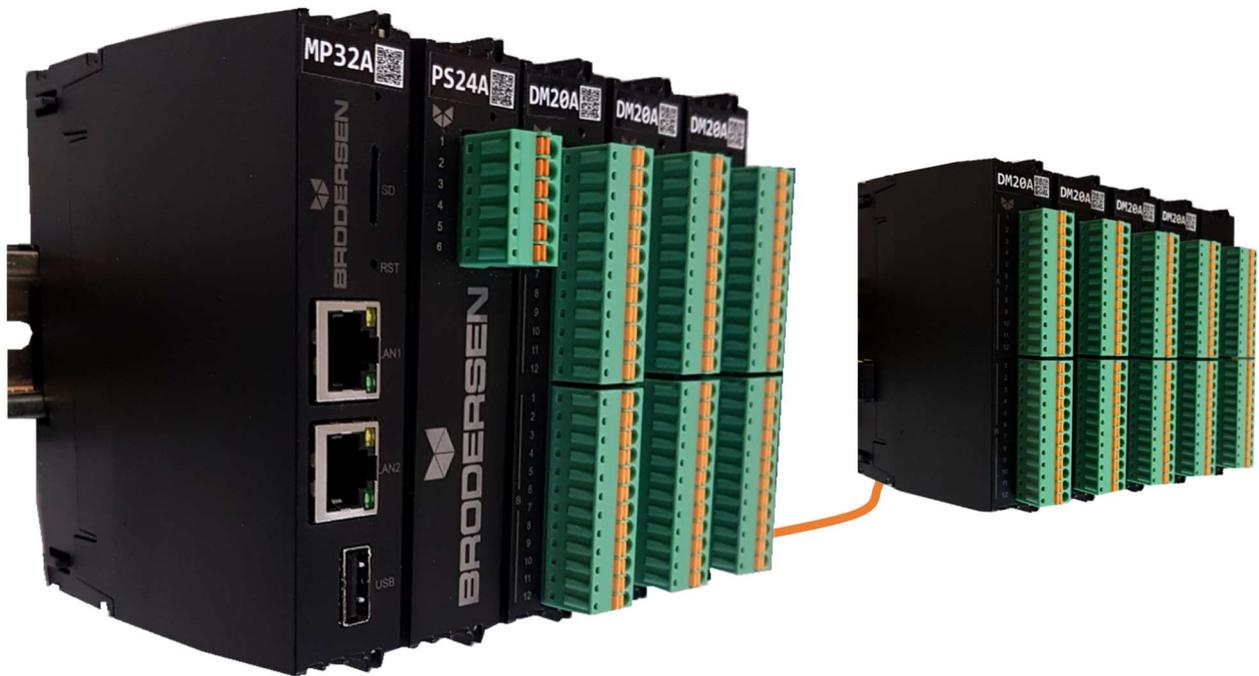


RTU32M

A compact, modular product solution featuring hot swap, distributed I/O, redundancy and more...





‘Click together’ to build whatever you want is well known in Denmark...



Flexible Architecture

Start with a CPU and power supply, then add I/O or system modules (4x serial, 4x Ethernet, VGA etc).

Powerful and ‘future proof’ CPU

i.MX 200MHz-2GHz processors & top model with additional 1GHz AI processor

Distributed I/O in a fixed or segmented arrangement

Create an RTU solution using up to 250 I/O modules, that can be distributed in multiple segments/blocks.

Smart Modules with ID, Data Quality and Timestamps

Enhanced I/O processing. In addition to reporting of data values – modules also report data quality, firmware and hardware revision, status, timestamp of last change (1ms resolution) and serial numbers.

Compact Size – with front terminations

Each module is only 110mmH x 25mmW x 95mmD.

Assembly is easy – connect the bus modules to form the backplane, then plug in the ‘hot swappable’ modules!



DIN Rail Mount – two part modules

Each module comprises of a lower backplane bus portion that mounts on the DIN rail and an upper module portion.

Hot Swap Modules

A module can be replaced/swapped while the RTU is operational. Module configuration parameters will then be automatically updated.

Brodersen have been building RTUs for almost 50 years

Brodersen RTU products are used in a wide range of applications around the world that include;

Energy

- Substation Automation
- Distribution Systems
- Windfarms

Oil and Gas

- Distribution
- Metering

Communications

- Protocol Gateways
- Equipment Control
- Network Management

Water and Waste Water

- Storage and Distribution
- Pump Stations and Treatment Plants

Rail and Road

- Road and Tunnel Management (including the Eurotunnel)
- Level Crossing Monitoring and Traction Control (trackside power systems)



Designed for Secure Monitoring and Control of Critical Infrastructure Applications – around the world

Large Installed Base - Proven Design Experience

Brodersen products are designed and built to last. The RTU32M CPU architecture and backplane interface to the I/O has changed considerably, but the I/O module signal interfaces are based on designs that are well proven in harsh industrial environments such as substations and waste water pump stations.

Redundancy – add another P/S or CPU module

Add another power supply to share the load and takeover if the other unit fails, or add another CPU module to increase the system availability.

WiFi Support – RTU setup from a tablet/phone

The option for WiFi allows secure access to the RTU web server using a browser to easily manage RTU configuration and view data values/graphics. Turn WIFI on/off with SCADA for increased safety.

Industrial Security Requirements

Security of data, restriction of access to configuration setup and version control have all been enhanced to meet the latest industry requirements and expectations. Features include HTTPS, LDAP, VPN, signed certificates, firewall, whitelist/blacklist & naturally encrypted storage.

Network Redundancy Protocols - HSR and PRP

The RTU32M includes HSR (High Availability Seamless Redundancy) and PRP (Parallel Redundancy Protocol) and Network Bonding. These interfaces are used in substation automation applications to provide ring and parallel network solutions.

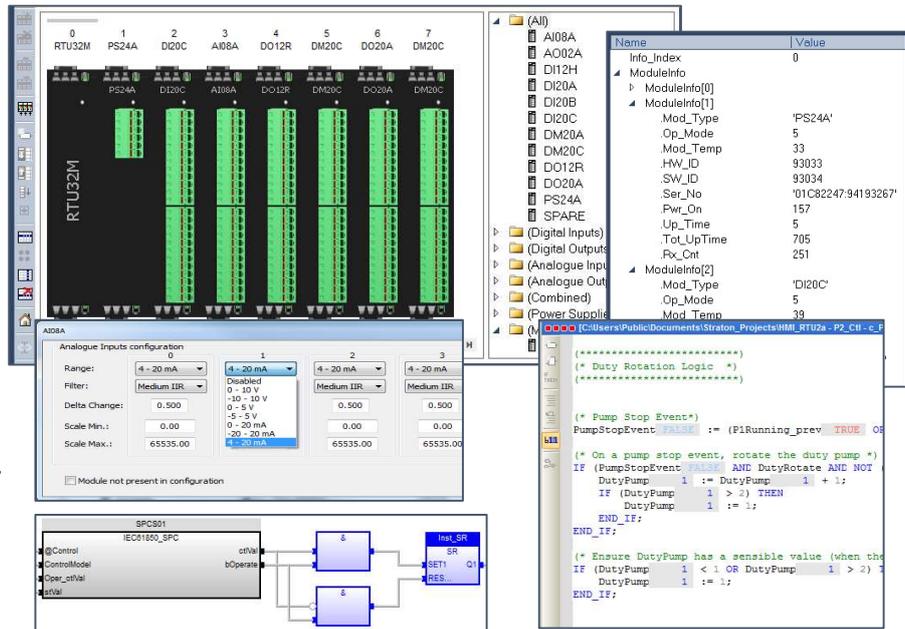
WorkSuite – software tools to manage your application

PLC Functionality

WorkSuite includes 'wizards' for creation of the I/O setup and program variables. Create and edit logic applications using IEC61131-3 function blocks, ladder logic and structured text programs.

Utility Industry Protocols

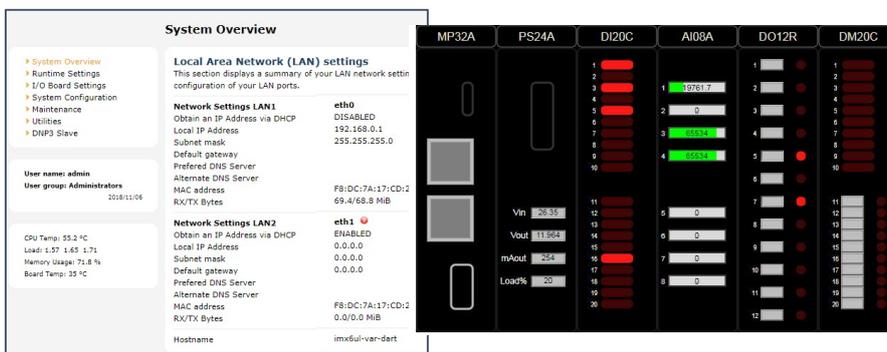
Many products claim to have RTU functionality – but most do not have a full suite of protocols. RTU32M protocols include; MODBUS, IEC60870, DNP3, IEC61850, Ethernet/IP, Profinet, MQTT and SNMP.



Web Server for configuration and html user displays

Easy access to setup/data

The RTU32M web Server allows access to the RTU setup. Change port settings, update firmware, monitor network activity and more from a web interface. Publish user displays as html pages for display on your tablet or phone.



Brodersen Style Commissioning

Auto generated HMI ready for you



Old Style Commissioning

"Wires around your ears"



Specification Overview – module types

Controllers	CPU modules
MP32A REV A	MP32A, 2 x 10/100 Ethernet Port, 1 x USB
MP32A REV B	MP32A, 2 x 10/100 Ethernet Port, 1 x USB with M8 connector for Redlink Module
MP32A REV C	MP32A, 2 x 10/100 Ethernet Port, 1 x Serial RS232/485 with M8 connector
MP32A REV D	MP32A with 4 x 2 GHz + 1GHZ co processor, 4 GB RAM, 8G eMMC, 2 X GB LAN
MP32E	Extended Temperature option for REV A,B,C,D (-40 to +85 °C)

BUS Modules	Backplane Modules
BB21A	Base I/O module - start
BB21B	Base I/O module - middle
BB21C	Base I/O module - expansion/end
BB41A	Base P/S module - start
BB41B	Base P/S module - middle
BB41E	Base P/S module - expand next din rail
BB61A	Base CPU module - start
BB61B	Base CPU module - middle
BB61R	Base CPU module - Redundant middle
BB81A	Base system module start
BB81B	Base system module

Power Supply	
PS24A	Power supply 10-30 VDC Input, 12VDC 1.2A BUS output
PS48A	Power supply 30-60 VDC Input, 12VDC 1.2A BUS output
PS96A	Power supply 60-150 VDC Input, 12VDC 1.2A BUS output

Specification Overview – module types

Expansion Modules	LB2 modules for use with RTU32N and RTU32M
Digital Input modules	
DI20A	20DI bipolar 10-30 VDC
DI20B	20DI bipolar 30-60 VDC
DI12H	12DI 90-140 VDC
High Speed counter 5Khz	
DI20C	18DI bipolar 10-30 VDC, 2 counter input 5kHz 5-30VDC
DM20C	8DI bipolar 10-30 VDC, 2 counter input 5kHz 5-30VDC, 10 PNP Out 10-30VDC
Output modules	
DO20A	20 bipolar DO 10-30 VDC
DO12R	12 Relay Out 2A SPST
DO08R	8 Relay Out 2A SPDT
DO08F	8 Relay Out 2A SPDT remanent type
Analogue Input modules	
AI08A	8 Channel Analogue Input, 16 Bit Resolution, Voltage/Current, Full User Configurable
AI08T	8 Channel Analogue Input, 16 Bit Resolution, PT100 (2 & 3 Wires)
Analogue Output modules	
AO02A	2 Channel Analogue Ouput, 16 Bit Resolution, Voltage / Current, User Configurable
AO02B	2 Channel Analogue Ouput, 16 Bit Resolution, Current, User Configurable

Specification Overview – module types

Combination modules	
DM20A	10DI bipolar 10-30 VDC, 10 PNP Out 10-30VDC
IO14A	8DI (6DI, 2CI/fast DI), 2DO (Relay out), 3AI (Current input), 1AO
IO14B	8DI (6DI, 2CI/fast DI), 2DO (Relay out), 3AI (Voltage input), 1AO
DM08H	4 DI 280 VDC 4DO 300VDC (solid state output)
IED Power Module	
PM03A	3-PHASE POWER IED METER 1A CT, UP TO 400/690 VAC IN 3-PHASE
PM03B	3-PHASE POWER IED METER 5A CT, UP TO 400/690 VAC IN 3-PHASE
PM03C	3-PHASE POWER IED METER ROGOWSKI COILS, UP TO 400/690 VAC IN 3-PHASE
PM04A	3-PHASE POWER IED METER 1A CT, UP TO 400/690 VAC IN 3-PHASE
PM04B	3-PHASE POWER IED METER 5A CT, UP TO 400/690 VAC IN 3-PHASE
PM04C	3-PHASE POWER IED METER ROGOWSKI COILS, UP TO 400/690 VAC IN 3-PHASE

Communication – module types

Communication Modules	
CM02A	1 Ethernet LAN port, 1 Serial RS232/RS485 port. 4 Serial Ports: COM1: Isolated RS232/RS485, COM2 & 3: RS232 with RX/TX/RTS/CTS, COM4: RS232
SP04A	with all null-modem signals.
SP04B	4 Serial Ports: Isolated RS232/RS485
FP02A	2 X Single Mode 100Base-FX Fiber Optical Module With SC connector 1310nm (MAX 60 KM)
FP02B	2 X Multi Mode 100Base-FX Fiber Optical Module With SC connector 1300nm (MAX 2 KM)
FP02C	2 X Multi Mode 100Base-FX Fiber Optical Module With ST connector 1300nm (MAX 2 KM)
IM51A	4G LTE Cat M1/Cat NB1/EGPRS + GPS
IM51B	4G LTE (150Mbps down/50Mbps up) + GPS
Redlink	Redundant replication Card for MP32A REV B
Redlink-P1	Redundant replication link USB
Other	
BOOT-MSD	Boot from Micro SD, 4GB preloaded card included.
Spare	Dummy I/O module, remember to order Bus module for inserting spare module

Driver Overview

Runtime licenses for RTU32M	
Performance runtime licenses	
DL-200MHZ-RL	200 MHz CPU Runtime License (Default)
DL-500MHZ-RL	528 MHz CPU Runtime License
DL-900MHZ-RL	900 MHz CPU Runtime License
DL-256MB-RL	256 MB RAM Runtime License (Default is 128 MB)
DL-256TAGS-RL	256 I/O points are included in the RTU by default
DL-512TAGS-RL	Up to 512 I/O Points Runtime License
DL-4KTAGS-RL	Up to 4096 I/O Points Runtime License
DL-16KTAGS-RL	Up to 16384 I/O Points Runtime License
DL-UNLIMTAG-RL	Unlimited I/O Points Runtime License
Class A driver runtime licenses	
DL-IEC60870-101M-RL	IEC60870-5-101 Master Driver Runtime License
DL-IEC60870-101S-RL	IEC60870-5-101 Slave Driver Runtime License
DL-IEC60870-104C-RL	IEC60870-5-104 Client Driver Runtime License
DL-IEC60870-104S-RL	IEC60870-5-104 Server Driver Runtime License
DL-IEC60870-103M-RL	IEC60870-5-103 Master Driver Runtime License
DL-SNMP-RL	SNMP Agent Driver Runtime License
DL-SNMPC-RL	SNMP Client Driver Runtime License
DL-MQTT-RL	MQTT Client Driver Runtime License
DL-OPCUAS-RL	OPC UA Server Driver Runtime License
DL-SS7C-RL	Siemens PLC300/400 series
DL-DNP3S-RL	DNP3 Slave Driver Runtime License
DL-DNP3M-RL	DNP3 Master Driver Runtime License
DL-ETHIPC-RL	Ethernet/IP Scanner Driver Runtime License
DL-DF1M-RL	DF1 Master Half Duplex for SLC500 and SLC5/x
Class B driver runtime licenses	
DL-IEC60870-RL	IEC60870-5-10x Driver Suite Runtime License
DL-HSRPRP-RL	Network Redundancy License (HSR/PRP)
DL-MULTITASK-RL	Quad kernel PLC Runtime License
DL-OPCUAC-RL	OPC UA Client Driver Runtime License
DL-IEC61850S-RL	IEC61850 Server Driver Runtime License
DL-IEC61850C-RL	IEC61850 Client Driver Runtime License
DL-DNP3WS-RL	WITS-DNP3 Slave Driver Runtime License