



CONTROLLERS

## Experion® PKS C300 Controller

Honeywell's C300 Controller provides powerful and robust process control for the Experion® platform. The C300 is part of the product family that operates Honeywell's field-proven and deterministic Control Execution Environment (CEE) software.

### Overview



#### Overview

**The Experion PKS C300 controller forms the heart of the Experion control system, and is ideal for implementation across all industries, with best-in-class process control capabilities and security. It supports a wide variety of process control applications, including continuous and batch processes, and integration with smart field devices. The C300 controller also supports advanced process control, as well as custom algorithm blocks that let users create custom code to run in the C300 controller.**

#### What Is It?

**The C300 is secure out-of-the-box DCS controller with embedded cybersecurity that supports compliance, reduces risks, and improves availability. It operates Honeywell's deterministic Control Execution Environment (CEE) software which executes control strategies on a constant and predictable schedule and transparently integrates standard and open communication protocols: Ethernet IP, Profinet, FOUNDATION™ Fieldbus, HART®, IEC61850, OPC UA, Profibus® and Modbus, addressing the requirements of a wide range of applications.**

#### What Problems Does It Solve?

**The C300 controller provides the means to overcome the increasing complexity of control systems, reduce Cyber risks and significantly improves the operational and lifecycle support aspects for control systems, as it offers :**

- Robust and scalable Control Platform for a wide range of control applications addressing the most demanding process control requirements.
- A new paradigm for process control with IO & Control HIVE enabling maximum flexibility, scalability, standardization, optimization, and resiliency
- Best-in-class security ensuring safe and secure operations
- Facilitates modular and parallel project execution
- Maximized process uptime and minimized maintenance effort with robust diagnostics and innovative redundancy schemes
- Improved engineering productivity and maintenance using the rich function libraries provided in the intuitive user environment Seamless integration of smart field devices and controllers via standard protocols.

**C300v5 (PCNT05), latest controller in this family, supports traditional 1:1 redundant and [Control HIVE](#) deployment.**

## Specifications

OTHERS

#### Models

- C300 (PCNT05)

#### Execution Units (XUs)

- 9000 XUs

**Execution Environment**

- Honeywell's Control Execution Environment (CEE)

**Synchronization Time**

- ~240 sec

**Supported Protocols**

- CDA peer-to-peer second (time unit)
- EtherNet/IP via EIM second (time unit)
- Foundation Fieldbus via FIM4/FIM8 second (time unit)
- Modbus/TCP via PCDI second (time unit)
- Profibus via PGM second (time unit)
- Profinet via EIM second (time unit)
- VLAN-based IO HIVE second (time unit)

**Temperature Rating**

- -40 to +70°C

**SNTP Update Period**

- 1 min

**PTP Update Period**

- 30 sec

**I/O HIVE Capacity**

- 1500 IO HIVE Parameter References
- Up to 15 CN100 Connections

**Redundancy Cable**

- Ethernet STP

**Execution Period**

- 20 ms not supported for PCNT05
- 50 ms (Standard)

**Switchover Time**

- ~500 ms

**Device Indexing**

- Odd-Even Pairing (e.g., 1 and 2)

**Tagged Blocks**

- Up to 4095

**Security Lock**

- Configurable via Device Index Switches

**Mounting Type**

- On Input Output Termination Assembly (IOTA)

**Memory Backup**

- CC-SCMB05 Module for Power-Loss Recovery

**Time Sources**

- NTP
- PTPv2

**User Memory**

- 32,768 MU (Memory Units)

**Form Factor**

- Series C

**Redundancy**

- Supports 1:1 redundancy with dedicated IOTA and redundancy cable

**Security**

- Embedded Firewall