

 **Cambridge Technology**

MOVING LIGHT, YEARS AHEAD.™

# ScanMaster™

## Scan Control Products

- TECHNOLOGY
- PERFORMANCE
- QUALITY
- VALUE
- RANGE OF PRODUCTS
- APPLICATIONS EXPERTISE



[www.camtech.com](http://www.camtech.com)

# Moving Light, Years Ahead.

## One Software Environment; Multiple Controller Options; Many Scanning Solutions

Once you have selected your CTI scanner or scan head, it is time to select your Scan Controller and Software. Cambridge Technology's suite of scan control products enables you to synchronize mirror motion with laser firing, integrate with your own software & hardware, and even provide a graphic user interface. Cambridge Technology has three controllers: the SC500 and EC1000 controller cards and the SM1000 controller module (with user interface, back panel I/O and powers supplies). All three can be used with either our API (including a DLL Library) or the full-featured ScanMaster Designer Software for Material Processing and Marking.

**ScanMaster Designer** is user software with contemporary "touch and feel" and all the functionality you'll need to create and control your scan jobs. Intuitive graphic design environment, import capability of standard file formats and multitude of editing tools make job creation an easy task. This software is great for system integrators and small volume OEM runs.

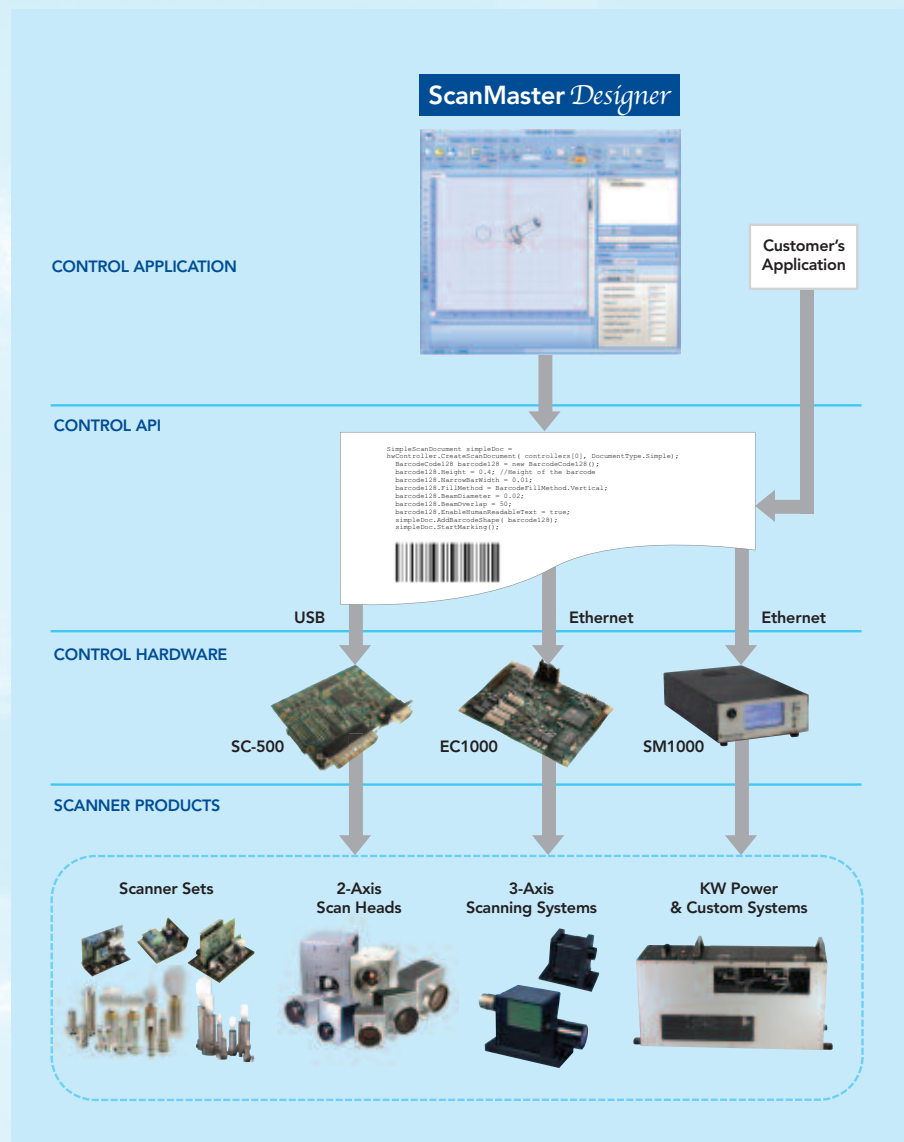
The **ScanMaster Application Protocol Interface (API)** provides access to most of ScanMaster Designer's functionalities if you already have your own user interface. This high-level API will allow you to programmatically incorporate complex objects (such as 1D & 2D barcodes, fonts, arcs, circles and more) into your jobs. This API also supports ScanScript - Cambridge Technology's scripting language that enables complex job structures and flow control.

Our **Board-Level API** supports Cambridge Technology's focus on delivering modern and new technologies to the market, while protecting your existing designs and past investments. This API facilitates easy migration from current scan control products in your system with minimal need for code modifications.

The SC500's Universal API also includes a new set of function calls that provide improved error handling and better precision computation compared to some of today's 3rd party options.

Regardless of the integration level you prefer, ScanMaster software suit is designed to work seamlessly with all of Cambridge Technology's **controllers** – the easy to use pre-integrated SM1000, the well known full-featured EC1000 and the new cost-effective sub-compact SC500.

Offering multiple price / performance options, each of our controllers can drive any of Cambridge Technology's **scanner sets, scan heads and integrated scanning solutions**.






From the day we invented galvanometer scanning over 40 years ago to the present times, Cambridge Technology has been perfecting the state-of-the-art in scanning technology, always staying one generation ahead of market requirements. Whether your primary need is speed, stability, cost, reliability, size, precision, quality, or performance, Cambridge Technology can provide a scanning solution optimized to your specific application.



|   | <b>SM1000</b>                            | <b>EC1000</b>                          | <b>SC500</b>                            |
|---|--|--|---|
| <b>Control Architecture</b>               | Dual, On-Board Embedded Processor        | Dual, On-Board Embedded Processor      | Host-Based, Streaming Data              |
| <b>Recommended Use</b>                    | System Integrators<br>Universities, Labs | OEM Systems –<br>Stand-Alone, High End | OEM Systems –<br>Main-Stream & Low-Cost |
| <b>Galvo Control Ports</b>                |  |  |   |
| 3-Axis Control                            | ✓  | ✓                                      | ✓                                       |
| Dual-Head Control                         | ✓  | ✓                                      |   |
| <b>Laser Control Ports</b>                |  |  |   |
| General Purpose Lasers (YAG, CO2)         | ✓  | ✓                                      | ✓                                       |
| IPG YLP Series Compatible                 | ✓  | ✓                                      | ✓                                       |
| SPI G3 Series Compatible                  | ✓  |  |   |
| <b>Automation Interface Ports</b>         |  |  |   |
| General Purpose Digital I/O Pins          | 20                                       | 4                                      | 2                                       |
| Dedicated Interlock, Sync and Status Pins | ✓  | ✓                                      |   |
| Mark-on-the-Fly Encoder Port              | ✓  | ✓                                      |   |
| Laser Shutter Control                     | ✓  |  |   |
| Laser DC Power Control                    | ✓  |  |   |
| <b>Operational Environment</b>            |  |  |   |
| Stand-Alone                               | ✓  | ✓                                      |   |
| PC Connection                             | Ethernet                                 | Ethernet                               | USB                                     |
| Lens Grid Correction                      | Integrated                               | Integrated                             | On PC                                   |
| Peripherals Ports (RS232, USB)            | ✓  | ✓                                      |   |
| <b>Software Environment</b>               |  |  |   |
| ScanMaster Designer Job Editor            | ✓  | ✓                                      | ✓                                       |
| ScanMaster Designer API & Scripting       | ✓  | ✓                                      | ✓                                       |
| API Interfaces                            | COM, Win32, and .NET                     | COM, Win32, and .NET                   | Win32                                   |
| Board-Level API                           | XML                                      | XML                                    | Universal                               |
| <b>Physical Attributes</b>                |  |  |   |
| Dimensions                                | 410 x 221 x 100mm                        | 127 x 102mm<br>(plus EC1000 IO Board)  | 99 x 74mm                               |

## Pre-Integrated Solutions



**2-Axis Scan Heads**

**KW Power & Custom Systems**

**3-Axis Scanning Systems**

This section displays various 2-axis scan heads and 3-axis scanning systems. The scan heads are shown in a cluster, while the 3-axis systems include a large industrial unit and a smaller, more compact system.



**Controllers and Software**

This section features a black control unit, a computer monitor displaying a software interface with a 3D model of a satellite, and two green printed circuit boards (PCBs).



**Optical Scanning Components**

**Galvos, Mirrors & Servos**

This section shows a collection of optical scanning components, including various sizes of galvos, mirrors, and servos, along with some electronic components.

Contact Cambridge Technology to learn more about our comprehensive line of products.



Components



2-Axis Scan Heads



Scan Control



3-Axis Scanning Systems



Lightning II Digital Scanning Platform

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