



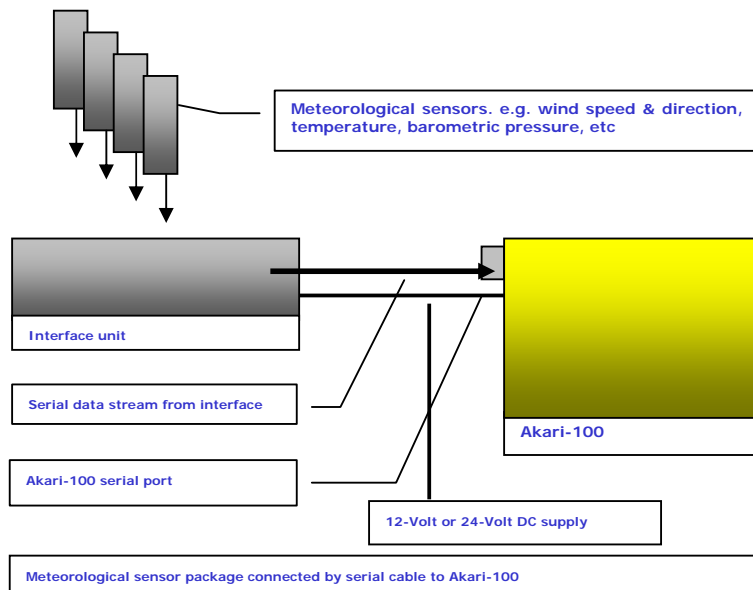
AKARI-100 AIS Weather Station

Akari-100 – AIS transponder for meteorological data acquisition and AIS broadcasting

Akari-100 is Zeni Lite second generation AIS Aids to Navigation transponder technology combined with a rugged meteorological and environmental sensor package to give an automatic AIS weather station that may be fitted to fixed or floating platforms.

When used on aids to navigation platforms, the **Akari-100** also monitors the aid to navigation and can transmit AIS Message 21 for use by vessels within range. Status of the system power supply is continually checked, and data returned to shore via AIS Message 6.

The **Akari-100** is designed to allow direct connection of 1 or 2 meteorological or hydrological sensors, or a number of sensors connected via an interface unit:



AIS module for Akari-100 system.



Aids to navigation, both fixed and floating, make excellent platforms for the Akari-100 Weather Station.

Fixed or floating installation

The **Akari-100** system is suitable for installation on buoys or fixed structures. Power drain by both the sensor package and the AIS module is minimised by special hardware and software. Exact power drain depends on the AIS message frequency. Zeni Lite will be pleased to prepare an energy budget based on your data requirements.

When an aid to navigation is used as the platform, all the benefits of the Akari-100 aids to navigation transponder are also available, both for navigation safety and aids to navigation management.



Sensors:

Akari-100 may be fitted with the following sensors.

Group 1 sensors

- Wind speed
- Wind direction
- Barometric pressure
- Air temperature
- Relative humidity

Group 2 sensors

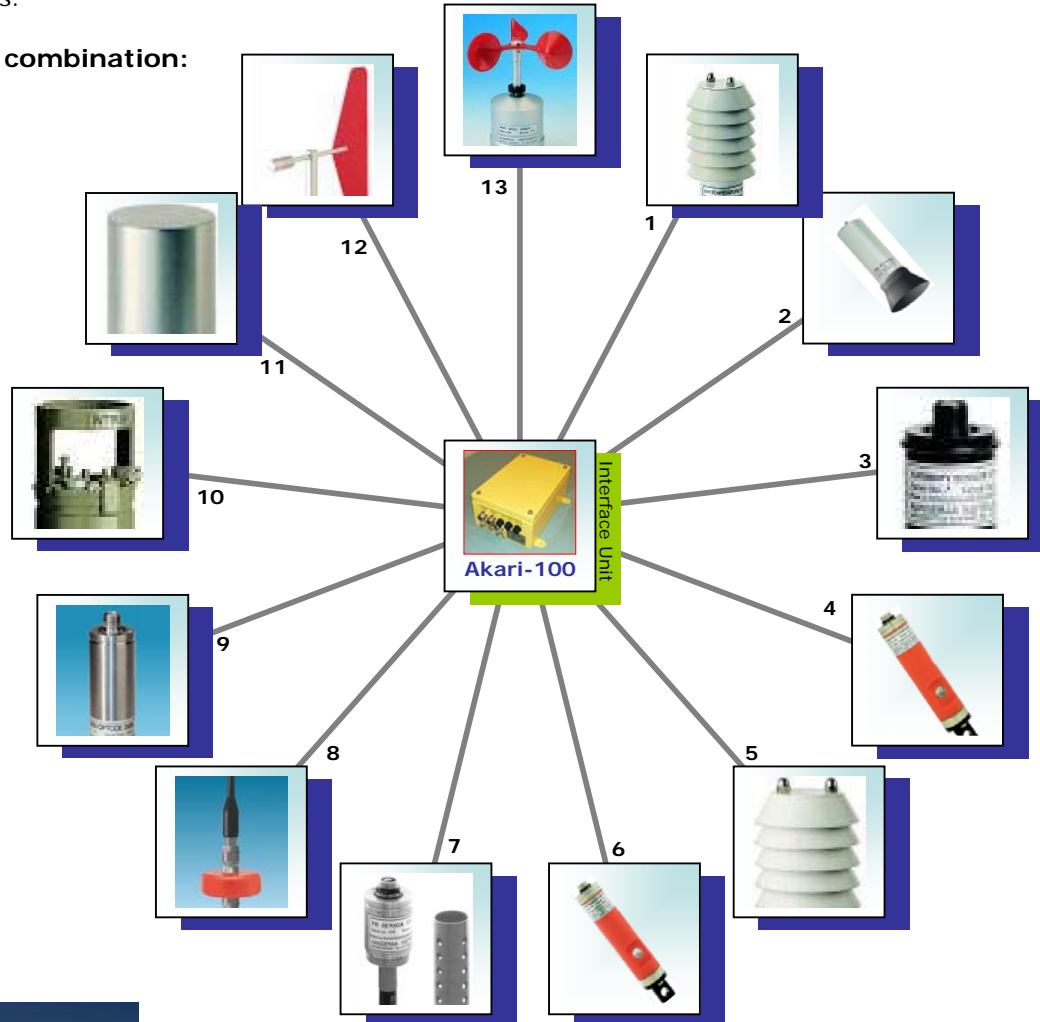
- Current speed
- Current direction
- Sea surface temperature
- Water level [tidal height]
- Wave data



Group 1 sensors may be installed easily in almost any location.

Group 2 sensors may require special consideration. Consult Zeni Lite to discuss your particular needs.

Or a combination:

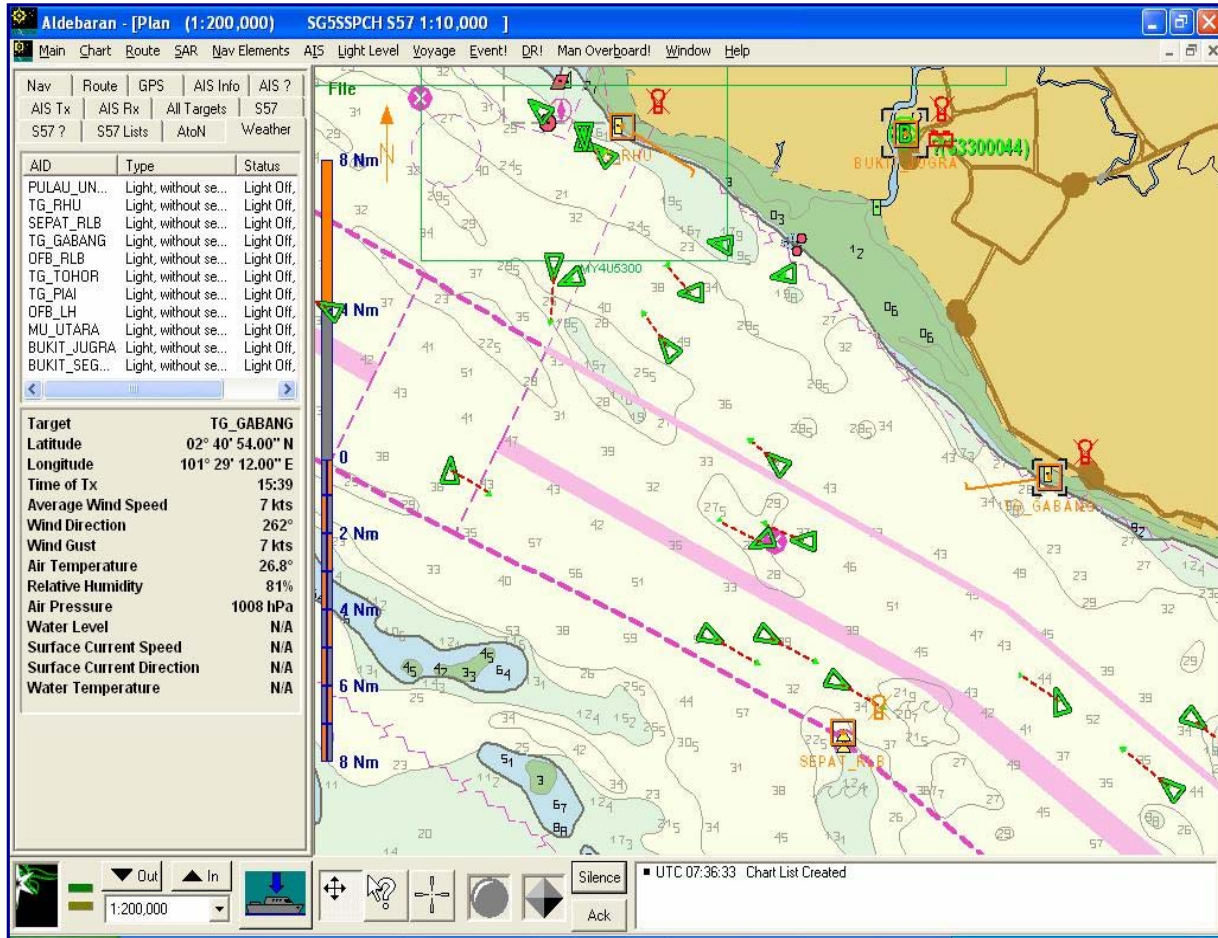


System Configuration:

- | | |
|-----------------------------|---------------------|
| ① Air Temperature | ⑧ Wind Speed |
| ② Water Temperature | ⑨ Wind Direction |
| ③ Humidity | <u>and</u> |
| ④ Conductivity / Salinity | ⑩ Current Direction |
| ⑤ Current Speed & Direction | ⑪ Wave Direction |
| ⑥ Wave Height & Wave Period | ⑫ Oxygen Optode |
| ⑦ Air Pressure | ⑬ Turbidity |

Technical Specifications for Meteorological & Hydrological systems available upon request

An Electronic Navigation Chart identifying a number of Lighthouses & Resilient Beacons (Spar Buoys) fitted with Meteorological and Hydrological (Weather) Sensors broadcasting Message 8.



Message 6 – AtoN Monitoring

ATON	TG_GABANG
Type	Light, without sectors
Sub Type	Fixed
Light Status	Off
Battery Level	OK
Position Status	On Position
Current	0.0 A
Voltage	13.2 VDC

Message 8 – Weather Sensors

Target	TG_GABANG
Latitude	02° 40' 54.00" N
Longitude	101° 29' 12.00" E
Time of Tx	15:39
Average Wind Speed	7 kts
Wind Direction	262°
Wind Gust	7 kts
Air Temperature	26.8°
Relative Humidity	81%
Air Pressure	1008 hPa
Water Level	N/A
Surface Current Speed	N/A
Surface Current Direction	N/A
Water Temperature	N/A

Message 21 – AtoN Information

ID	533000054
Name	TG_GABANG
Positional Accuracy	High
Latitude	02° 40' 54.00" N
Longitude	101° 29' 12.00" E
EPFS	Surveyed
Repeat Indicator	0
Mode	Autonomous
RAIM	Not In Use
Status	On Position, Light Out
Last Update Time	16:17:01

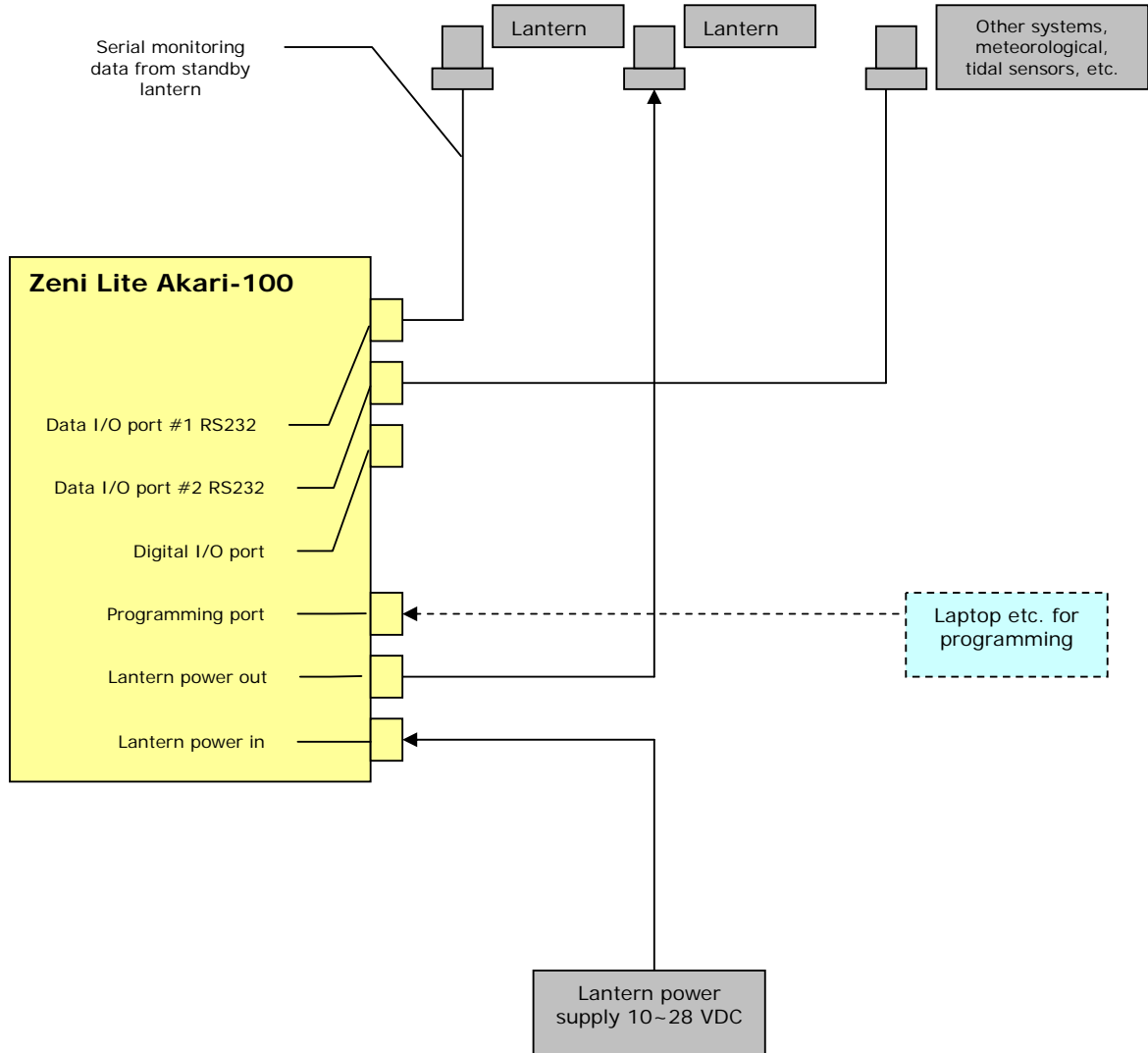
Choice of software for display:
 Zeni Lite "Akari-ECS" or
 alternatively, ICAN "Aldebaran II"

Displays aids to navigation status
 in charted and tabular formats

Includes Access data store for
 record-keeping, and analysis.

Zeni Lite Akari-100 AtoN AIS unit – Single-line diagram installation example.

Typical installation with lantern and other equipment such as meteorological or tidal sensors, or another AtoN system



Note:

Review Akari-100 brochure for detailed technical specification
 Information correct at the time of printing, though subject to change without notice

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