC control platform implements the same comprehensive QuickBuilder automation language used on CTC Series 5300 Automation Controllers. QuickBuilder is a high-level language developed specifically for machine and process automation. It supports multitasking, asynchronous events, function libraries and other advanced constructs to simplify and modularize automation projects.



The QuickBuilder Programming Environment provides graphical, free text and syntax-directed code development, and incorporates a wealth of monitoring and debugging tools to facilitate rapid development.

Tutorial videos and trial downloads are available at:

controltechnologycorp.com/plc

IncentiveAPI: Connect Your Code to Your Process

IncentiveAPI provides an extensive API to interface your C#, C++ or VB.Net code to IncentivePLC and/ or IncentiveECAT processes running either locally or remotely.

In addition to supporting fully-custom applications, this makes it easier to integrate vision systems, HMIs and other third-party subsystems into your control architecture.

Most of the work is done through two classes of objects:

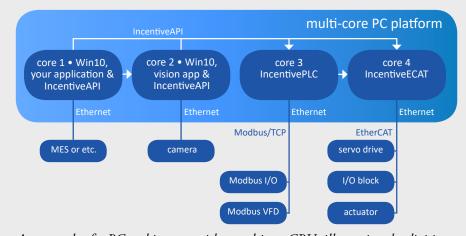
- Controller::Axis, primarily for motion control, and
- Controller::PLCLogic, supporting access to IncentivePLC registers and I/O.

Some of the nearly 100 methods supported by these objects include:

- move_at_for
- segmove_slew_until_position
- gear_at_in_after
- set master
- get_register
- input32

For a complete list of supported methods, along with usage examples for each, download the IncentiveAPI help file at:

controltechnologycorp.com/api



An example of a PC architecture with a multicore CPU, illustrating the division of functionality to achieve high levels of performance.

IncentiveECAT: Vendor Independent Motion and I/O

Working in conjunction with either IncentivePLC or IncentiveAPI (or both), IncentiveECAT is a powerful software-based EtherCAT master controller. During initialization, IncentiveECAT scans the network and automatically configures any of a growing list of vendor products, currently including support for:

Servo Drives

- ABB MicroFlex e150[™]
- AMC DigiFlex® Performance™
- Copley Accelnet
- Emerson Unidrive SP/Digitax ST
- IAI America Intelligent Actuators
- Kollmorgen AKD
- LinMot Linear Motors
- Mitsubishi J4
- Sanyo Denki SANMOTION R
- Yaskawa Sigma-5 and Sigma-7

EtherCAT I/O

- Beckhoff
- SMC
- Numatics
- Turck I/O
- Turck RFID
- WAGO

This creates a vendor-transparent network of resources with which your application program can interact.

For more information download the EtherCAT Application Guide at:

controltechnologycorp.com/ecat

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