

# PAC Terminal Secure Strategy Distribution

## Features

- Uses encryption to protect compiled control strategies both in a controller and for distribution
- Secures a controller so that a key is required to download an encrypted strategy
- Provides security functions via a graphical user interface (GUI) or a command line interface












## Description

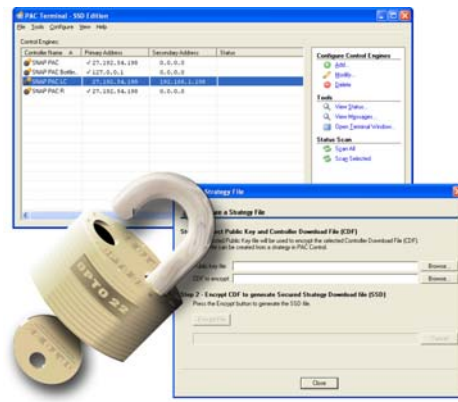
PAC Terminal SSD (Secure Strategy Distribution™) allows you to safely distribute a PAC Control strategy and to protect it once it is downloaded to a controller. PAC Terminal SSD also can ensure that new controller firmware is from Opto 22 and has not been modified by anyone.

SSD provides a level of strategy security that is most valuable to original equipment manufacturers (OEMs) who use Opto 22 equipment in their own systems, although it is not limited to that application. Using this security system, you can:

- Protect strategies *stored* and *running* in a controller
- Safely distribute updated strategies and keep them protected once downloaded
- Ensure that new firmware is from Opto 22 and has not been modified by anyone

## Steps to Securing Your Strategy

- 1 Generate encryption keys.  Private key  
 Public key
- 2 Program the private key into the controller.  +  → 
- 3 Encrypt a strategy file with the public key.  +  → 
- 4 Download the encrypted SSD file with the matching public key to the secured controller.  +  → 
- 5 Distribute the encrypted SSD and secured controller publicly.



PAC Terminal SSD

While this is a robust and effective system, here are some things this system will *not* protect:

- Original strategies on a PC. SSD does *not* provide password protection in PAC Control. It only protects the compiled strategy.
- Normal system communications, such as controller to controller, controller to I/O, human-machine interface (HMI) to controller, etc.
- I/O settings, such as I/O configurations, proportional-integral-derivative (PID) loop settings, Event/Reaction settings, etc.
- Inspection of controllers using PAC Terminal

When using Secure Strategy Distribution one user task is used. This means that one less chart can run at a time than normal. However, performance is otherwise unaffected.

The PAC Terminal SSD security functions are available in both a graphical user interface (GUI) and a command line interface. The command line interface makes it easy for you to create batch or script files to handle the various aspects of strategy security.

## System Requirements

PAC Project 9.3 or newer (either Basic or Pro) must already be installed on your computer. In addition, your SNAP-PAC-R or SNAP-PAC-S controller must have loader R4.0b or newer and firmware R9.2c or newer installed.

## How to Obtain PAC Terminal SSD

PAC Terminal SSD is available for purchase from authorized Opto 22 distributors worldwide, or from our website at [www.opto22.com](http://www.opto22.com). Because SSD protects your intellectual property, we require you to submit a registration form. Once you've submitted the form and purchased the product, the software and installation password will be sent to you by email.

## Part Number

Part	Description
PACTERMSSD	PAC Terminal SSD software and documentation (in PDF format)

## More About Opto 22

### Products

Opto 22 develops and manufactures reliable, flexible, easy-to-use hardware and software products for industrial automation, energy management, remote monitoring, and data acquisition applications.

#### groov

*groov* puts your system on your mobile device. With zero programming, you can build mobile operator interfaces to monitor and control systems from Allen-Bradley, Siemens, Schneider Electric, Modicon, and many more. Web-based *groov* puts mobile-ready gadgets at your fingertips. Tag them from your existing tag database, and they automatically scale for use on any device with a modern web browser. See [groov.com](http://groov.com) for more information and your free trial.

#### SNAP PAC System

Designed to simplify the typically complex process of selecting and applying an automation system, the SNAP PAC System consists of four integrated components:

- SNAP PAC controllers
- PAC Project™ Software Suite
- SNAP PAC brains
- SNAP I/O™

#### SNAP PAC Controllers

Programmable automation controllers (PACs) are multifunctional, modular controllers based on open standards.

Opto 22 has been manufacturing PACs for over two decades. The standalone SNAP PAC S-series, the rack-mounted SNAP PAC R-series, and the software-based SoftPAC™ all handle a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

SNAP PACs are based on open Ethernet and Internet Protocol (IP) standards, so you can build or extend a system easily, without the expense and limitations of proprietary networks and protocols. Wired+Wireless™ models are also available.

#### PAC Project Software Suite

Opto 22's PAC Project Software Suite provides full-featured, cost-effective control programming, HMI (human machine interface) development and runtime, OPC server, and database connectivity software for your SNAP PAC System.

Control programming includes both easy-to-learn flowcharts and optional scripting. Commands are in plain English; variables and I/O point names are fully descriptive.

PAC Project Basic offers control and HMI tools and is free for download on our website, [www.opto22.com](http://www.opto22.com).

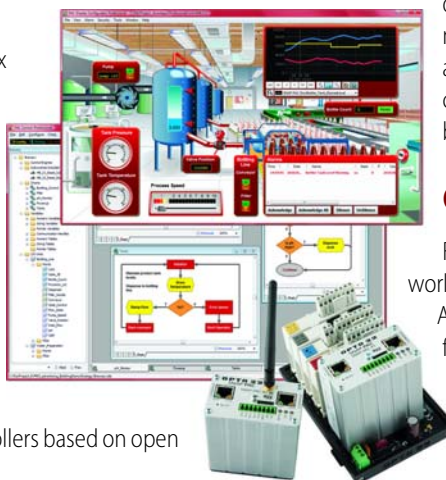
PAC Project Professional, available for separate purchase, adds one SoftPAC, OptoOPCServer, OptoDataLink, options for controller redundancy or segmented networking, and support for legacy Opto 22 serial *mistic*™ I/O units.

#### SNAP PAC Brains

While SNAP PAC controllers provide central control and data distribution, SNAP PAC brains provide distributed intelligence for I/O processing and communications. Brains offer analog, digital, and serial functions, including thermocouple linearization; PID loop control; and optional high-speed digital counting (up to 20 kHz), quadrature counting, TPO, and pulse generation and measurement.

#### SNAP I/O

I/O provides the local connection to sensors and equipment. Opto 22 SNAP I/O offers 1 to 32 points of reliable I/O per module, depending on the type of module and your needs. Analog, digital, and serial modules are all mixed on the same mounting rack and controlled by the same processor (SNAP PAC brain or rack-mounted controller).



### Quality

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California. Because we test each product twice before it leaves our factory, rather than only testing a sample of each batch, we can guarantee most solid-state relays and optically isolated I/O modules for life.

### Free Product Support

Opto 22's California-based Product Support Group offers free, comprehensive technical support for Opto 22 products. Our staff of support engineers represents decades of training and experience. Support is available in English and Spanish by phone or email, Monday–Friday, 7 a.m. to 5 p.m. PST.

Additional support is always available on our website: how-to videos, OptoKnowledgeBase, self-training guide, troubleshooting and user's guides, and OptoForums.

In addition, hands-on training is available for free at our Temecula, California headquarters, and you can [register online](#).

### Purchasing Opto 22 Products

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-6786 (toll-free in the U.S. and Canada) or 951-695-3000, or visit our website at [www.opto22.com](http://www.opto22.com).

**[www.opto22.com](http://www.opto22.com)**

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