

Remote Controller Unit

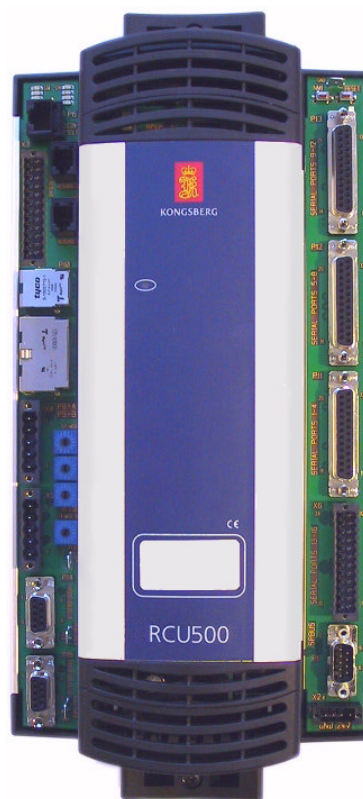
The RCU 500 is a single unit computer specifically designed for process control purposes.

Typical applications are:

- Dynamic Positioning Systems
- Vessel Control Systems
- Process Control Systems
- Safety Systems

Features

- Power PC processor 8245, 400 MHz capable of running AIM and DP applications, 32 MB SDRAM memory and 16 MB Flash memory
- Built-in Self Test (BIST) facilities and error reporting system (via Operator Stations)
- Watchdog with a system status output
- Four general purpose digital input channels
- Four general purpose digital output channels
- Twelve general purpose RS-232/RS-422/RS-485 serial line interfaces
- Four isolated general purpose RS-232/RS-422/RS-485 serial lines
- Dual CAN bus interfaces (1 Mbps)
- Dual Profibus (12 Mbps)
- Serial Process Bus (SPBus) interface to RIO 400 remote I/O units
- Dual 100 Mb Ethernet LAN connectors
- Prepared for redundant RCU operation
- Allows “hot-replacement” of an RCU 500 in a redundant system
- Built-in high-temperature and cooling-fan alarms



- Easy installation and replacement:
 - DIN standard rail-mounting
 - Plug-in connections
- Status LED on the front

Description

The RCU 500 is a Remote Controller Unit based on a real-time single board computer (SBC) specially designed for process control purposes. It is software compatible with both the RCU 400H controller unit and the SBC 500 single board computer.

Technical Specifications

Standards Applied

The equipment is designed to conform to the following standards:

- IEC 61131-2
- IEC 60945
- IACS E10
- IEC 61508

CE Marking

The module conforms to the relevant EU directives.

Type Approval

The RCU500 is designed for type approval by:

- Det norske Veritas (DnV)*
- The American Bureau of Shipping (ABS)*
- TÜV Rheinland for IEC 61508*

* Approval is expected in the second quarter of 2004.

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
Connectors:	screw terminals, 1.5 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
storage:	up to 98% relative humidity

Heat dissipation: maximum 20 W

Protection standard: IP20

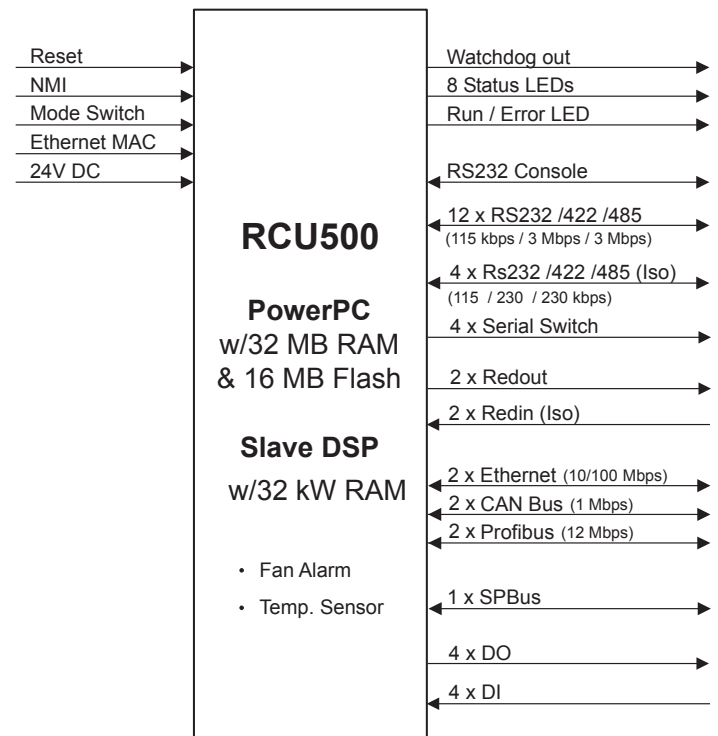
EMC according to: EN 61000-6-2, EN 61000-6-4 and EN 60945

Computer Details

CPU type:	Power PC 8245
CPU speed:	400 MHz.
Memory:	32 MB SDRAM 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 (optocoupler)
SPBus type:	RS-485 (multidrop)
SPBus frequency:	maximum 2 MHz
SPBus signal code:	Manchester encoded (self-clocked)



Signal interface diagram

Article Number

RCU500: 602265

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