RCU602

REMOTE CONTROLLER UNIT

RCU602 is a high performance, general purpose, real-time process control computer for use in a wide variety of KM system applications in both on and offshore installations. The processor core is an embedded Power PC™ architecture. The unit is prepared for single, dual and triple unit redundancy topologies.

Application types

- Dynamic Positioning Systems
- Thruster Control/Steering Systems
- Navigation Sensor Integrator
- Integrated Process Control Systems
- Alarm and monitoring Systems

Benefits

- Extended Built-in Self Test (BIST)
- Prepared for online remote diagnostics
- Simple firmware upgrade
- Bootable from file server or local flash memory
- Easy installation and replacement
  1. DIN Rail mounting
  2. All connections are pluggable
  3. Three digit address switches
- Hot swap in redundant applications, dual and triple Hot-Standby redundancy, 1oo2 redundancy
- Run/Error Status LED indication

Function

- Dual ethernet LAN process network
- Dual Redundancy Net interface for redundant RCU configuration
- Dual field networks for interfacing 3rd party ethernet field devices
- Dual Remote I/O process BUS (RBUS)
- Four general purpose Digital Input channels
- Four general purpose Digital Output channels
- One Watch Dog Digital Output channel
- 24 serial lines for 3rd party interface via RSER200
- Two PROFIBUS channels for 3rd party interface
- Two CANBUS channels for 3rd party interface
**Specifications subject to change without any further notice.**

### TECHNICAL SPECIFICATIONS

**Compliance**
- IACS E10
- DnV GL 2.4
- IEC 60945
- RoHS Directive 2011/65/EU
- EMC Directive 2014/30/EU

**Environmental**
- Ambient temperature (operation): -15°C to 70°C
- Temperature (storage): -25°C to 70°C
- Humidity (operation): max. 95% RH, non-condensing
- Humidity (storage): max. 95% RH, non-condensing
- IP20 (IEC 60529)

**Dimensions**
- H x W x D: 355 mm, 158 mm, 87 mm
- Weight: 1.34 kg
- Mounting DIN Rail T35 7.5/15 according to EN 50022

**Electrical**
- Input supply voltage: 24 VDC (+30%, -25%)
- Nominal current consumption: Max. 0.75 A
- Start-up current: Max. 2.8 A
- Power consumption: Max. 20 W
- Power connectors: Screw terminals (slotted), Cable cs: 2.5 mm²

**Processor and memory**
- Processor type: Power PC Host processor P2041
- Clock frequency: 1.5 GHz
- Memory: - RAM: 2 GB, - Flash: 256 MB for application use

**Serial line**
- Channels: 24 insulated serial lines via RSER200 modules, distributed on 6 shielded RJ45 modular jack connectors
- Physical layer on RSER200: RS232, RS422, RS485 and NMEA 0183 multidrop via RSER200-4
- Bit rate per channel: Max. 115 kb/s

**General purpose I/O channels**
- Digital Output: 4 x opto-isolated outputs. Max. 30 mA
- 1 x opto-isolated watchdog (for external interface) Max. 30 mA
- Digital Input: 4 x opto-isolated inputs
- I/O connectors: Cage clamps
- Cable cross section: 0.75 mm²

**Lan interface**
- Process network: - 2 x RJ45 Ethernet IEEE 802.3 type 10BASE-T/100BASE-TX
- Field network: - 2 x RJ45 Ethernet IEEE 802.3 type 10BASE-T/100BASE-TX
- Redundancy Ethernet: - 2 x RJ45 Ethernet IEEE 802.3 type 100BASE-TX/1000BASE-T

**RBUS interface**
- Connector: 2 x shielded RJ45 modular jack

**Field interface**
- CAN interface: 2 x CANopen/DeviceNet
- Bus connectors: - Cable cross section: 2.5 mm²
- Bit rate: Max. 1 Mb/s (DeviceNet not defined above 500kb/s)
- PROFIBUS interface: 2 x opto isolated 9 pin female D-Sub connectors
- Bit rate: Max. 12 Mb/s

**Failure rate**
- MTBF (SN29500/ 40°C): 22 years.

**Power**
- 1. Redundant power input with power alarm monitoring
- 2. Inrush current and over-voltage protection
- 3. Enhanced watchdog with fail-safe function and system status output

**Compliant to the following protocols:**
1. Modbus (Serial and TCP)
2. NMEA 0183
3. PROFINET/PROFIsafe
4. CAN
5. 3rd party vendor specific protocols are available upon request

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