

ScreenGenie™

IT Administration & Configuration Guide

Version 26.7 • PNQ Software



© 2026 PNQ Software BV. All rights reserved. Trademarks may be the property of their respective owners.

Introduction

This document is intended for IT administrators, system administrators, and managed service providers who are responsible for managing, deploying, and configuring ScreenGenie within an organization.

The guide describes the architecture, configuration options, automation logic, and best practices for deploying ScreenGenie in a controlled manner within professional work environments.

This manual focuses exclusively on administration and configuration. User interaction and functional explanations for end users are covered in the separate ScreenGenie User Guide.

1. Architecture Overview

ScreenGenie consists of multiple logically separated components that work together to ensure consistent display configurations.

Component	Role
ScreenGenie GUI	Provides limited control options for end users to adjust display settings.
ScreenGenie Engine	Performs detection, application, and storage of display settings. Runs as ScreenGenie.exe /engine.
ScreenGenie Agent	Persistent tray application that starts automatically at Windows login. Triggers the Engine on power or display events. Provides system tray icon with context menu and supports global hotkeys (Ctrl+Win+G to open the GUI, Ctrl+Win+R to trigger a silent refresh).

ScreenGenie operates in addition to the native Windows display settings and utilizes the existing Windows display stack. Windows® 11 remains responsible for the actual rendering and persistent storage of display configurations. Brightness and contrast are stored directly on the monitor(s) themselves.

2. Installation and Deployment

ScreenGenie can be deployed using an MSI installer for centralized distribution or as a local installation. Both methods place the application files in the \Program Files directory, while the configuration file `screengenie.ini` is stored by default under: `%AppData%\PNQ Software\ScreenGenie\screengenie.ini`

Other files, such as the license file, are stored in:
`%ProgramData%\PNQ Software\ScreenGenie\`

When deploying via the MSI with a license key, the `license.ini` file is automatically created in the `ProgramData` directory.

It is also possible to run the `ScreenGenie.msi` manually without specifying a license key. In that case, **no license.ini file** is created in `%ProgramData%\PNQ Software\ScreenGenie\`.

The license can then be added afterwards using the CLI tool: `AddLicense.Cli.exe -License "LICENSE-KEY"`

Alternatively, the `license.ini` file can be created manually in the same directory with the following structure:

```
[License]
Key=LICENSE-KEY
ExpireDays=14
```

For enterprise environments, centralized deployment via MDM, RMM, or software distribution tools is recommended, preferably including the license key as part of the deployment process to ensure immediate activation

Silent MSI Installation

```
msiexec /i ScreenGenie.msi LICENSEKEY="LICENSE-KEY" /qn
```

3. Configuration File Lifecycle

The configuration file `screengenie.ini` serves as the central policy document for ScreenGenie. This file is read during application startup and during relevant system events. Changes to this file can be deployed centrally. ScreenGenie may update certain values based on user actions, depending on the configured policy.

The `screengenie.ini` file is stored in the user's profile under:

`%AppData%\PNQ Software\ScreenGenie\screengenie.ini`

This design makes all configuration settings inherently user-specific. This is particularly relevant in Windows 11 environments, where display-related settings are primarily managed at the system level (HKLM) and therefore apply globally to all users on the device. As a result, in shared device scenarios, changes made by one user can directly impact the display configuration experienced by other users.

ScreenGenie introduces a user-context layer on top of this behavior, ensuring that monitor configurations such as layout, brightness, contrast, resolution, and positioning are applied and maintained per user. This prevents cross-user interference and guarantees a consistent and personalized workspace experience, even on shared laptops or flexible workstations.

A backup copy, `screengenie.bak`, is stored alongside `screengenie.ini` and refreshed automatically after every change made through the application. If `screengenie.ini` ever becomes unreadable or corrupted, ScreenGenie silently restores it from this backup on the next startup, without prompting the user. If no valid backup is available either, ScreenGenie falls back to its normal built-in defaults.

4. screengenie.ini — Sections and Settings

The `screengenie.ini` file contains all central configuration settings for ScreenGenie. Administrators can edit this file manually or modify it automatically using `SetSG.exe` with the parameters `-section`, `-item`, and `-value`.

Changes in this file are applied dynamically and form the basis for corrections when the application (or the Engine) starts, as well as during system events such as connecting monitors or docking stations.

4.1 [Settings]

Key	Values	Description
Language	EN, NL, DE, FR, ES, IT, DK, SE, NO	UI language. Defaults to OS language after installation.
WindowsMode	Yes / No	Follow Windows 11 Light/Dark theme. When Yes, the Dark Mode toggle in the UI is disabled.
Mode	Light / Dark	UI display mode. Only applies when <code>WindowsMode</code> = No.
LogDays	1–365	Number of days log files are retained. Older logs are deleted automatically.
Deduplicate	Yes / No	When Yes, ScreenGenie automatically switches from clone/duplicate mode to extended desktop on startup. When No, duplicate monitors are left as-is. Brightness and contrast can still be adjusted when No. Default: Yes.
Engine	On / Off	When Off, ScreenGenie skips all automatic display adjustments (brightness, contrast, resolution, refresh rate, scaling, layout positioning). The GUI still opens normally, allowing the switch to be turned back on. When triggered via <code>ScreenGenie.exe /engine</code> and the switch is Off, the process exits immediately without making any changes. Default: On. See section 4.13 for full behaviour details.

4.2 [Reset]

When the user selects Reset in the interface, ScreenGenie resets brightness/contrast and restores the entire `screengenie.ini` to its original values as they were on first startup. This includes all sections: [Settings], [Synchronization], [Monitor 1], [Monitor 2], [Layout], [ForceLeft], and [ForceRight].

4.3 [Agent]

Key	Value	Description
Delay	seconds	Seconds to wait after a detection change before ScreenGenie reapplies the configured layout, brightness, and contrast. Default: 10.

If the Refresh occurs too early or too late in practice, adjust the Delay value. Too low → Windows may still be initializing. Too high → noticeable delay before settings become active.

4.4 [Synchronization]

Key	Values	Description
Monitors	Yes / No	When Yes, brightness and contrast sliders for left and right displays move simultaneously.
BrightnessContrast	Yes / No	When Yes, the brightness and contrast sliders per monitor move together. If both are Yes, all four sliders move to the same level.

4.5 [Monitor 1] and [Monitor 2]

Key	Values	Description
Brightness	0–100	Default brightness level for this monitor position.
Contrast	0–100	Default contrast level for this monitor position.
Scaling	The monitor's live Windows display scaling percentage (e.g. 100, 125, 150), read directly from Windows rather than from screengenie.ini.	
Engine	Whether the Engine switch is currently On or Off on the reporting PC (see 4.13).	
Primary	Yes / No	Set Yes on the monitor that should become the Windows primary display. Only one monitor should be set to Yes. If both are Yes, Monitor 1 takes precedence.

Monitor 1 acts as the master monitor: the monitor with built-in docking functionality, or the first external monitor detected by Windows. Monitor 2 acts as the companion. When the user selects Reverse Displays, Monitor 1 and Monitor 2 swap roles.

4.6 [Change]

Key	Values	Description
OnPower	Yes / No	Applies values from screengenie.ini whenever the power state changes (dock/undock).
OnDisplay	Yes / No	Controls whether the ScreenGenie Agent automatically re-runs the Engine (ScreenGenie.exe /engine) after a display configuration change, such as docking or undocking. This setting does not affect the ScreenGenie GUI itself: the GUI always keeps its monitor tiles and telemetry in sync with the actual connected monitors, regardless of this setting — OnDisplay only gates automatic corrective action by the Agent.

4.7 [ForceLeft] and [ForceRight]

Key	Description
SerialFile	File containing one or more serial numbers (comma-separated or one per line).
Serial	Optional: one or more comma-separated serial numbers directly in the INI.
Name	Optional: monitor name or model.
Connection	Optional: connection type (e.g., HDMI, DP, USB-C, TBT).

When multiple identification methods are provided, ScreenGenie uses them as combined matching criteria.

4.8 [Brand Model]

This section allows brightness, contrast, resolution, and refresh rate to be automatically configured for specific monitor models. Values here take priority over [Monitor 1] and [Monitor 2].

Key	Values	Description
Brightness	0–100	Brightness for this specific monitor model.
Contrast	0–100	Contrast for this specific monitor model.
Resolution	e.g., 2560x1440	Optional: force a specific resolution.
RefreshRate	e.g., 120	Optional: force a specific refresh rate in Hz.
Scaling	e.g., 100, 125, 150	Optional: force a specific Windows display scaling percentage for this monitor model. Applied instantly, without sign-out or restart.
Preset	LMM, MLM, MML, FREE	Optional: overrides the global [Layout] Preset for this specific monitor model only. Useful when a monitor requires a different laptop position than the default.

The exact monitor name can be found in the log files at: %ProgramData%\PNQ Software\ScreenGenie\Logs\

```
[HP 727pu]
Brightness = 43
Contrast = 76
Resolution = 2560x1440
RefreshRate = 60
Scaling = 100
Preset = MML
```

4.9 [Layout]

Key	Values	Description
Preset	LMM, MLM, MML, FREE	Default position of laptop and external monitors. L=Laptop, M=Monitor. FREE allows the user to define their own layout via Windows Display settings.
VerticalAlign	Top, Center, Bottom	Vertical alignment of monitors within Windows.

4.10 [Show]

The [Show] section allows IT administrators to hide specific UI elements from end users. This is useful in managed environments where certain controls should not be accessible.

Key	Values	Description
DisplaySettings	Yes / No	When No, the Windows Display Settings button and label are hidden from the bottom bar.
Reset	Yes / No	When No, the Reset button is hidden from the bottom bar, preventing users from resetting brightness and contrast to defaults.
Engine	Yes / No	When No, the Engine on/off toggle switch is hidden from the title bar.
AutoBrightness	Yes / No	When No, the Auto toggle switches next to each monitor's Brightness slider are hidden. This does not disable the underlying functionality; a "Brightness = Auto" value configured directly in the ini file continues to be honored.

4.11 [Telemetry]

Configures the telemetry heartbeat sent by the ScreenGenie Agent. When enabled, the Agent periodically reports live monitor values (brightness, contrast, resolution, refresh rate, firmware, connection) to the configured telemetry server, without making any changes to the display configuration.

Key	Values	Description
Enabled	Yes / No	Enables the telemetry heartbeat. Default: No.
Interval	1–1440	Interval in minutes between heartbeat reports. Default: 60.

4.12 [Schedule]

Configures the AutoBrightness feature. When enabled, the ScreenGenie Agent gradually adjusts monitor brightness based on sunrise and sunset times, calculated from the Windows timezone. The daytime brightness target is read per monitor from the INI profile ([Monitor#Serial], [Model], or [Monitor 1/2]). If NightBrightness is equal to or higher than the daytime value, no adjustment is made for that monitor.

Key	Values	Description
Enabled	Yes / No	Enables AutoBrightness. Default: No.
NightBrightness	0–100	Target brightness level at night. Only applied when lower than the monitor's daytime brightness. Default: 40.
TransitionStep	1–20	Brightness change per interval in percentage points. Default: 2.
TransitionInterval	1–60	Minutes between each brightness step. Default: 5.
Timezone	Auto / Windows ID	Auto uses the Windows system timezone. Alternatively specify a Windows timezone ID (e.g. W. Europe Standard Time). Default: Auto.
PauseAfterManualMinutes	0–1440	Minutes to pause AutoBrightness after a manual brightness adjustment is detected. Default: 120.
Deadband	0–20	Minimum difference between the current and expected brightness before a manual override is detected. Default: 5.

4.13 Engine On/Off Behaviour

The Engine switch, shown in the top bar of the ScreenGenie window, provides a global on/off control for all automatic display adjustments. It is stored as Engine under [Settings] (see 4.1).

When Engine is set to Off:

- No automatic adjustments are applied: brightness, contrast, resolution, refresh rate, scaling, and layout positioning are all skipped.
- The ScreenGenie window still opens normally, so the switch can be turned back on at any time.
- When triggered via ScreenGenie.exe /engine (by the Agent, Task Scheduler, or a logon script), the process exits immediately without making any changes.
- Monitor discovery, telemetry reporting, and firmware version checks continue to run — only the corrective actions are skipped.

Turning the switch Off prompts a confirmation dialog in the user's configured UI language, to prevent accidental disabling. Turning it back On is instant and requires no confirmation.

Engine = Off is a user-facing convenience control, not an IT policy lock. A user can turn it back on at any time from the GUI. To centrally prevent automatic corrections, use the deployment models in section 11 instead.

4.14 [Monitors]

Allows specific monitor models to be excluded from all automatic adjustments, while keeping them fully visible in discovery, layout positioning, and telemetry.

Key	Values	Description
Whitelist	Comma-separated model names	Monitors whose model name is not on the list are treated as if the Engine switch were off, for that monitor only — no brightness, contrast, resolution, refresh rate, or scaling changes are applied to them. Discovery, layout positioning, and telemetry are unaffected. Leaving the value empty or omitting the key allows all monitors, as before.

Example: [Monitors] Whitelist = HP 524pu, DELL U3425WE

Model names are matched exactly as detected by ScreenGenie. The exact name can be found in the log files at %ProgramData%\PNQ Software\ScreenGenie\Logs\.

5. Automation and Triggers

ScreenGenie can automatically apply settings when specific events occur, such as connecting a docking station or changing the monitor configuration. Starting with version 26.5, the ScreenGenie Agent runs as a persistent tray application. It starts automatically at Windows login via the registry run key and remains active in the system tray. On every change in power state or display configuration — the Agent launches:

```
ScreenGenie.exe /engine
```

This process verifies the current setup and adjusts it when necessary based on the configuration defined in screengenie.ini.

6. Firmware Management

ScreenGenie supports firmware management for selected monitor models from Dell Technologies®. The application can read the current firmware version and offer firmware updates to the user or perform them automatically.

Dell monitors are supported by default because their firmware update tool does not require administrative privileges. Only monitor brands whose update utilities can run without elevated rights are eligible for the same automation.

6.1 Requirements

- The monitor is manufactured by Dell
- The monitor supports firmware updates via USB-C or Thunderbolt
- The monitor is connected through USB-C or Thunderbolt (TBT)
- ScreenGenie is properly installed
- Internet access is available and connections to *.dell.com are permitted

When connected via DisplayPort or HDMI, no firmware update will be offered.

6.2 Location of firmware.ini

```
%ProgramData%\PNQ Software\ScreenGenie\firmware.ini
```

6.3 Basic Configuration

```
[Settings]
FirmwareUpgrade = Yes
```

Without this setting, ScreenGenie will never offer a firmware update.

6.4 Monitor-Specific Sections

```
[DELL C2722DE]
Version = 113
Location = https://dl.dell.com/FOLDER12217142M/1/Dell_C2722DE_FWUpdate_M3T113_Windows.zip
Silent = -s
```

Key	Required	Description
Version	Yes	Target firmware version (last three digits).
Location	Yes	Download URL of the Dell firmware ZIP or EXE file.
Silent	No	Silent install parameter for the firmware updater (e.g., -s).

6.5 How ScreenGenie Determines Whether an Upgrade Is Needed

1. The current firmware version of the monitor is read.
2. The last three digits are extracted (e.g., 113).
3. This value is compared with Version in firmware.ini.
4. If $\text{CurrentVersion} < \text{Version}$, an Upgrade button appears for the corresponding monitor.

6.6 User Experience

- An Upgrade Firmware button appears next to the monitor in the ScreenGenie UI.
- The user clicks the button and confirms the upgrade.
- ScreenGenie downloads the firmware, extracts the ZIP, and launches the Dell firmware updater.
- After completion, the monitor may restart. ScreenGenie re-checks the version and the button disappears if the monitor is up to date.

6.7 Management in Larger Environments

- Deploy firmware.ini centrally via GPO, Intune, SCCM, etc.
- Maintain firmware versions centrally and keep them up to date.
- ScreenGenie clients automatically follow the central configuration.

6.8 Security & Validation

ScreenGenie only accepts firmware download locations within the following domains: dell.com and *.dell.com. This prevents execution of firmware from external or untrusted sources.

6.9 Benefits for IT

Benefit	Detail
No additional Dell tools required	Everything runs within ScreenGenie.
No standalone scripts needed	Fully managed via firmware.ini.
Minimal user interaction	One click + confirm.
Consistent firmware versions	Across the entire environment.
Fewer incidents	Related to USB-C, docking, or display issues.

7. Display Telemetry

ScreenGenie includes an optional telemetry module that reports monitor configuration data to a central server. This allows IT administrators to monitor display settings across an entire organization from a single web-based dashboard.

Telemetry is entirely optional and is disabled by default. It is activated by deploying a `telemetry.ini` file to the client machine.

7.1 Architecture Overview

Component	Role
ScreenGenie Client	Reads the current monitor state and sends it to the telemetry server after each configuration change and on a configurable interval.
Telemetry Server	ASP.NET Core 8 web application that receives, stores, and serves telemetry data. Deployable on Windows Server with IIS or Linux with Nginx.
Telemetry Dashboard	Web-based interface for administrators to view, search, sort, and export monitor data.

7.2 Data Collected

Field	Description
Hostname	The Windows machine name of the reporting PC.
Model	The monitor model name as detected by Windows.
Serial Number	The unique hardware serial number of the monitor.
Connection	The connection type (e.g., USB-C, DisplayPort, HDMI).
Firmware	The current firmware version of the monitor.
Resolution	The active display resolution (e.g., 2560x1440).
Refresh Rate	The active refresh rate in Hz.
Brightness	The current brightness level (0–100).
Contrast	The current contrast level (0–100), if supported.
Scale	The active DPI/display scaling percentage (e.g., 100, 125, 150).
Engine	Whether the ScreenGenie Engine is currently enabled (On) or disabled (Off) on the reporting PC.
Last Seen	The timestamp of the most recent report (UTC).

No personal user data is collected. Only hardware and configuration data is transmitted.

7.3 Client Configuration

```
%ProgramData%\PNQ Software\ScreenGenie\telemetry.ini
```

```
[Telemetry]
Url          = https://telemetry.pnqsoftware.com
TenantId     = your-tenant-id
ApiKey       = your-api-key
AcceptAnyCertificate = No
IntervalMinutes = 15
```

This file is managed by IT and is never modified by ScreenGenie itself.

7.4 Reporting Behavior

- Immediately at application startup.
- After each brightness or contrast change (with a 2-second delay).
- On the configured interval (default: every 15 minutes).
- After each Engine run triggered by a power or display event.

Telemetry failures never affect the normal operation of ScreenGenie. Failed reports are silently skipped and logged.

7.5 Telemetry Dashboard

- Sortable overview of all monitors with all collected fields.
- Search by hostname, model, serial number, or connection type.
- Color-coded brightness indicators (green = efficient, orange = moderate, red = high).
- Color-coded Engine indicator (green = On, red = Off).
- CSV export and automatic refresh every 60 seconds.

7.6 Deployment

Mode	Details
Cloud / Hosted	Deploy to Windows Server with IIS and a public domain. Free SSL via Let's Encrypt (Win-ACME). Suitable for MSPs and multi-location organizations.
On-premise	Deploy within the organization's own network. All data stays internal — no internet required.

Both configurations require the ASP.NET Core 8 Hosting Bundle and PostgreSQL 17 or higher.

7.7 Security

- All communication over HTTPS.
- Each tenant identified by unique TenantId + ApiKey. Invalid keys rejected with HTTP 401.
- Dashboard protected by username and password.
- Credentials stored as environment variables on the server, not in application files.

8. Command-Line Configuration

SetSG.exe is a standalone console tool that allows IT administrators to add, modify, or manage configuration values in screengenie.ini without opening the ScreenGenie GUI. It is designed for automated deployment via Intune, SCCM, GPO, or RMM.

Basic syntax:

```
SetSG.exe -Section "SectionName" -Item "ItemName" -Value "Value"
```

By default, a value is replaced. If the key does not yet exist, it will be created automatically.

8.1 Special Logic for ForceLeft / ForceRight (Serial)

Serial numbers are treated as comma-separated lists — values are appended and automatically deduplicated.

Adding:

```
SetSG.exe -Section "ForceLeft" -Item "Serial" -Value "ABC#1234"
```

Removing:

```
SetSG.exe -Section "ForceLeft" -Item "Serial" -Remove -Value "ABC#1234"
```

Clearing:

```
SetSG.exe -Section "ForceRight" -Item "Serial" -Clear
```

8.2 Configuration Examples per Section

[Settings]

```
SetSG.exe -section "Settings" -item "Language" -value "EN"  
SetSG.exe -section "Settings" -item "WindowsMode" -value "Yes"  
SetSG.exe -section "Settings" -item "Mode" -value "Dark"  
SetSG.exe -section "Settings" -item "LogDays" -value "14"  
SetSG.exe -section "Settings" -item "Deduplicate" -value "Yes"  
SetSG.exe -section "Settings" -item "Engine" -value "On"
```

[Telemetry]

```
SetSG.exe -section "Telemetry" -item "Enabled" -value "Yes"  
SetSG.exe -section "Telemetry" -item "Interval" -value "60"
```

[Schedule]

```
SetSG.exe -section "Schedule" -item "Enabled" -value "Yes"
SetSG.exe -section "Schedule" -item "NightBrightness" -value "30"
SetSG.exe -section "Schedule" -item "TransitionStep" -value "2"
SetSG.exe -section "Schedule" -item "TransitionInterval" -value "5"
SetSG.exe -section "Schedule" -item "Timezone" -value "Auto"
SetSG.exe -section "Schedule" -item "PauseAfterManualMinutes" -value "120"
SetSG.exe -section "Schedule" -item "Deadband" -value "5"
```

[Agent]

```
SetSG.exe -section "Agent" -item "Delay" -value "10"
```

[Show]

```
SetSG.exe -section "Show" -item "Reset" -value "No"
```

[Synchronization]

```
SetSG.exe -section "Synchronization" -item "Monitors" -value "Yes"
SetSG.exe -section "Synchronization" -item "BrightnessContrast" -value "No"
```

[Monitor 1] / [Monitor 2]

```
SetSG.exe -section "Monitor 1" -item "Brightness" -value "60"
SetSG.exe -section "Monitor 1" -item "Contrast" -value "75"
SetSG.exe -section "Monitor 1" -item "Primary" -value "Yes"
SetSG.exe -section "Monitor 2" -item "Brightness" -value "60"
SetSG.exe -section "Monitor 2" -item "Contrast" -value "75"
SetSG.exe -section "Monitor 1" -item "Primary" -value "No"
```

[ForceLeft] / [ForceRight]

```
SetSG.exe -section "ForceLeft" -item "Name" -value "HP 524pu"
SetSG.exe -section "ForceLeft" -item "Connection" -value "USB-C,TBT"
```

[Brand Model]

```
SetSG.exe -section "HP 727puE" -item "Brightness" -value "39"
SetSG.exe -section "HP 727pu" -item "Contrast" -value "78"
SetSG.exe -section "HP 727pu" -item "RefreshRate" -value "120"
SetSG.exe -section "DELL U4025QW" -item "Scaling" -value "125"
SetSG.exe -section "DELL U4025QW" -item "Preset" -value "MML"
```

[Layout]

```
SetSG.exe -section "Layout" -item "Preset" -value "LMM"
SetSG.exe -section "Layout" -item "VerticalAlign" -value "Center"
```

[Change]

```
SetSG.exe -section "Change" -item "OnPower" -value "Yes"
SetSG.exe -section "Change" -item "OnDisplay" -value "No"
```

[Monitors]

```
SetSG.exe -section "Monitors" -item "Whitelist" -value "HP 727pu,HP 734pm "
```

9. SetVCP — Direct Monitor Control via DDC/CI

SetVCP.exe is a standalone command-line tool included with ScreenGenie. It sends VCP (Virtual Control Panel) commands directly to connected monitors via the DDC/CI protocol, without going through the ScreenGenie configuration engine. SetVCP.exe is located in the ScreenGenie installation folder: Program Files\PNQ Software\ScreenGenie\.

9.1 Basic Syntax

Basic syntax:

```
SetVCP -all -code <hex> -value <int>
SetVCP -display <displaynumber> -code <hex> -value <int>
```

9.2 Parameters

Parameter	Description
-all	Send the command to all connected monitors.
-display	Target a specific display by display number (e.g. 2).
-code	VCP feature code in hexadecimal (e.g. 0x05).
-value	Integer value to write to the VCP feature.

9.3 Output Format

Example output:

```
SetVCP -all -code 0x05 -value 1
OK  \\.\DISPLAY1 HP 727pu CF542627SQ
    VCP 0x05: 0/1 -> 0/1
OK  \\.\DISPLAY2 DELL U2722D 2X3ZC23
    VCP 0x05: 0/1 -> (write ok, reread failed)
Completed. Success=2, Failed=0
```

reread failed on write-only VCP codes such as 0x04 and 0x05 is expected behaviour. The command is executed successfully — the monitor simply does not return a value after a write-only operation.

9.4 Common VCP Codes

Code	Function
0x04	Restore all factory defaults (brightness, contrast, geometry, colour).
0x05	Restore factory brightness and contrast defaults.
0x10	Brightness (0–100).
0x12	Contrast (0–100).
0xD6	Power mode: 1 = On, 4 = Standby, 5 = Off.

9.5 Task Scheduler and RMM Integration

SetVCP.exe can be called directly from Windows Task Scheduler, logon scripts, Intune remediation scripts, or any RMM tool. The ScreenGenie GUI or Engine does not need to be running. This makes SetVCP.exe suitable for scheduled mass operations such as a nightly factory brightness/contrast reset across an entire monitor fleet.

Example — reset brightness and contrast on all monitors at login:

```
"C:\Program Files\PNQ Software\ScreenGenie\SetVCP.exe" -all -code 0x05 -value 1
```

9.6 GetVCP — Reading Monitor Values via DDC/CI

GetVCP.exe is a standalone command-line tool included with ScreenGenie. It reads the current value of a VCP (Virtual Control Panel) feature directly from connected monitors via the DDC/CI protocol, without going through the ScreenGenie configuration engine. GetVCP.exe is located in the ScreenGenie installation folder: Program Files\PNQ Software\ScreenGenie\.

Where SetVCP.exe writes values to a monitor, GetVCP.exe reads them — making it possible to inspect, log, or act on a monitor's current state from a script, without opening the ScreenGenie GUI.

9.6.1 Basic Syntax

```
GetVCP -all -code <hex>
```

```
GetVCP -display <displaynumber> -code <hex>
```

9.6.2 Parameters

Parameter	Description
-----------	-------------

-all	Read the value from all connected monitors.
------	---

-displayTarget	a specific display by display number (e.g. 2).
----------------	--

-code	VCP feature code in hexadecimal (e.g. 0x10).
-------	--

9.6.3 Output Format

GetVCP -all -code 0x10

OK \\.\DISPLAY1 HP 727pu CF542627SQ

VCP 0x10: 75/100

OK \\.\DISPLAY2 DELL U2722D 5H7CV91

VCP 0x10: 60/100

Completed. Success=2, Failed=0

The value is reported as <current>/<maximum>, matching the format used for read-back confirmations in SetVCP.exe. If a monitor does not support the requested VCP code, or the read fails, it is reported as Failed rather than OK, and is excluded from the value count.

9.6.4 Logging values to a file

GetVCP.exe writes its output to standard output, so it can be redirected to a file for later inspection:

GetVCP -all -code 0x10 >> Brightness.txt

Each invocation appends a new block of results to the file, timestamped implicitly by when the scheduled task or script runs. This is useful for building up a simple history of brightness (or any other VCP feature) across a monitor fleet, without needing the telemetry server.

9.6.5 PowerShell and RMM Integration

Because GetVCP.exe writes plain text to standard output, its results can be captured directly in a PowerShell variable and parsed for automated decision-making — for example, flagging monitors that fall outside an expected brightness range, or feeding values into a custom monitoring/alerting pipeline:

```
$output = & "C:\Program Files\PNQ Software\ScreenGenie\GetVCP.exe" -all -code 0x10
$output | Select-String "VCP 0x10:" | ForEach-Object {
    if ($_ -match "VCP 0x10:\s*(\d+)/(\d+)") {
        $current = [int]$matches[1]
        $max     = [int]$matches[2]
        # Example: flag monitors below 20% brightness
        if ($current -lt ($max * 0.2)) {
            Write-Warning "Monitor reported low brightness: $current/$max"
        }
    }
}
```

As with SetVCP.exe, GetVCP.exe can be called directly from Windows Task Scheduler, logon scripts, Intune remediation scripts, or any RMM tool — the ScreenGenie GUI or Engine does not need to be running.

10. Licensing

ScreenGenie is licensed through a central server using a subscription model with an expiration date. Without a valid license, the software will not operate.

10.1 License Storage

Silent MSI Installation

```
msiexec /i ScreenGenie.msi LICENSEKEY="LICENSE-KEY" /qn
```

Command Line via AddLicense.Cli.exe

```
AddLicense.Cli.exe -License "LICENSE-KEY"
```

Centrally via MDM/RMM

Place license.ini in:

```
%ProgramData%\PNQ Software\ScreenGenie\
```

Distribute via Intune, Workspace ONE, or any other MDM/RMM solution.

Local Manual Entry

```
%ProgramData%\PNQ Software\ScreenGenie\license.ini
```

10.2 Valid License Required

- Licenses are time-bound and must be renewed before expiration.
- license.lic specifies: to whom the license is assigned, the expiration date, and the number of licenses issued.

11. Best Practices for Deployment

In all cases, Windows 11 remains responsible for persistent storage of display configurations. ScreenGenie acts as a correction mechanism, applied through the Windows Task Scheduler rather than a continuously running background process.

11.1 User-Initiated Execution (No Scheduled Task)

Characteristics	Advantages	Disadvantages
No Task Scheduler entry for ScreenGenie.Engine. No automatic triggers. No background processes. User decides when to apply corrections, via the application, the tray icon, or the Ctrl+Win+R shortcut.	Minimal system load. Full user control. No system intervention.	Settings are not reapplied automatically. The user must start ScreenGenie manually after connecting an external display.

Suitable for: individual systems, small organizations, and environments where users manage their own monitors.

11.2 Scheduled Task at Login

Characteristics	Advantages	Disadvantages
A Windows Task Scheduler task runs ScreenGenie.Engine once, triggered "At log on." No continuous background process. IT defines the baseline configuration in screengenie.ini.	Consistent startup configuration. Minimal system overhead, as the Engine exits once the check is complete. User flexibility remains during the session.	Docking, undocking, or display changes made during the session are only corrected at the next login.

Suitable for: enterprise environments with fixed workstations, enforcing a baseline configuration at session start.

11.3 Scheduled Task at Login and on Unlock

Characteristics	Advantages	Disadvantages
Two Windows Task Scheduler tasks trigger ScreenGenie.Engine: “At log on” and “On workstation unlock.” Each trigger runs a single check-and-correct pass; no continuous background process is used.	Corrects configuration drift caused by docking, undocking, or monitor changes made while the workstation was locked, not just at boot. System overhead remains minimal, as the Engine still exits after each run.	Changes made mid-session, without an intervening lock/unlock cycle, are not corrected until the next unlock or login.

Suitable for: flexible workplaces, hot-desking, and laptop-and-dock environments with frequent changes.

11.4 Telemetry-Only (No Automated Correction)

Characteristics	Advantages	Disadvantages
No Task Scheduler entry for ScreenGenie.Engine exists, and the Engine is not started manually as part of the deployment. Only telemetry reporting runs. Combine with [Show] AutoBrightness / Engine = No in screengenie.ini to hide the corresponding controls from end users entirely.	Zero risk of unwanted automated changes. Full visibility into fleet-wide brightness, contrast, scaling, and connection state through the telemetry dashboard, without any active management.	No automatic correction whatsoever. Deviations from the desired configuration remain visible but unresolved unless a user adjusts them manually, or IT switches to one of the other models.

Suitable for: organizations evaluating ScreenGenie, environments under strict change-control policies, or pilot phases where visibility is wanted before any automated enforcement is introduced.

11.5 Recommended Deployment Model

PNQ Software recommends the Scheduled Task at Login model (11.2) for most environments. Windows 11 persistently stores monitor positions, scaling, and resolutions; once configured correctly at login, this baseline remains stable for the rest of the session without any continuously running process. For flexible workplaces and hot-desking scenarios, the Login and Unlock model (11.3) is recommended instead, as it also corrects configuration drift introduced while the workstation was locked.

12. Troubleshooting

12.1 DisplayReset Utility

The DisplayReset utility removes the complete Windows display cache by deleting specific registry keys, forcing Windows to rebuild the display stack as if monitors were being connected for the first time.

DisplayReset must always be executed with administrative privileges.

Recommended procedure:

5. Run DisplayReset with administrative privileges.
6. Physically disconnect the monitor(s) or docking station.
7. Reconnect the monitor(s) or docking station.
8. Windows detects displays as newly attached. ScreenGenie reapplies all values from the configuration.

12.1.1 Command-Line Syntax

```
DisplayReset.exe [-Reboot] [-NoBackup]
```

Parameter	Description
-Reboot	Performs an automatic system restart after clearing the display cache.
-NoBackup	Skips creation of a registry backup. Without this parameter, a backup is saved in the Windows TEMP directory.

12.2 Physically Resetting Monitors

9. Completely remove power from the monitor(s).
10. Wait 5–10 seconds.
11. Reconnect the power to force internal monitor controllers to reinitialize.

12.3 Restart to Rebuild the Graphics Stack

For docking stations: also reset or restart the docking device, as these contain their own DisplayPort/USB-C routing chips that may become unresponsive.

12.4 Common Causes

Cause	Details & Resolution
DisplayPort HPD stuck	Faulty cable, loose connector, or malfunctioning docking chipset can cause Windows to cache incorrect EDID/VCP states.
MST hubs altering routing	Unstable dock firmware can cause VCP access to disappear, wrong monitor order, or EDID profiles not passed through. A dock reset or firmware update often resolves these.
Monitor firmware issues	Some firmwares only accept VCP after a full power cycle or lose the DDC/CI buffer preventing brightness/contrast control.
Windows EDID cache inconsistency	Cache may become inconsistent after Windows updates, sleep/hibernation, dock switching, or hot-plug events. Use DisplayReset.exe to clear.
GPU driver DP link renegotiation	DDC/CI channel may temporarily drop during driver updates or G-Sync/FreeSync changes. Physical reconnect resolves.

13. PNQ Software Support

For additional assistance, please contact PNQ Software.

Contact	Details
Support Portal	https://pnqsoftware.com/support/
Address	De Nieuwe Erven 3, 5431 NV Cuijk, The Netherlands
Telephone	+31 (0)85 060 4610
Email	support@pnqsoftware.com

© 2026 PNQ Software BV. All rights reserved. Trademarks may be the property of their respective owners.