

I N N O V A Q U A

# Miranda

Monitoring & Control



**FULL CONTROL OF MACHINES, SENSORS AND ALL PROCESSES FROM ANYWHERE**

Designed and manufactured by INNOVAQUA in the EU.

# Miranda



All supported devices

## *The real-time aquaculture and water industries BIG DATA Management*

Robust and reliable for producers, managers and researchers allowing you to monitor and control parameters in real-time, on site or remotely.

Save time and money by optimising your operations. Create the reports you need to manage your installation better and take the right decisions timely.

**Innovaqua** has many years of experience and knowledge and has designed several specific control modules for aquaculture such as photoperiod, thermoperiod or feeding management (**Mirafeed**) that are fully integrated.

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## Automation Control and Supervisor Data



- MySQL database Engine.
- Field Communication module specifically developed.
- APACHE web server with php technology.



Rack Model

### **Miranda SDA** (Supervisor Data Acquisition)

It is installed into a rugged device connected to controllers via cable, optic fiber or radio (communications network), collecting the field data and incorporating them into the database, also allowing the execution of orders and setting of different control systems.

Includes the following **functions**:

- Parameters display in real-time.
- Display in real-time.
- Information showed with colour codes for quick interpretation.
- Management of historical data.
- Information export in standard CSV file, compatible with most data management applications.
- Alarm management through SMS and/or e-mail.
- Can be accessed simultaneously locally (LAN) or remotely (Internet).
- Automatic back-up in local removable media.
- Key-code system, allowing the replacement of a defective machine with a new one keeping all configuration.



**Miranda ACB** (Automation Control Box) includes an industrial PLC with colour touch screen. Connecting the appropriate probes, it reads the levels of the parameters (pH, oxygen, temperature, etc.), acting on the devices (pump, valves, etc.) and maintaining the levels within the desired ranges.

This architecture increases the system reliability against failures and minimizes the risk of accidents and losses.

Currently, it can be connected to any standard device with 4-20 mA, 0-20 mA and 0-10 Volts, or digital communications.

“ INTELLIGENT 4.0 solutions for  
AQUACULTURE and WATER INDUSTRIES ”

**CONTROLLERS and SENSORS** have been specifically chosen for their optimal performance with our system.

**PROBES** among others



Optical DO  
Autoclean



Conductivity



Turbidity  
Autoclean



Pressure



Level IP68



TDG



pH



Redox



+ Autoclean

**ACTUATORS and DEVICES** among others



Alarms



Inverters



Electric Valves



Skimmers



Temperature



Oxygen  
Dissolution



Filtration



Mixers



Aerators



Feeders



Pumps



pH



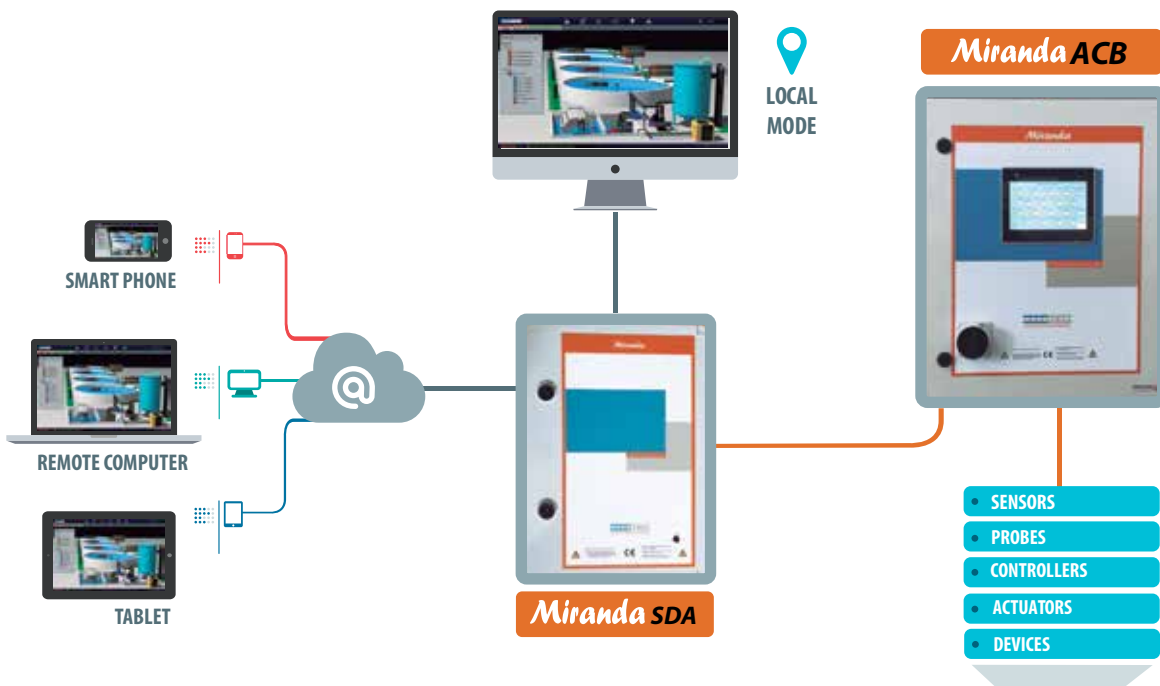
Photoperiod



UV



Ozone





# Miranda

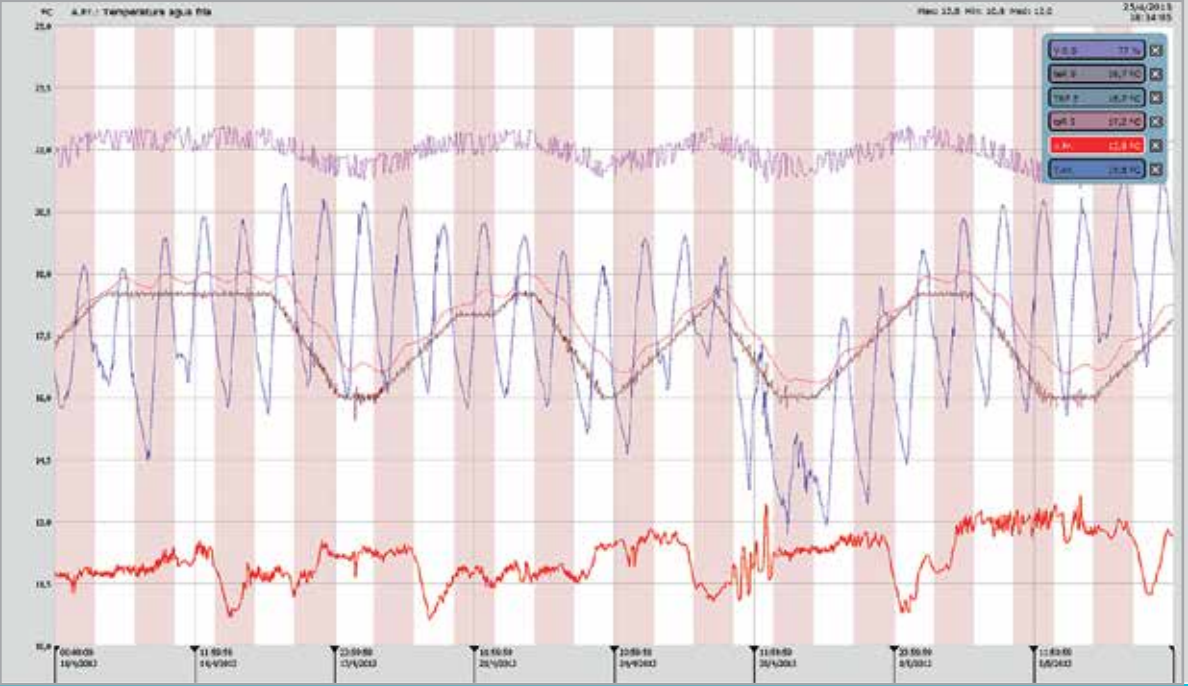
by

INNOVAQUA

Device	IP	Port	Protocol	Group	Status	Alerts
miranda01	192.168.1.10	80	TCP	Admin	OK	0
miranda02	192.168.1.11	80	TCP	Admin	OK	0
miranda03	192.168.1.12	80	TCP	Admin	OK	0
miranda04	192.168.1.13	80	TCP	Admin	OK	0
miranda05	192.168.1.14	80	TCP	Admin	OK	0
miranda06	192.168.1.15	80	TCP	Admin	OK	0
miranda07	192.168.1.16	80	TCP	Admin	OK	0
miranda08	192.168.1.17	80	TCP	Admin	OK	0
miranda09	192.168.1.18	80	TCP	Admin	OK	0
miranda10	192.168.1.19	80	TCP	Admin	OK	0
miranda11	192.168.1.20	80	TCP	Admin	OK	0
miranda12	192.168.1.21	80	TCP	Admin	OK	0
miranda13	192.168.1.22	80	TCP	Admin	OK	0
miranda14	192.168.1.23	80	TCP	Admin	OK	0
miranda15	192.168.1.24	80	TCP	Admin	OK	0
miranda16	192.168.1.25	80	TCP	Admin	OK	0
miranda17	192.168.1.26	80	TCP	Admin	OK	0
miranda18	192.168.1.27	80	TCP	Admin	OK	0
miranda19	192.168.1.28	80	TCP	Admin	OK	0
miranda20	192.168.1.29	80	TCP	Admin	OK	0
miranda21	192.168.1.30	80	TCP	Admin	OK	0
miranda22	192.168.1.31	80	TCP	Admin	OK	0
miranda23	192.168.1.32	80	TCP	Admin	OK	0
miranda24	192.168.1.33	80	TCP	Admin	OK	0
miranda25	192.168.1.34	80	TCP	Admin	OK	0
miranda26	192.168.1.35	80	TCP	Admin	OK	0
miranda27	192.168.1.36	80	TCP	Admin	OK	0
miranda28	192.168.1.37	80	TCP	Admin	OK	0
miranda29	192.168.1.38	80	TCP	Admin	OK	0
miranda30	192.168.1.39	80	TCP	Admin	OK	0
miranda31	192.168.1.40	80	TCP	Admin	OK	0
miranda32	192.168.1.41	80	TCP	Admin	OK	0
miranda33	192.168.1.42	80	TCP	Admin	OK	0
miranda34	192.168.1.43	80	TCP	Admin	OK	0
miranda35	192.168.1.44	80	TCP	Admin	OK	0
miranda36	192.168.1.45	80	TCP	Admin	OK	0
miranda37	192.168.1.46	80	TCP	Admin	OK	0
miranda38	192.168.1.47	80	TCP	Admin	OK	0
miranda39	192.168.1.48	80	TCP	Admin	OK	0
miranda40	192.168.1.49	80	TCP	Admin	OK	0
miranda41	192.168.1.50	80	TCP	Admin	OK	0
miranda42	192.168.1.51	80	TCP	Admin	OK	0
miranda43	192.168.1.52	80	TCP	Admin	OK	0
miranda44	192.168.1.53	80	TCP	Admin	OK	0
miranda45	192.168.1.54	80	TCP	Admin	OK	0
miranda46	192.168.1.55	80	TCP	Admin	OK	0
miranda47	192.168.1.56	80	TCP	Admin	OK	0
miranda48	192.168.1.57	80	TCP	Admin	OK	0
miranda49	192.168.1.58	80	TCP	Admin	OK	0
miranda50	192.168.1.59	80	TCP	Admin	OK	0
miranda51	192.168.1.60	80	TCP	Admin	OK	0
miranda52	192.168.1.61	80	TCP	Admin	OK	0
miranda53	192.168.1.62	80	TCP	Admin	OK	0
miranda54	192.168.1.63	80	TCP	Admin	OK	0
miranda55	192.168.1.64	80	TCP	Admin	OK	0
miranda56	192.168.1.65	80	TCP	Admin	OK	0
miranda57	192.168.1.66	80	TCP	Admin	OK	0
miranda58	192.168.1.67	80	TCP	Admin	OK	0
miranda59	192.168.1.68	80	TCP	Admin	OK	0
miranda60	192.168.1.69	80	TCP	Admin	OK	0
miranda61	192.168.1.70	80	TCP	Admin	OK	0
miranda62	192.168.1.71	80	TCP	Admin	OK	0
miranda63	192.168.1.72	80	TCP	Admin	OK	0
miranda64	192.168.1.73	80	TCP	Admin	OK	0
miranda65	192.168.1.74	80	TCP	Admin	OK	0
miranda66	192.168.1.75	80	TCP	Admin	OK	0
miranda67	192.168.1.76	80	TCP	Admin	OK	0
miranda68	192.168.1.77	80	TCP	Admin	OK	0
miranda69	192.168.1.78	80	TCP	Admin	OK	0
miranda70	192.168.1.79	80	TCP	Admin	OK	0
miranda71	192.168.1.80	80	TCP	Admin	OK	0
miranda72	192.168.1.81	80	TCP	Admin	OK	0
miranda73	192.168.1.82	80	TCP	Admin	OK	0
miranda74	192.168.1.83	80	TCP	Admin	OK	0
miranda75	192.168.1.84	80	TCP	Admin	OK	0
miranda76	192.168.1.85	80	TCP	Admin	OK	0
miranda77	192.168.1.86	80	TCP	Admin	OK	0
miranda78	192.168.1.87	80	TCP	Admin	OK	0
miranda79	192.168.1.88	80	TCP	Admin	OK	0
miranda80	192.168.1.89	80	TCP	Admin	OK	0
miranda81	192.168.1.90	80	TCP	Admin	OK	0
miranda82	192.168.1.91	80	TCP	Admin	OK	0
miranda83	192.168.1.92	80	TCP	Admin	OK	0
miranda84	192.168.1.93	80	TCP	Admin	OK	0
miranda85	192.168.1.94	80	TCP	Admin	OK	0
miranda86	192.168.1.95	80	TCP	Admin	OK	0
miranda87	192.168.1.96	80	TCP	Admin	OK	0
miranda88	192.168.1.97	80	TCP	Admin	OK	0
miranda89	192.168.1.98	80	TCP	Admin	OK	0
miranda90	192.168.1.99	80	TCP	Admin	OK	0
miranda91	192.168.1.100	80	TCP	Admin	OK	0

Alarm group	Validity of Alarm
Alarm group 1	Validity of Alarm 1
Alarm group 2	Validity of Alarm 2
Alarm group 3	Validity of Alarm 3
Alarm group 4	Validity of Alarm 4
Alarm group 5	Validity of Alarm 5
Alarm group 6	Validity of Alarm 6
Alarm group 7	Validity of Alarm 7
Alarm group 8	Validity of Alarm 8
Alarm group 9	Validity of Alarm 9
Alarm group 10	Validity of Alarm 10
Alarm group 11	Validity of Alarm 11
Alarm group 12	Validity of Alarm 12
Alarm group 13	Validity of Alarm 13

User	Password	Password repeat	Name	Privileges
sa	*****	*****	App. Manager	User Management
admin	*****	*****	Administrador	Administration
sa	*****	*****	User	Alarm Config
ivan	*****	*****	Ivan	Alarm Config
guarda	*****	*****	Guarda	Basic



Configuration panel for the system. It includes sections for:

- GENERAL EQUIPMENT FROM:** Internet connection (Alarm Critical), Internet disconnection (Alarm Critical).
- PROBLEMS WITH THE ACCESS THROUGH EMAIL SYSTEM:** Connect alarm through email system (Alarm Critical), Disconnect alarm through email system (Alarm Critical).
- PROBLEMS WITH THE ACCESS THROUGH ANDROID SYSTEM:** Connect alarm through AND system (Alarm Critical), Disconnect alarm through AND system (Alarm Critical).
- A REVERSE SIDE CONNECTION:** Network reconnected (Alarm Critical), Network disconnected (Alarm Critical).
- B CONTROLLED DISCONNECTION:** Controller reconnected (Alarm Critical), Controller disconnected (Alarm Critical).
- SECURITY STATE:** System with alarm device (Alarm Critical), System in test mode (Alarm Critical), System working with another key (Alarm Critical), System in navigation mode (Alarm Critical).

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[www.innovaqua.com](http://www.innovaqua.com)

Integral solutions for the aquaculture world

