



KONGSBERG

RCU510

Remote Controller Unit

The RCU510 is a Remote Controller Unit specifically designed for process control purposes. It contains 32 general purpose I/O channels for field connections.

Features

Computer

- 32-bit CPU running at 400 MHz
- 32 MB of 64-bit, 133 MHz, SDRAM with ECC
- 16 MB flash memory

Input/Output

- 20 AI/AO/DI/DO channels
 - AI - current, voltage, PT100 or potentiometer
 - AO - current or voltage (channels 1 to 16 only)
 - DI - potential free or Namur
 - DO - high side driver
- 4 relay output channels
- 8 AI/AO channels, $\pm 10V$
- All input/output channels, except for the four relay output channels, are loop monitored
- DSP (Digital Signal Processor) for controlling RIO sub-system and data filtering purposes
- Seven general purpose RS-232/422/485 serial line interfaces, two of which are isolated

Interface Busses

- Single Serial Process Bus (SPBus) interface to Remote I/O (RIO) units
- Dual CAN bus interface (needs adapter card)
- Dual Profibus interface (needs adapter card)

Network

- Dual Ethernet LAN interface (10BASE-T/100BASE-T)

Power

- Low power consumption (typical 20 W)



Monitoring and Status

- Built-In Self Test (BIST)
- Built-in high-temperature and inputs for under-voltage power alarms and cooling-fan alarms
- One Run/Error LED
- Eight status LEDs

Description

The RCU510 is a Remote Controller Unit based on a real-time single board computer (SBC), remote I/O-bus driver and I/O handling controller with a wide set of I/O interfaces. It runs the application program of a process control system and interfaces to different bus and I/O systems.

Standards Applied

The module is designed to conform to the following standards:

- IEC 61131-2
- IEC 60945
- IACS E10

CE Marking

The module conforms to the relevant EU directives.

Type Approval

The RCU510 is type approved by:

- Det norske Veritas (DnV)
- The American Bureau of Shipping (ABS)

Dimensions

Height:	355 mm
Width:	158 mm
Depth:	87 mm
Weight:	1.35 kg

Electrical

Input voltage:	24 VDC \pm 20%
Power consumption:	maximum 20 W + loop power
Connectors:	screw terminals, 2.5 mm ²

Environmental Specifications

Ambient temperatures	
operational:	0° C to 70° C
storage:	-25° C to 70° C
Ambient humidity	
operational:	up to 98% relative humidity, non-condensing
storage:	up to 98% relative humidity, non-condensing
Heat dissipation:	maximum 20 W
Protection standard:	IP20
EMC according to:	EN 61000-6-2, EN 61000-6-4 and EN 60945

Article Number

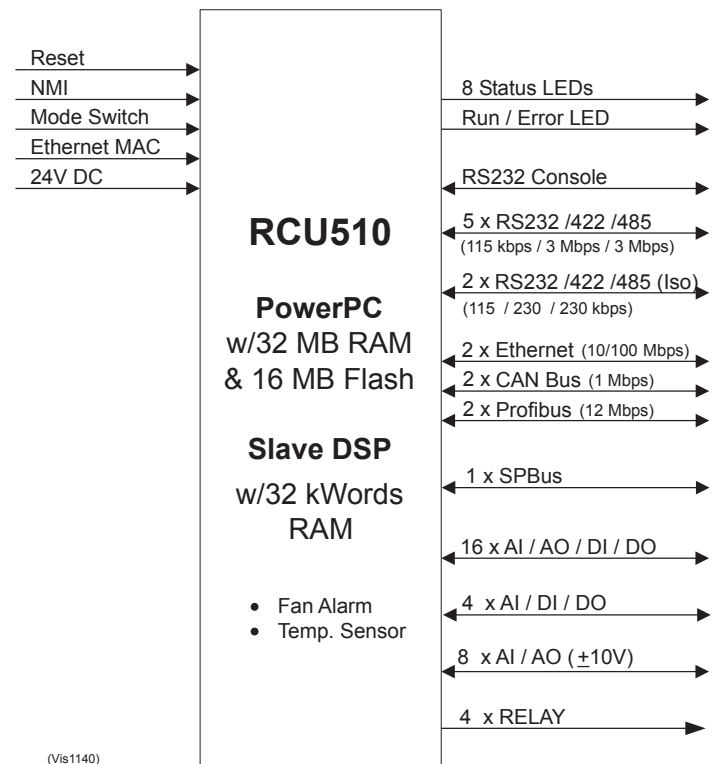
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Computer Details

CPU type:	MPC8245 PowerPC Host Processor
CPU speed:	400 MHz
Memory:	32 MB SDRAM and 16 MB Flash

SPBus Interface

SPBus interfaces:	1
Power supply voltage:	10 to 28.8 VDC
SPBus connector:	9-pin male DSUB
SPBus isolation:	500 V (opto-coupler)
SPBus type:	RS-485 (multi-drop)
SPBus frequency:	maximum 2 MHz
SPBus signal code:	Manchester encoded (self-clocked)



Signal interface diagram

