Data Sheet

Graphic Cards for Fujitsu Desktop PC ESPRIMO, Workstation CELSIUS and Thin Clients FUTRO

For a wide range of user scenarios, Fujitsu offers selected graphics cards from various vendors. Parameters like quality, availability and reliability are important.

	NVIDIA GeForce GTX 1650 (available with FH bracket only)
Description	Full height PCI Express Gen3 - graphics controller card
Field of application	DX12.0 gaming support with high range performance. Smooth playing up to 2560x1440 resolution possible. Prepared for upcoming 8k displays with up to 7680x4320 resolution. All application with lowest noise during high graphic load.
Mainboard interface	PCI Express x16 mechanical and electrical
TV Interfaces	HDMI 2.0b, HDCP 2.2 support
Connectors on graphic-board	2* DP 1.4 ready, 1* HDMI 2.0b
Shipped adapters	-
Possible monitor combinations	2*DP, 1*HDMI => three monitor interfaces (can be used simultaneously) DVI-D possible via DP / DVI adapter cable (optional) VGA possible via DP / VGA adapter (optional)
Electrical power consumption	5W - 75Wmax (depending on graphic load)
Technical specification	Local Frame Buffer: 4GB GDDR6, mounted on graphics board Graphics processor: GPU base = 1410 MHz, GPU boost = 1590 MHz Core Frequency Memory Frequency: 6000 MHz, 128bit memory interface DX12.0 support, OpenGL 4.5 DP 1.4, HDMI 2.0b HDCP 2.2 support (High Bandwidth Digital Content Protection) at all digital connectors Occupies 1 PCI Express slot
Operating systems	Windows 10 Home / 10 Pro
Dimensions (W x D in mm)	198mm x 112mm, one slot full height bracket
Cooling solution	with fan
Approvals	CE, VCCI (Released for Fujitsu systems only)
Driver certification	Windows 10 Home, Windows 10 Pro
Mainboard onboard graphic	DISABLED when using graphics card in main graphic slot Note: system BIOS settings can be changed to run graphics card and onboard graphics in parallel
	All resolutions dependent on display type 4:3 or 16:9 (additional resolutions possible depending on monitor EDID data) Color depth [bit/pixel]: up to 36bit

Resolutions / Display types

Resolutions					**Display type:**	
	DP	**HDMI**	**DVI**	**VGA**	**4:3 or 5:4**	**16:9 or 16:10**
640/720*480, 720*576, 800*600, 1024*768,1152*864,1280*960, 1280*1024,	x	x	x	x	x	
1280*720,1280*768, 1280*800, 1360*768, 1600*1024,1680*1050	x	x	x	x		x
1600*1200, 1920*1440 1), 2048*1536 1)	x	x	x1)	x	x	
1920*1080, 1920*1200, 2048*1152	x	x	x	x		x
2560*1440 1), 2560*1600 1)	x	x	x1)			x
4k Resolution: 3840*2160, 4096*2160	x	x				x
5k Resolution: 5120*2880 (via DP)	x	x				x
8k Resolution: 7680*4320 (need 2*DP connectors simultaneous)	x					x

[1)] Needs DP to DUAL Link DVI adapter

	NVIDIA GeForce RTX 3070 8GB (available with FH bracket only)
Description	Full height PCI Express Gen4 - graphics controller card
Field of application	DX12.2 gaming support with highest possible performance. Smooth playing up to 3840x2160 resolution possible. Support for 8k displays with up to 7680x4320 resolution. All application with lowest noise during high graphic load.
Mainboard interface	PCI Express x16 mechanical and electrical
TV Interfaces	HDMI 2.1, HDCP 2.3 support
Connectors on graphic-board	3* DP 1.4a, 1* HDMI 2.1
Shipped adapters	-
Possible monitor combinations	3*DP, 1*HDMI => four monitor interfaces (four can be used simultaneously) DVI-D possible via DP / DVI adapter cable (optional) VGA possible via DP / VGA adapter (optional)
Electrical power consumption	10W - 250Wmax (depending on graphic load)
Technical specification	Local Frame Buffer: 8GB GDDR6, mounted on graphics board Graphics processor: GPU base = 1500 MHz, GPU boost = 1725 MHz Core Frequency Memory Bandwidth: 448 GB/s, 256bit memory interface DX12.2 support, OpenGL 4.6 DP 1.4a, HDMI 2.1 HDCP 2.3 support (High Bandwidth Digital Content Protection) at all digital connectors Occupies 1 PCI Express slot electrical (mechanical 2 slots)
Operating systems	Windows 10 Home / 10 Pro / Windows 11
Dimensions (W x D in mm)	267mm x 112mm, two slot full height bracket
Cooling solution	With 1 fan
Approvals	CE, VCCI (Released for Fujitsu systems only)
Driver certification	Windows 10 Home, Windows 10 Pro, Windows 11
Mainboard onboard graphic	DISABLED when using graphics card in main graphic slot
	All resolutions depend. on display type 4:3 or 16:9 (additional resolution possible depend. on monitor EDID data) Color depth [bit/pixel]: up to 36bit

Resolutions / Display types

Resolutions					**Display type:**	
	DP	**HDMI**	**DVI 1)**	**VGA 2)**	**4:3 or 5:4**	**16:9 or 16:10**
640/720*480, 720*576, 800*600, 1024*768,1152*864,1280*960, 1280*1024,	x	x	x	x	x	
1280*720,1280*768, 1280*800, 1360*768, 1600*1024,1680*1050	x	x	x	x		x
1600*1200, 1920*1440, 2048*1536	x	x	x	x	x	
1920*1080, 1920*1200, 2048*1152	x	x	x	x		x
2560*1440, 2560*1600	x	x	x			x
4k Resolution: 3840*2160, 4096*2160 3)	x	x				x
5k Resolution: 5120*2880	x	x				x
8k Resolution: 7680*4320 3)	x	x				x

1) Needs DP to DUAL Link DVI adapter
2) Needs DP to VGA

8k @60fps or 4k @120fps requires High-Speed HDMI 2.1 cable

Link to datasheets of current NVIDIA standard products:

https://www.nvidia.com/en-us/design-visualization/desktop-graphics/

NVIDIA RTX A6000
NVIDIA RTX A5000
NVIDIA RTX A4500
NVIDIA RTX 4000 SFF Ada Generation
NVIDIA RTX A4000
NVIDIA RTX A2000 - 12GB
NVIDIA T1000 / T1000 - 8GB
NVIDIA T400 - 4GB

Link to datasheets of previous NVIDIA standard products:

https://www.nvidia.com/en-us/design-visualization/previous-quadro-desktop-gpus/

NVIDIA Quadro GV100
NVIDIA Quadro RTX 6000
NVIDIA Quadro P6000
NVIDIA Quadro RTX 4000
NVIDIA RTX A2000 - 6GB
NVIDIA Quadro P2200
NVIDIA Quadro P1000

More information

Fujitsu platform solutions

In addition to graphic cards, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures
With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products
Client Computing Devices : Fujitsu Global

Software
Fujitsu Product Support Software : Fujitsu EMEIA

More information

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www.fujitsu.com/emeia/

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT.
Please find further information at
Fujitsu Global : Fujitsu Global

Green Policy Innovation

More information

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