GPUpartner

VALIDATION REPORT · IMAGE GENERATION

Qwen-Image 2.1

on RTX 3070 · 16-bit (BF16)

STATUS · NOV 22, 2026

Not validated

0 of 2 checks pass

Qwen-Image 2.1 at 16-bit needs 15.1 GB; the RTX 3070 can use 8.0 GB. The smallest machine we checked that runs it is the RTX PRO 2000 Blackwell.

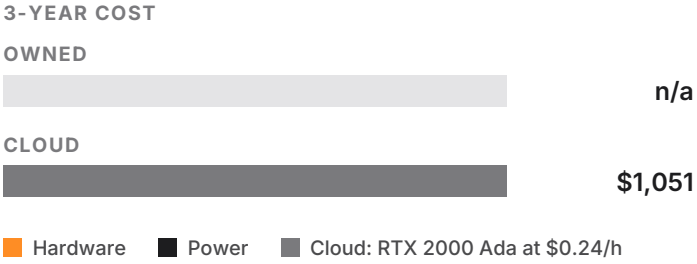
VALIDATION

CHECK	TARGET	RESULT	STATUS
Fits in GPU memory	8.0 GB usable	15.1 GB needed	FAIL
Headroom	5% free	none	FAIL
Time per image	under 30 s	–	NOT TESTED

Targets: an image in under 30 s, and 5% of memory left free. Calculated from published specs, not benchmarked.

BUDGET

HARDWARE, ONE-TIME	MSRP not entered
POWER, PER YEAR	Doesn't run on this machine
CLOUD INSTEAD, PER YEAR	$350
3-YEAR TOTAL, OWNED	n/a
3-YEAR TOTAL, CLOUD	$1,051
BREAK-EVEN	n/a



Budget basis: 4 h a day, power at $0.18 per kWh, cloud at RunPod on-demand prices as of Nov 22, 2026. Hardware at the MSRP entered in the calculator, not a GPU Partner quote. A 3-year view; resale value, staff time and taxes aren't counted.

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TECHNICAL DETAIL · IMAGE GENERATION

Qwen-Image 2.1

on RTX 3070 · 16-bit (BF16)

SETUP

PARAMETERS	7.1B
PRECISION	16-bit (BF16)
HARDWARE	RTX 3070
GPU CAN USE	8.0 GB of 8.0 GB

MEMORY

WEIGHTS	13.3 GB
WORKING	1.0 GB
RUNTIME	819 MB
SYSTEM	0.0 GB
OVER BY	7.1 GB

SUGGESTED CHANGES

SPILL TO RAM	Runs, slower, 6.3 min an image
RTX PRO 2000 BLACKWELL	Runs it, 3.6 min an image
M5 MAX · 48 GB	Runs it, 4.7 min an image
RYZEN AI MAX+ 395 · 64 GB	Runs it, 7.1 min an image

SAME MODEL, OTHER MACHINES

RTX 4090	16-bit · 1.5 min
RTX 5090	16-bit · 72 s
RTX PRO 6000 BLACKWELL	16-bit · 31 s
M5 MAX 128 GB	16-bit · 4.7 min
M3 ULTRA 256 GB	16-bit · 9.1 min
DGX SPARK 128 GB	16-bit · 4.0 min
RYZEN AI MAX+ 395 128 GB	16-bit · 7.1 min

WHERE TO GET IT

FP8	huggingface.co/unsloth/Qwen-Image-2.1-FP8
GGUF	huggingface.co/unsloth/Qwen-Image-2.1-GGUF
OFFICIAL	huggingface.co/Qwen/Qwen-Image-2.1

METHOD AND ASSUMPTIONS

Memory is the denoiser's weights at the chosen precision plus the bigger of one transformer block's working set and the VAE decode, plus the runtime; the text encoders run first and then wait in system RAM. Time is the denoising FLOPs per step times the steps, against the chip's dense 16-bit TFLOPS, scaled to published GeForce runs of this model. Running cost is power at the wall at your rate and hours; the cloud figure is the cheapest RunPod on-demand GPU that runs the same job. Accuracy: memory lands within about a gigabyte; speeds and times are rough, about ±25%. Model data and hardware specs checked Nov 2026; cloud prices are RunPod's on-demand list as of Nov 22, 2026. Report VR-12E01KJ, generated November 22, 2026.