



TEM TA  
NERAMIT

Neramit

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## Real-Time 3D On-Air Graphics system

TemTa-Neramit is an all-in-one creation and playout solution for real-time on-air graphics optimized to the need of today's broadcasters. It can be utilized not only in a simple 2D and 3D character generator, but also highly advanced real-time 3D graphics and animation creation without rendering time. TemTa-Neramit enhanced functions and powerful graphics engine will be ideal for moving to the next level of broadcast graphics quality and performance.

### Benefits

#### Rich and Sophisticated 3D Graphics

TemTa-Neramit assists users in creating high quality real-time on-air graphics in order to generate a remarkable expression with built-in-2D and 3D objects, realistic materials as well on imported 3D modeling files.



#### Real-Time Performance and Stability

TemTa-Neramit is embedded with a highly optimized graphic engine that is utilizing up-to-date hardware technology to playout up to 16 layers of scenes simultaneously and process million of polygon in real-time without sacrificing stability.



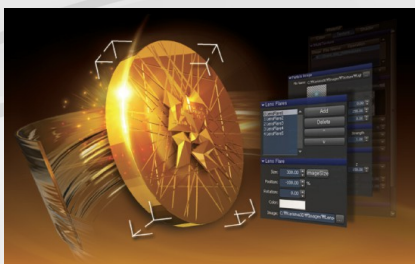
#### Convenient and Easy Creation

TemTa-Neramit provides useful toolset and library. Also has an intuitive user interface to designers so they can manage creation work in easy and simple way. All users, even first-time users, can create better graphics output quickly with fun.



#### Extreme Efficiency and Productivity

TemTa-Neramit has many useful functions on CG graphics creation with an extensive library of templates, time-saving editing tools, and shortcut keys. For example, TemTa-Neramit CG's easy batch process helps import of huge text from file, process on multiple project work to edit all the scenes simultaneously.



#### Maximized Extensibility

Most of TemTa-Neramit features can be controlled by programming interface. This SDK includes rich API, sample codes and documentations that 3<sup>rd</sup> party developers make for their own purposes in C#, VB, C++ languages.



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Boost your on-air graphics

### Built-in 2D/3D Composition

TemTa-Neramit offers the users built-in 2D and 3D composition features. It provides 2D text, shapes, and also path for custom object creation. 2D objects are decorated with cool 2D style system or can be converted into 3D object with bevel, lathe or loft. In 3D, there are built-in 3D text and parametric creation of 3D geometries.

### Import Various File Types

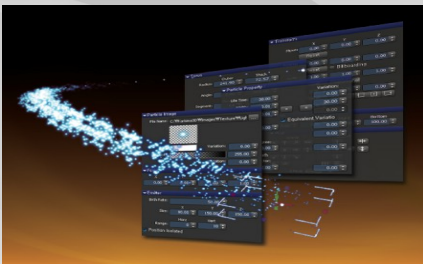
TemTa-Neramit imports various image file types such as PNG, JPG, TGA, TIFF, PSD and AI files. Users can import PSD file, by each layer and can import AI file as vector outline to edit and convert it into 3D object. Also TemTa-Neramit can import 3D model from 3DS, DAE, FBX, OBJ file with meshes, lights and cameras including materials and animations.

### Realistic Material Use

TemTa-Neramit provides the users to set the materials and textures for the 3D elements to give realistic look to the objects for example plastic, metal, wood and glass image. Video files or live input video can also texture mapping to each side of objects.

### Convenient Key-Frame Animation

TemTa-Neramit provides a high level customizable key-frame based animation to deliver a powerful motion graphics. Including position, rotation, and scaling, most of object attributes can be key-framed and controlled on the track-based timeline and spline editor.



### Various Effects

TemTa-Neramit can customizable transition effects to scene and object with various effect such as particle system, lens-flare, and reflection plane. Those are considered as an object and can be controlled and animated. Intuitive particle system to express like a real flame, water, explosion, fireworks, snow, and rain.



### Play-out

TemTa-Neramit support up to 16 multi-layer(scenes). This layer (scene) can play out simultaneously. Also can be controlled independently and conditionally.

TemTa-Neramit also support up to 4K 50p(option).





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Key Feature	TemTa-Neramit ๒	TemTa-Neramit ๓	TemTa-Neramit ๔
Build-in 2D/3D Text, Shapes, Path, Geometries	Y	Y	Y
Clocks (Counter, Timer, Digital Clock)	Y	Y	Y
Image File Support (TGA, JPG, BMP, PNG, AI, PSD)	Y	Y	Y
2D styles (Edge, shadow, glow, gradation, texture)	Y	Y	Y
Native 64 bit CG platform (Still, Roll and Crawls Scenes)	Y	Y	Y
External Real-Time Data Link (ODBC, TXT, RTF, XML)	Y	Y	Y
Lights (Point, Directional, Spot) and Phong Shading	Y	Y	Y
Realistic Material Shader including Reflection and Refraction	Y	Y	Y
Key-Frame Animation and Timeline User Interface	Y	Y	Y
Object and Scene 3D Transition Effects (Wipe, Fade, Ripple, Particle, Distortion, etc)	Y	Y	Y
Scene transition Effect (wipe, fade, ripple, particle, etc) to the whole scene	Y	Y	Y
Support Video format	VRV	VRV Sequence PNG	VRV, MXF, MP4, AVI, WMV, MOV **
Multi-Layer <u>Playout</u>	6	8	16
Audio (AES/EBU, embedded, depending on board type)	Y	Y	Y
<u>Playout to TriCaster</u>	Y	Y	Y
Live-in Image Grab	Y	Y	Y
Network Automation Server	Y	Y	Y
Import 3D modeling file (DAE, FBX, OBJ, 3DS)		Y	Y
Particle effect with various shapes, color, images, directions, etc.		Y	Y
Lens-Flare Effect		Y	Y
Table based 3D Chart Drawing (bar, pie, cylinder, line)		Y	Y
Animation wizard (built-in animation effect roll, jump, side, spin, etc)		Y	Y
Camera animation (Free and Target)			Y
Multi-Animation for Object and Scene			Y
Live-in Video Capture			Y
Live-in Video Mapping to 3D surface			Y

Option	Feature
SMS Message display	ดึงข้อมูลจาก Server อัตโนมัติ พร้อมระบบตัดคำภาษาไทย
Niva Sport Module	รายงานผลคะแนนกีฬา (ฟุตบอล ฟุตบอล ตะกร้อ มวย แบดมินตัน เทนนิส วอลเลย์บอล บาสเกตบอล สุนัขเกอร์)
Shopping Channel Option	เหมาะสมสำหรับงานทางด้าน shopping TV
Social media : Line Display	ดึงข้อมูลอัตโนมัติ พร้อมระบบตัดคำภาษาไทย สามารถคัดกรอง แท็กซ์ เพิ่มเติมก่อนออกอากาศ
Social media : Twitter Display	ดึงข้อมูลอัตโนมัติ พร้อมระบบตัดคำภาษาไทย สามารถคัดกรอง แท็กซ์ เพิ่มเติมก่อนออกอากาศ
News Ticker Display	พร้อมหน้าจอสำหรับกรอกข้อมูลข่าว สามารถหยุด ข่าวด่วน เล่นซ้ำ คัดกรองข่าวก่อนออกอากาศได้
Stock Ticker Display	สำหรับดึงข้อมูลข่าวหุ้นอย่างอัตโนมัติและแสดงในรูปแบบของทางสถานี กำหนด
Logo Bumper (Niva RTDs)	แสดงผลกราฟฟิกส์ภาพและเสียงสำหรับคั่นมุมมองของผู้ชม
Clock	เสริมคุณสมบัติการแสดงผลนาฬิกา จับเวลา โดยสามารถนับเดินหน้า หรือถอยหลัง หยุดเวลารอได้

Subject to change without notice.

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Specification	Details
Notebook	17.3 Full HD 1920x1080 / Intel Core i7-Gen12 (3.7GHz) Nvidia GeForce GTX 4070 (8 GB GDDR6) / 32 GB DDR5 RAM 1 TB NVMe / Window 10 License
Connection	Lan 10/100/1000 / Bluetooth
Port & Interface	USB 3.2 / Thunderbolt 3 / HDMI / Display Port
Support Video Resolutions	SD formats: 525 , 625 HD formats: 1080i 25/29.97/30 720P 50/59.94/60 1080P/PsF 23.98/24/25/29.97/30
Standards	SMPTE 259M SDI 4:2:2 / 270 Mbps SMPTE 292M SDI 4:2:2 / 1.5 Gbps
HD/SD-SDI Video Input/Output	1 HD/SD-SDI Input 1 Reference (Analog BB or Tri-level Sync) Input 1 HD/SD-SDI Output 1 KEY Output
Option	Capture image or Video from Internet
	Backpack Case



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Specification	Details
Notebook	17.3 Full HD 1920x1080 / Intel Core i7-6700 (2.60GHz) Nvidia GeForce GTX 1060 (6 GB GDDR5) / 16 GB DDR4 RAM 1 TB 7200 rpm SATA Disk + 128 GB SSD / Window 10 License
Connection	Wireless Lan / Bluetooth
Port & Interface	USB 2.0 / USB 3.0 / Thunderbolt 3 / HDMI / Display Port
Support Video Resolutions	SD formats: 525 , 625 HD formats: 1080i            25/29.97/30 720P                            50/59.94/60 1080P/PsF            23.98/24/25/29.97/30
Standards	SMPTE 259M SDI 4:2:2 / 270 Mbps SMPTE 292M SDI 4:2:2 / 1.5 Gbps
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