

# SU2000

DESCRIPTIVE SPECIFICATIONS



The Supervisor 2000 is our thinnest barrier-free turnstile. Its compact form is well suited for applications where space is at a premium.

## COMMON APPLICATIONS

- Employee and Visitor Access Control
- Time & Attendance Integration

## TYPICAL INSTALLATION SITES

- Government Facilities
- Corporate Lobbies
- Recreation Centers

## FUNCTION

The Supervisor 2000 is a barrier-free, optical turnstile that provides bi-directional access control and other passage modes (described below). In access control mode, upon receipt of a valid card signal from an access control system, or GateKeeper turnstile control software (see Options), the integrated sensors allow a single user to pass through the turnstile in the requested direction. If an unauthorized user attempts to tailgate on the entry, the unit will recognize the illegal passage, a violation alarm will sound and red notification lights will flash.

The SU2000 utilizes integrated optical sensors to control access. The optical sensors detect patrons, determine the direction of patron movement and (in conjunction with the facility access system) detect unauthorized users as well as “piggybacking” or “tailgating” on allowed entries.

While access control throughput will depend on the access control system and readers used, the SU2000 supports extremely rapid entry and throughput. It will “stack” valid scans and process patrons as fast as they can walk through the turnstile.

## AVAILABLE CONFIGURATIONS

### SU2000

The SU2000 consists of a pair of end cabinets that create a single lane with a 28”-36” wide passageway. Center cabinets (that are the same dimensions as end cabinets) may be added to create multi-lane configurations; i.e. two end cabinets and two center cabinets create three lanes.

## AVAILABLE FINISHES

### STAINLESS STEEL, POWDER COATED & PLATED

External cabinet materials are fabricated from #304 stainless steel polished to a #4 satin finish. Powder coated and plated cabinets are available (see Options).

## MATERIALS

### CABINET

The cabinet is fabricated from formed and welded #304 stainless steel. See Options for details on cabinet construction using alternate materials. The cabinet base is fabricated from formed and welded carbon steel and powder coated black.

### INTERNAL FRAME

A powder coated steel internal frame houses electronics and other internal components.

### CABINET LIDS

Cabinet lids are fabricated from 100% acrylic resin (Color: Starry Night Black). Alternate acrylic resin colors and alternate materials can be provided (see Options).

## OPERATIONAL MODES & FUNCTIONALITY

### PASSAGE MODES

The following user-configurable passage modes are available:

**Controlled Passage** - Upon receipt of an authorization signal from an access control system, a single passage in the authorized direction is allowed. Controlled Passage can be either single direction or bi-directional.

**Free Passage** - An authorization signal is not required for a user to pass through the lane. Free Passage can be either single direction or bi-directional.

**No Passage (Lane Closed)** - No passage is allowed. Valid electronic credentials are ignored. Any passage will set off violation alarms. No Passage can be either single direction or bi-directional.

### USER STATUS DISPLAY

An illuminated status icon display, visible to users, is flush mounted within the cabinet lid and is configured to function in the following manner:



**Yellow Card Icon** - An illuminated yellow card means the turnstile is ready for card presentation.



**Green Arrow Icon** - An illuminated green arrow indicates passage is allowed in the direction of the arrow and / or valid credentials have been presented. A flashing green arrow indicates the turnstile is in Free Passage mode in the direction of the arrow.



**Red Stop Icon** - An illuminated red X indicates passage is prohibited in the direction of the arrow. A flashing red X indicates the turnstile has an alarm condition and / or invalid credentials have been presented.

### FUNCTIONALITY - USER CUSTOMIZABLE FEATURES & AVAILABLE TOOLS

In addition to the available passage and operating modes, the SU2000 has a number of additional user customizable features. These features allow turnstiles to be “tuned” to the operational requirements of an application and allow users to associate individual audio sounds with operational states and alarm conditions. SU2000 turnstiles also come with tools to assist service personnel with setup, diagnostics and troubleshooting.

Customizable features and custom sounds are downloaded to turnstiles over a TCP/IP network using the included LaneConfig application. The product ships with standard sounds. Users may create and install their own audio sounds in the form of .wav files.

Prior to shipping, turnstiles are configured with settings that are appropriate for most facilities and default sound files are loaded. A summary of configurable features, and setup and diagnostic tools, is listed below.

Operational Tuning Adjustments	Description
Access Timeout	Valid credential presented but user does not pass through turnstile; controls time before barriers close and turnstile resets
Object	Controls object detection size
Blocked Sensor	Controls time before alarm is generated if sensors are blocked

Operational Sounds / Alarms*	Description	Configurable Sounds
Access Granted*	Good card	√
Access Denied*	Bad card	√
Tailgating / Unauthorized Passage*	Tailgating / unauthorized passage detected	√
Blocked Sensor	Sensors not cleared	√
Loitering	Loitering detected in the lane	√
Crawl Sensor	Object detected by the crawl sensor	√

\* Configurable for both entry and exit direction.

## CARD READERS

### INSTALLATION OF CARD READERS

Space is available on the end cabinets for mounting of slim style proximity card readers. Use of larger readers is accomplished through custom solutions (see Options).

## TURNSTILE INTERFACE TO ACCESS CONTROL SYSTEM

There is a single interface available to allow an access control system to operate with the SU2000:

**DRY CONTACT** - Single passage activation, and other functionality, is achieved by supplying an isolated, voltage-free, momentary dry contact at the appropriate location on the I/O control board. Various outputs are also available to provide information on turnstile operational status and activity. A description of available input and output signals is provided below.

Input Signal	Entry / Exit
Direction Closed*	√
Good Card (Activation)	√
Bad Card	√
Passage - Free Pass Mode*	√
Single Entry Override	√
Life Safety Input**	√

Output Signal	Entry / Exit
Authorized Passage	√
Unauthorized Passage	√
Sensor Blocked	√
Lingering Barrier	√

\* Sustained dry contact

\*\* Configurable for normally open or normally closed signals

### AVAILABLE RELATED APPLICATIONS

There are two additional applications that are available with the SU2000.

**LANECONFIG** – LaneConfig is a desktop application that comes standard with all SU2000s. The application allows configurable features of the SU2000 and updated software to be installed over a network. Use of LaneConfig in a networked setting eliminates the need to physically plug into individual turnstiles to change turnstile configurations or update software. LaneConfig is installed on a PC that is networked to installed SU2000 units and communicates to turnstiles via TCP/IP.

In installations where SU2000 turnstiles are not networked, LaneConfig is loaded on a laptop which is temporarily plugged into the Ethernet port of individual turnstiles when turnstile configurations are changed or software is updated.

**GATEKEEPER** – GateKeeper is an optional desktop application that allows all Alvarado optical turnstiles installed at a site to be monitored and controlled from a single PC. GateKeeper allows control of virtually all day-to-day operating functions, including designating a turnstile as entry or exit, opening or closing a turnstile, and allowing single passage overrides for guests or personnel that have forgotten their access card. The application also includes various other functions; these include an emergency “open all turnstiles” capability that is in addition to the emergency override / fire alarm capabilities. The application has tiered login levels with three levels of security (User, Supervisor and Administrator). The higher permission levels enable various additional features and settings.

GateKeeper has an intuitive graphic interface that gives desk attendants a current “status” of all installed turnstiles. In addition, when alarm conditions occur, the application provides both visual and audio notification of what happened. All actions (such as passage overrides) and turnstile alarms are logged. Logs may be printed or saved for record keeping or diagnostic purposes.

GateKeeper also includes a built in Event Scheduler. This extremely useful tool allows day-to-day operational changes that are often implemented at sites to be scheduled and automatically implemented without the need for a guard or attendant to “remember” to change settings. Event Scheduler allows operation templates to be saved and then automatically implemented at user defined times. Examples include changing the entry status of turnstiles (entry, exit, bi-directional control or free passage) at set times of the day. This flexibility allows turnstiles to be used more efficiently, can decrease the number of turnstiles that may be needed, and allows Alvarado’s optical turnstiles to seamlessly integrate into a customer’s operational requirements.

A single license of GateKeeper allows users to control all turnstiles installed at a single licensed site.

## OPTIONS

### ALTERNATE LID COLORS AND MATERIALS

Cabinet lids may be ordered in alternate colors and materials.

### ALTERNATE POWER SUPPLY

A 220-240 VAC, 50 Hz power supply and appropriately rated key switch are utilized.

### BASEPLATE

A baseplate for either single turnstile or multi-turnstile configurations is available. The baseplate is powder coated black with a black non-slip coating in the passageway area. The baseplate includes enclosed cable runs and eliminates the need for trenching or stubbing up conduit from floor.

### CARD READERS / PHYSICAL ACCESS DEVICES

Due to the slim architectural profile of the SU2000, generally only mullion sized readers can be installed to the end cabinet. Custom fabricated solutions, including pedestals, are used to house alternative readers. When requesting use of readers other than mullion size, provide the manufacturer and model number to Alvarado for evaluation. Custom reader integration generally requires providing a sample of the actual reader to be used to Alvarado for design purposes.

### CUSTOM CABINETS

External cabinet materials may be powder coated in a variety of colors. Cabinet materials can also be plated in a variety of finishes.

### LONGER INTERCONNECT CABLES

Longer interconnect cables are available to accommodate installations where standard conduit runs are unavailable. The standard interconnect cable length is 13' (396cm). Custom cables are available in 20' (610cm) or 40' (1220cm) lengths.

### TCP/IP (GATECONNECT)

See the description under Available Related Applications.

### TCP/IP (GATEKEEPER)

GateKeeper communicates with SU2000 turnstiles over a wired TCP/IP network. The program runs on current Windows operating systems. See the full description under Available Related Applications or online at <http://alvaradomfg.com/download/gatekeeper-datasheet/>.

### TURNSTILE KEY CONTROLS

Two 3-position key switches are installed on the turnstile to control passage modes for each direction of travel. Turning the key to one of three positions overrides current settings and places the turnstile in Controlled Passage, Free Passage or No Passage modes.

### CONDUIT REQUIREMENTS

#### PRIMARY POWER SOURCE CONDUIT

.75" (19mm) power conduit for primary power must be run to each master controller cabinet.

Note: The product standard is 110-120VAC (use of 220-240VAC is an option).

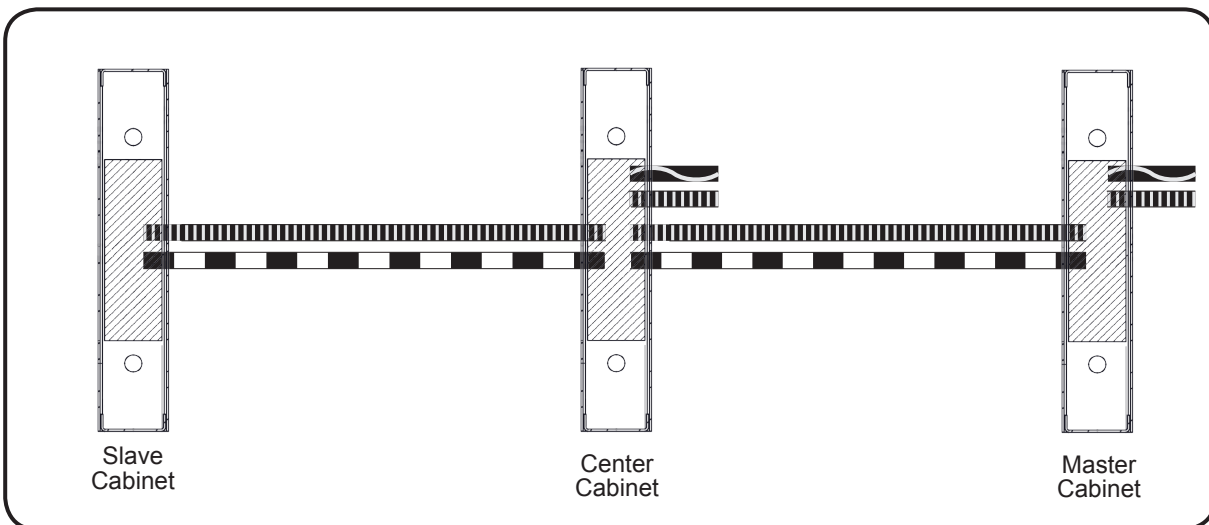
#### LOW-VOLTAGE & INTERCABINET COMMUNICATION CONDUIT




1.5" (38mm) conduit must be run to allow passage of the interconnect cable between cabinet sets. 13' interconnect cables are included. 20' and 40' interconnect cables are available options.

#### ACCESS CONTROL SYSTEM, READER & ETHERNET CONDUIT

The SU2000 has space for the acceptance of a .75" conduit for access control, reader, and Ethernet cabling. Alvarado does not provide cables for access control systems.

Use of TCP/IP communication with LaneConfig or GateKeeper requires the running of an Ethernet cable to each master controller cabinet. Do not run cable in the same conduit as AC power.



-  3/4" Primary Power Source Conduit
-  3/4" Access Control System, Reader & Ethernet Conduit
-  Low-Voltage & Intercabinet Communication Conduit

**SHIPPING & SITE PREPARATION**

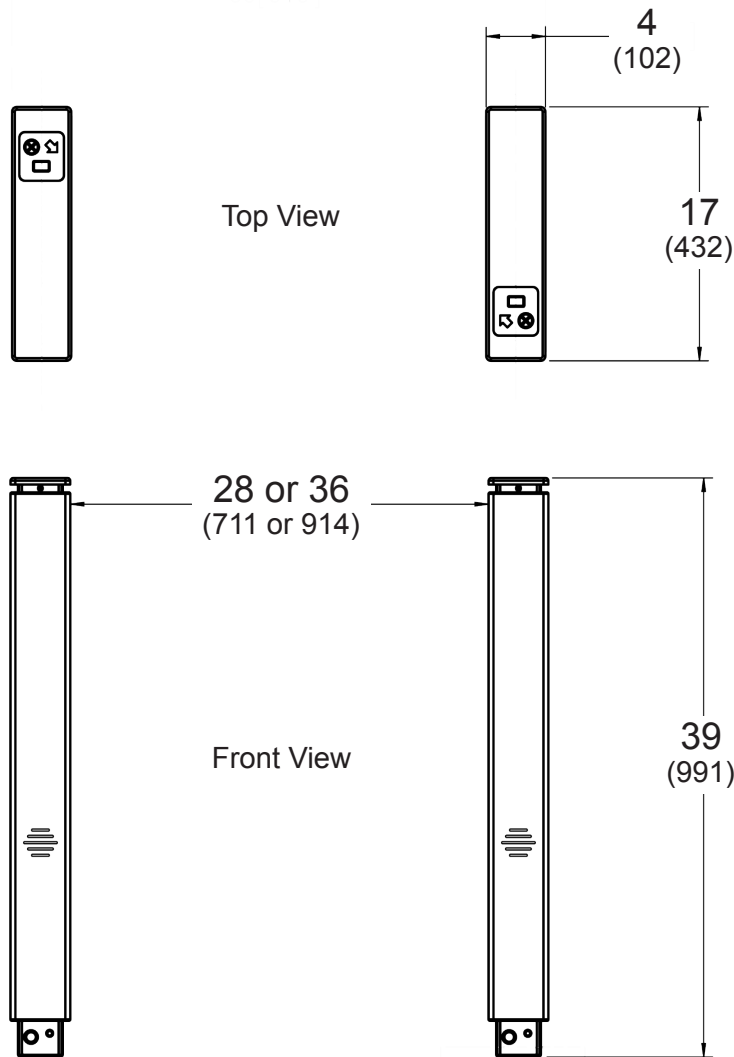
**SHIPPING**

SU2000 cabinets are shipped fully assembled for easy installation. Each cabinet includes mounting hardware (anchors, bolts, washers, etc.) to mount the unit to a standard, level concrete floor.

**SITE PREPARATION**

Turnstiles must be installed on a firm foundation in a manner that allows the required power and access control cabling to be pulled into the turnstile cabinet. The recommended slab platform should be a minimum of 4" (102mm) deep, level concrete. Installation should be performed by a skilled installer following Alvarado's instructions. Detailed drawings and installation manuals are available online.

**TECHNICAL DIMENSIONS**



Dimensions shown in inches (mm).



THROUGHPUT RATES	
CARD READER TYPE*	USERS PER MINUTE**
PROXIMITY	40
MAGNETIC SWIPE	25
MAGNETIC SWIPE WITH NUMERIC KEYPAD	20
OMNI-DIRECTIONAL BARCODE SCANNER	40
*Access control system response is assumed to be instantaneous	**Approximate. Rates may increase with user familiarity.

ELECTRICAL	
	DESCRIPTION
POWER SUPPLY	120VAC, 60 Hz.
POWER REQUIREMENTS	Maximum power consumption is 60W per lane with all options installed.
OPERATIONAL VOLTAGE	Primary power is stepped down and rectified for low-voltage 12 VDC, and 5 VDC operation.
ON/OFF POWER BUTTON	A recessed on/off power button is located in the base of each master cabinet.

WEIGHT, DIMENSIONS, ENVIRONMENT		
	STANDARD	METRIC
PRODUCT WEIGHT*	50 lbs.	23 kg <span style="float: right;">*Per cabinet weight</span>
SHIPPING WEIGHT**	100 lbs.	45 kg <span style="float: right;">**Includes weight of shipping crate(s)</span>
HEIGHT	39"	991mm
WIDTH	4"	102mm
DEPTH	17"	432mm
OPERATING TEMP. RANGE	50° to 90° F	10 to 32° C
STORAGE TEMP. RANGE	0° to 104° F	-4 to 40° C
RH	15-85% (non condensing)	--

## WARRANTY

For a period of 18 months from the date of purchase, Alvarado will replace or repair, at Alvarado's option, any products or parts which are defective in materials or workmanship, provided recommended installation and maintenance procedures are followed. This warranty is void if damage is due to improper installation, maintenance or use. This warranty is limited to parts only, and does not cover labor or shipping charges incurred in connection with the removal or replacement of warranted products or parts.

This warranty is expressly made in lieu of any and all other warranties, expressed or implied, including, but not limited to implied warranties of merchantability and fitness for a particular purpose. Alvarado shall not be liable for any loss or damage, directly or indirectly, arising from the use of purchased products. In no event shall Alvarado be liable to buyer for consequential damages, special damages, incidental damages, loss of use, business interruption, loss of profits, or damages of any kind arising out of the use or inability to use a purchased product. In no event shall Alvarado be liable for damages which exceed the purchase price of a covered product.