

LSNAM01 Network adapter

Renesas SH4 internal clock 240 MHz

■ Summary



* CPU	:	Renesas (SH-4)
* Main memory	:	DDR3-667 SDRAM with ECC (Capacity: 256 MB) x 2
* Communication FPGA	:	Xilinx Spartan6
* User interfaces		
	Ethernet (100BASE-TX)	: 2 in total
	Micro SD slots	: 1 in total
	CompactFlash	: 1 in total
	USB mini-B connector	: 1 in total
	Switches	: 4 in total
	- Online/Shutdown switch (toggle switch)	
	- Control selection switch	
	- Reset switch	
	- Abort switch	
	1pps signal connector	: 1 in total

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■ Specifications

ITEM		SPECIFICATION
Major components	CPU	Renesas SH4, internal clock: 240 MHz
	Memory 1	DDR3-667 256 MB with ECC
	Memory 2	DDR3-667 256 MB with ECC
	Boot ROM	SPI Flash 512 kB
	EEPROM	I2C-EEPROM 256 B (for MAC)
	FPGA	Xilinx Spartan6: 100 MHz
	Microcontroller (WDT)	Silicon Laboratories: For power voltage check
Ethernet interface	100BASE-TX	2 in total
Serial interface	USB Serial (USB miniB connector)	1 in total
User interface	Micro SD slot	1 in total
	CompactFlash	1 in total
	1pps signal connector	1 in total
	toggle switch	1 in total (ON-LINE/SHUTDOWN)
	Push switch	3 in total (CONTROL, RESET, ABORT)
Self diagnosis	Watchdog timer	
	Power voltage check	
	CPU clock abnormal check	
	Illegal access	
	FPGA health check (The microcontroller can reconfigure the FPGA when an error is detected.)	
Protection	Overcurrent/Overvoltage protection	
	Reverse current/Reverse voltage protection	
	Inrush current protection	
Hot-swapping	Supported (*Note that emergency stop signal processing must be handled by user circuitry.)	
Bus standard	LVDS	
Indicator	4 in total : Power / Status / Mode / Action Config	
Power supply	DC 24 V \pm 10% / typ 0.46 A (The voltage supplied from the backplane)	
Environmental conditions	Module ambient temperature	(Operating) 0 to 60°C (Storage) -25 to 85°C
	Module ambient humidity	(Operating / Storage) 0 to 95% RH (No condensation)
Vibration	3.5 mm at 5 to 8.4 Hz, 1 G at 8.4 to 150 Hz	
Shock	15 G 11 ms	
Current consumption	389 mA	
Weight	360 g or less	
Size	112 mm (D) x 177.8 mm (H) x 51.8 mm (W) (Protrusions excluded)	
Standard/Directive	IEC61131-2:2007, RoHs	

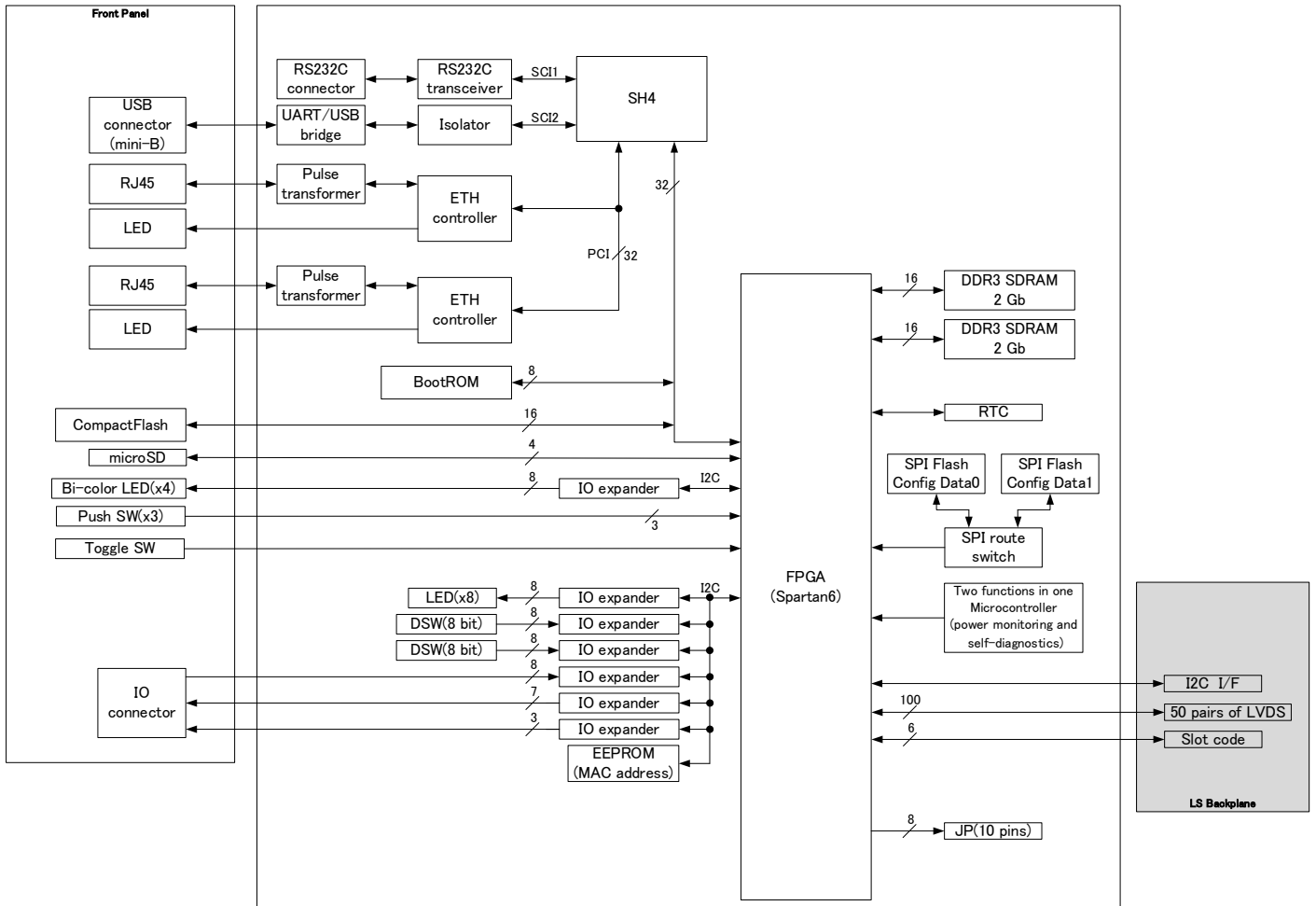
*About compliant module type

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

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Block diagram



LED	:	Light Emitting Diode
DSW	:	DIP Switch
EEPROM	:	Electrically Erasable Programmable Read-Only Memory
DDR3	:	Double Data Rate3
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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