

# LSNAM02 Network Adapter

Intel Pentium Processor D1519 Internal operating frequency 1.5 GHz

## ■ Summary



*CPU	:	Intel Pentium Processor D1519
		Onboard memory
*Main memory	:	DDR4 SDRAM 2133 MT/s
		ECC compliant Maximum 8 GByte
*Communication FPGA	:	Xilinx XC7A200T-2FBG676I
*User interface		
Ethernet (1000base-T/100base-TX/10base-T)	:	2
SD slot	:	1
USB mini-B connector	:	1
Switch	:	4
		- Online / Shutdown switch (toggle switch)
		- Control selection switch
		- Reset switch
		- Abort switch
1 pps signal input connector	:	1

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## ■ Specifications

ITEM		Rated value / Performance
Main parts	CPU	Intel Pentium Processor D1519, Internal operating frequency Maximum 1.5 GHz
	Main memory	Onboard memory DDR4 SDRAM 2133 MT/s, ECC compliant Maximum 8 GByte
	Boot ROM	SPI-Flash memory x 2 (16 MB, 32 MB)
	EEPROM	64 kbit
	Communication FPGA	Xilinx XC7A200T-2FBG676I
	Microcomputer	Silicon Laboratories: Power supply voltage check SILICON LABS: C8051F501-IM Monitor power supply voltage of onboard power supply, ADC calibration, Clock deviation, For survival confirmation of FPGA
Ethernet interface		GIGA-Ethernet (1000base-T/100base-TX/10base-T) : 2
Serial interface		USB serial (USB mini-B connector) : 1
User interface		SD slot : 1 1 pps signal input connector : 1 Toggle switch with lock : 1 (ON-LINE/SHUTDOWN) Push switch : 3 (CONTROL, RESET, ABORT)
Self-diagnosis function		Watchdog timer Power supply voltage check CPU clock error check Illegal access FPGA health check (When error occurs, FPGA can be reconfigured from microcomputer)
Protection function		Overcurrent / overvoltage protection Reverse Current / Reverse Voltage Protection Inrush current protection
Hot swap		Possible (*However, regarding the emergency stop signal processing, it depends on the user circuit.)
Bus standard		LVDS
Indicator		4: Power / Status / Mode / SD Access
Compatible terminal blocks		LSLSB01
Power supply		DC 24 V $\pm$ 20% (The voltage supplied from the backplane)
Environmental conditions	Module ambient temperature	(Operating) -5 to 60°C (Storage) -45 to 85°C
	Module ambient humidity	(Operating / Storage) 0 to 95% RH (No condensation)
Vibration		3.5 mm at 5 Hz to 8.4 Hz, 1 G at 8.4 Hz to 150 Hz
Shock		15 G 11 ms
Current consumption		1.207 A (@ 24 V) * 1
Weight		194 g (Including heat sink) 406 g (Includes CPU module and heat sink)
Dimensions		112 mm (D) x 177.8 mm (H) x 51.8 mm (W) (Except projection)
Standard/Directive		EN 61131-2:2007, RoHs

### About compliant module type

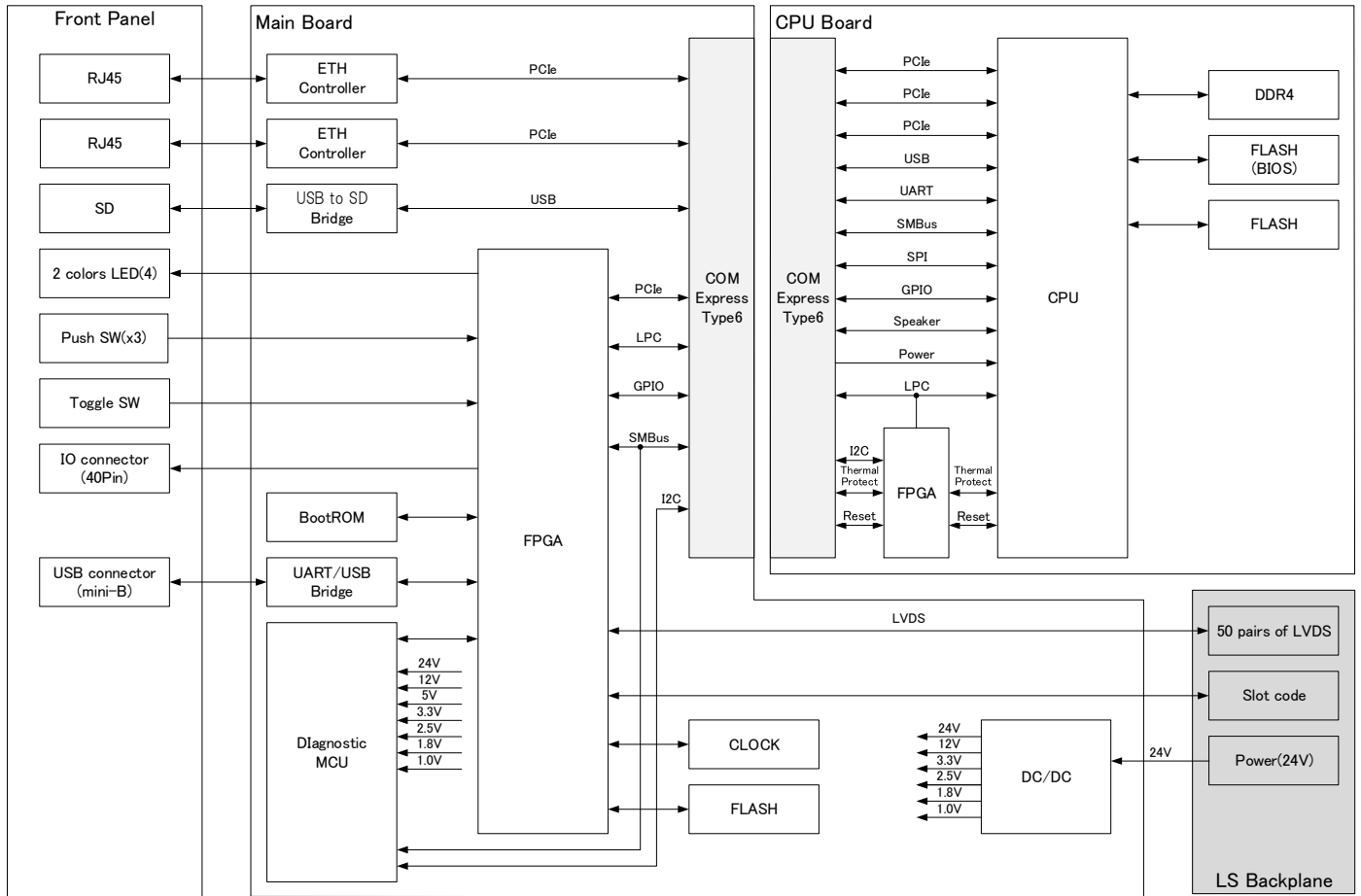
For compliant modules of this product, please refer to "Compliant backplane list (CGS-S9901-E-XX)".

\*1 This is the current consumption when the CPU module is mounted and it is operated at 100% CPU load ratio with Intel Thermal Tool at room temperature.

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## Block diagram



LED	:	Light Emitting Diode
DSW	:	DIP Switch
EEPROM	:	Electrically Erasable Programmable Read-Only Memory
DDR4	:	Double Data Rate4
SDRAM	:	Synchronous Dynamic Random Access Memory
RTC	:	Real Time Clock
SPI	:	Serial Peripheral Interface
JP	:	Jumper Pin
LVDS	:	Low Voltage Differential Signaling
FPGA	:	Field Programmable Gate Array
ROM	:	Read Only Memory
ETH	:	Ethernet
PHY	:	Physical layer
SW	:	Switch

When using, please read the instruction manual attached to the product carefully and use it properly.

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