

PoE-compatible 24ch RTD Temperature Measurement Module

Preliminary

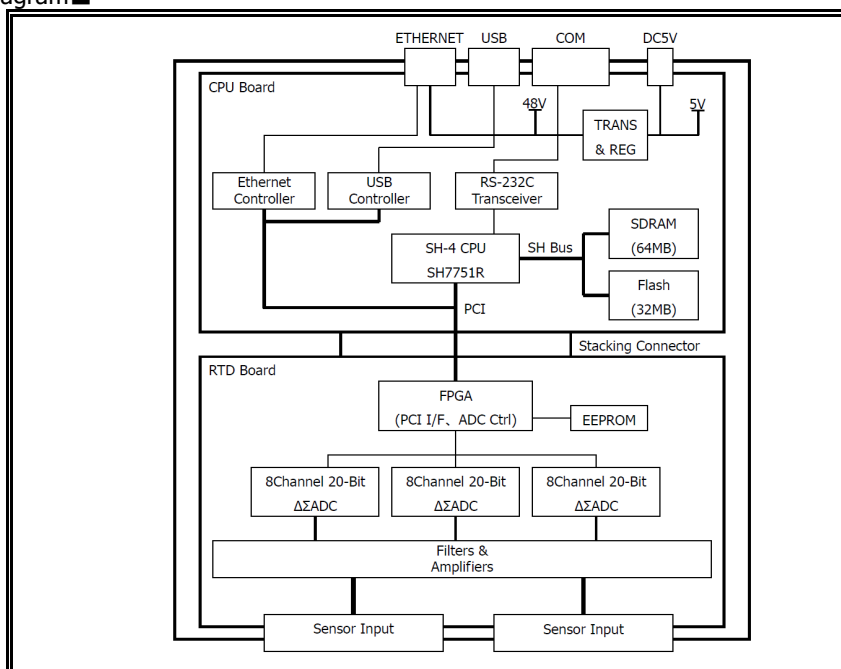
■ Overview ■

- This PoE(Power over Ethernet)-compatible module is capable of temperature measurement by resistance-temperature detector (RTD) via a network.
- It consists of a CPU board and a RTD temperature measurement board (hereinafter called 'RTD board').

■ Features ■

- PoE
 - Compatible with PoE (Power over Ethernet) that can receive power from Ethernet
 - Possible to receive power from external power supply (DC5V)
- CPU
 - Equipped with 32bit RISC-CPU HD6417751RF240 (internal frequency at 240MHz)
 - Equipped with cache of 16kB for instruction (32 kB for data)
 - Peak value of integer arithmetic is 430MIPS
- Memory
 - 32MB Flash memory for CPU boot code stack
 - Main memory: SDRAM 64MB
- I/O
 - 100/10Base-TX Ethernet (PoE-compatible) x 1 port
 - USB 2.0 x 1 port
- Temperature Measurement
 - 24 of Pt100 or JPt100 can be connected
 - Four-wire measurement
 - Accuracy $\pm 0.1^{\circ}\text{C}$
- OS
 - Linux Kernel 2.6
- Power Voltage
 - DC-48V(-42V~-57V) from PoE or DC5V $\pm 5\%$ from external power supply

■ Block Diagram ■



■ Specifications ■

CPU	Processor	HD6417751RF240V(QFP256) SH-4
	Internal cache	16kB for instruction, 32kB for data
	Internal frequency	240MHz
	External bus frequency	120MHz
Memory	Boot ROM	Flash memory of 32MB (8M x 32bit)
	Main memory	SDRAM of 64MB (16M x 32bit)
I/O	Ethernet	100/10BASE-TX x 1
	USB	Type A connector x 1
	RS-232C	x 1
	JTAG ICE I/F	for connecting dedicated cable (not appearing outside of the chassis)

Note: Specifications are subject to change without prior notice.

Temperature measurement	
Channels	24ch
Connecting sensor	Four-wire Pt100 or JPt100
Isolation	Non-isolated
Temperature range	-20 to 80 $^{\circ}\text{C}$
Resolution	0.0001 $^{\circ}\text{C}$
General accuracy	$\pm 0.1^{\circ}\text{C}$ (module temperature at 25 $^{\circ}\text{C} \pm 5^{\circ}\text{C}$)
Conversion rate	Approx. 0.9Hz (all channels)
Measurement current	Approx. 1mA
RTD sensor input	Via external terminal block
Form factor	31.6mm \times 200mm \times 120mm

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