

White Paper

Energy Consumption ESPRIMO Q520

Version 1.2

In order to strengthen the leadership in implementing European environmental protection regulations, Fujitsu provides all important energy information on its products. The energy efficiency test reports required by Commission Regulation (EU) No 617/2013 are publicly available. These reports have to be done with maximum configurations which are not used by the majority of customers. To give more practical and usable values, Fujitsu provides additional information on power consumption for standard configurations based on ENERGY STAR® 6 calculation.

Fujitsu is also making a significant effort to reduce the energy consumption in data centers by delivering highest energy efficiency with PRIMERGY servers. To underline these efforts Fujitsu joined the Green Grid and Climate Savers Computing initiatives, and publishes SPECpower benchmark results for PRIMERGY servers.

A. Web addresses for information on Energy, Environment and End-of-life treatment

Fujitsu supports important information for energy, environment and End-of-life treatments on the basis of European directives and beyond. Listed below are web addresses pertaining to this topic:

Energy reports: <http://globalsp.ts.fujitsu.com/sites/certificates/default.aspx>

Energy: <http://www.fujitsu.com/fts/energy>

Environment: <http://www.fujitsu.com/fts/green>

End-of-life treatment: <http://www.fujitsu.com/fts/recycling>

B. Power Consumption and Typical Energy Consumption (ETEC) for Clients for typical standard configuration

Typical Configuration	2,5" HDD, 2 x4 GB, ODD, Windows® 8.1™
Related Processor for power consumption	Intel® Core i7-4785T
Power consumption notes	ACPI S5/WOL enabled: power level 10 minutes after shut down
Power consumption: Maximum (S0*, running appl., CD in use) 1)	28.8 W
Power consumption: short Idle (Pshort idle) (S0, running OS, Idle-mode)	7.22 W
Power consumption: long Idle (Plong idle) (S0, running OS, Idle-mode)	5.2 W
Power consumption: Standby (Psleep) (ACPI status S3*, sleep, energy saving mode, WOL enabled)	0.75 W
Power consumption: Minimum (ACPI status S5*, soft off, WOL enabled)	0.56 W
Power consumption: Minimum (Poff) (ACPI status S5, soft off, wake up power button) 2)	0.17 W
Typical Energy Consumption (ETEC), ENERGY STAR® 6 based, conventional mode, 3)	30.0 kWh/year
Typical Energy Consumption (ETEC), ENERGY STAR® 6 based, full capability,3)	24.5 kWh/year
Heat dissipation, WOL enabled, conventional mode (kBTU, 1 W = 3.4121 BTU/h)	102.3 kBTU/year
Heat dissipation, WOL enabled, conventional mode (MJ, 1 W = 3.6 kJ/h)	107.9 MJ/year

1) The Maximum Mode is measured according to SYSTEST 32 of Fujitsu for PCs. This value gives you an indication of maximum power consumption possible and is for information only, i.e. not to be used in any ETEC calculation

2) Shipment conditions ex-factory

3) Formula used for ETEC calculation, Desktop (DT), All in One (AIO), Thin client and Notebook (NB)

$ETEC = 8760/1000 \times (P_{off} \times T_{off} + P_{sleep} \times T_{sleep} + P_{long\ idle} \times T_{long\ idle} + P_{short\ idle} \times T_{long\ idle})$

Mode weighting	Conventional DT, AIO, Thin client	Conventional NB	Full Network Connec- tivity / Full Capability DT, AIO, Thin Client	Full Network Connec- tivity / Full Capabili- tyNB
T off	45 %	25 %	20 %	25 %
T sleep	5 %	35 %	45 %	45 %
T long idle	15 %	10 %	5 %	5 %
T short idle	35 %	30 %	30 %	25 %

C. Power Consumption and Typical Energy Consumption (ETEC) for Clients according to Blue Angel requirements

These measurements were taken according to Blue Angel requirements, and are based on a maximum configuration. Product categories are identical with ENERGY STAR® 5.

Power consumption in accordance to Blue Angel certification (max. configuration per category 230 V / 50 Hz)			
Desktop Category (Definition is identical to ENERGY STAR® 5)	B	C	D
Max. power consumption: Idle (S0, running OS, Idle-mode)	11.9 W	11.8 W	11.9 W
Max. power consumption: Standby (S3, energy saving mode, WOL enabled)	1.31 W	0.98 W	1.30 W
Max. power consumption: Minimum (ACPI status S5, soft off, WOL disabled)	0.17 W	0.17 W	0.17 W
Max. typical energy consumption (ETEC), based on ENERGY STAR® 5	43.1 kWh/year	42.6 kWh/year	43.1 kWh/year

Fujitsu OPTIMIZATION Services

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Fujitsu Technology Solutions
Website: www.fujitsu.com/fts
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