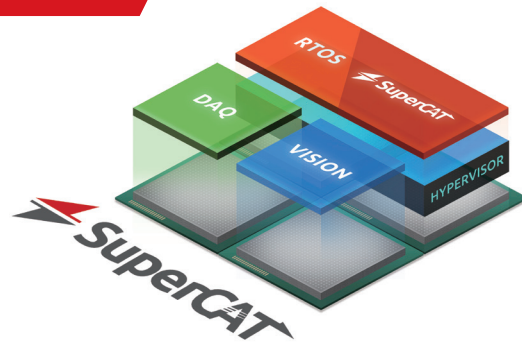


SuperCAT v1.2

EtherCAT SoftMotion Controller



Highlights

- Software EtherCAT MainDevice combines EtherCAT protocol, IO control, and motion control with short lead time
- Supports 125 μ s EtherCAT control cycle, and up to 128 axes motion control with one PC
- EtherCAT frame monitor supported with frame health and Subdevice communication quality checks**
- Run MCP2 & multi-applications at the same time to fine tune m/c UPH*
- User task programing run in SuperCAT RTOS*
- Online configuration of Subdevice ENI and support for IO-Link**

Key Features

- EtherCAT open standard protocol CIA402 compliance for motion control
- Supports 2D coordination bias compensation for high precision movement
- App management and execution in real-time environment via user task programing function and GUI*
- 16D linear interpolation and 3D spiral
- Log-Viewer simplifies the process of identifying development issues in multi-process environments**
- Supports APS SDK for machine automation, compatible with ADLINK motion controller products
- Lowest jitter (<20 μ s) by fine tuning SuperCAT controller
- Rotary scales support for all standard EtherCAT driver*

Notes:

*Features available in v1.1

**Features available in v1.2

Introduction

ADLINK SuperCAT is an EtherCAT SoftMotion controller capable of supporting up to 128 synchronized axes and over 10,000 points simultaneously. SuperCAT fully supports ADLINK EtherCAT subdevices for high-speed trigger, latch, I/O, and pulse train motion control, designed for laser and semiconductor applications. It features a built-in software trigger and latch function operating at up to 4 kHz for applications such as AOI, dispensing, and EMS manufacturing. Optimal jitter control is achieved with minimal cycles of 125 μ s, enhancing synchronous I/O performance for vertical automation applications in the semiconductor and electronics manufacturing industries, among others.

SuperCAT provides an off-the-shelf application-ready (APS) function library to generate multi-dimensional, highly synchronized, time-deterministic event-triggered motion and I/O control. A wide range of compatible third-party subdevices can be easily controlled using ADLINK's APS function library. ADLINK's Motion Creator Pro 2™ utility is fully compliant with the Microsoft® Windows™ environment, allowing comprehensive EtherCAT motion and I/O configuration, function evaluation, and process download functions.

System Requirements

- Operating System: Windows 10/11 32/64-bit
- Processor: x86 Atom, Core i, or Xeon
- Network Interface: 100/1000BASE-T Ethernet port

Ordering Information

- **EM-xP00**
SuperCAT virtual license for Classic version
- **EM-xC00**
SuperCAT virtual license for Premium version
- **EM-xA00**
SuperCAT virtual license for Ultimate version
- **EM-xP00D**
SuperCAT dongle license for Classic version
- **EM-xC00D**
SuperCAT dongle license for Premium version
- **EM-xA00D**
SuperCAT dongle license for Ultimate version

Note:

x = 2: supports 16 axes motion control x = 8: supports 64 axes motion control
 x = 4: supports 32 axes motion control x = F: supports 128 axes motion control

The SuperCAT are available for different platform.

The SuperCAT performance depends on the configuration and the technical data of the ADLINK IPC (including the processor).

125us EtherACT control cycle only guarantee with ADLINK specific platform.

Specifications

| Function | Mode | Classic | Premium | Ultimate |
|---|---|---------|---------|----------|
| | | EM-xP00 | EM-xC00 | EM-xA00 |
| Single Axis Motion | P2P | V | V | V |
| | Position/Velocity override | V | V | V |
| | Blending mode | V | V | V |
| | Homing | V | V | V |
| | Motion IO mapping | V | V | V |
| Multi-Axis Motion | Linear interpolation | V | V | V |
| | 2D circular interpolation | - | V | V |
| | 3D Circular interpolation | - | - | V |
| | Spiral/Helical | - | - | V |
| | Gantry/E-Gear | - | V | V |
| | Gantry/E-Gear homing | - | V | V |
| | Blending mode | V | V | V |
| | Continuous interpolation Roll back/ Dwell | - | V | V |
| Continuous interpolation synchronize DO control | - | - | V | |
| Speed Profile | PVT | - | V | V |
| | T-curve | V | V | V |
| | S-curve | V | V | V |
| Compensation | Pitch error compensation | V | V | V |
| | Backlash compensation | V | V | V |
| | 2D mesh compensation | V | V | V |