ProDAHS

ProDAHS
Data. Reported.

Protea Data Acquisition and Handling Software
Environmental and Emissions Data. Reported.

The continuous logging, reporting and assessment of emissions data is needed by plant operators, often needing to use a range of sensors and analysers to comply with local legislative requirements. Protea's Data Acquisition and Handling Software (ProDAHS) is a complete emissions reporting platform and can be provided by Protea configured for use with either Protea or 3rd party emissions equipment.

ProDAHS has been developed to the same high standards as the MCERTS and EN 14181 compliant AC-DC Emissions Reporting software, but ProDAHS does not include the MCERT-compliant aspects such as QAL3 control charts and auditing. However, the powerful and flexible reporting capabilities make it a valuable software tool for a wide range of emissions and process applications. ProDAHS also meets the requirements of *EN 17255*.

Data Acquisition and Handling Software

ProDAHS provides a complete historical log of emissions data to meet the needs of any local inspections. High quality displays of real-time data can be configured to be as simple or as detailed as needed, featuring multi-windows and resizable graphs and charts. Historical data from commissioning onwards is accessible via the trend and reporting facilities.

Unlimited sensor readings can be inputted at 1 second intervals, so ProDAHS can record critical emissions data such as multiple gases, VOC, dust, flow, temperature and pressure from 3rd party instruments. Any instrument with a digital or analogue output signal can be integrated. The operator can select and export data for any time periods in real-time whilst the CEM is operating. Reports can be supplied for local inspectors and the Environment Agency needs in the required formats. User interaction can be as simple as generating regular reports, or advanced users can configure bespoke reports as and when needed. Data can be displayed as raw data, in a number of different measurement units. Dynamic time-weighted average data can be displayed, such as 1min, 30min, 1hr, Daily, Weekly and Monthly averages. Configurable Partial Averaging can be used to alert users of impending breaches giving operators time to make plant adjustments before ELVs are breached.

All data can also be exported in a variety of formats for external examination and processing. This can assist with maximising plant efficiencies and diagnosing potential problems with the plant processes. Reports access data immediately on its creation to provide the most up-to-date measurement and system statuses.

Flexible Data Reporting software for emissions data:

- Unlimited sensor readings
- Emissions, Ambient Air, Meteorological and Process Data
- Configurable reports ready for print
- Real-time graphs and charts.

- **Incineration** (Chemical/Clinical/Municipal)
- **Power** (Gas/Coal/Oil/Biomass)
- **Cement Works**
- **Chemical industry**
- **Petrochemical**
- **Pharmaceuticals**
- **Refining**
- **Gas Turbines**
- **Boilers** (Oil/gas/Wood Fired)
- **Food Processing**
- **Mining**
- **Foundries**
- **Recycling**
- **Steel**
- **Wastewater Treatment**
- **Landfill Gas Treatment**

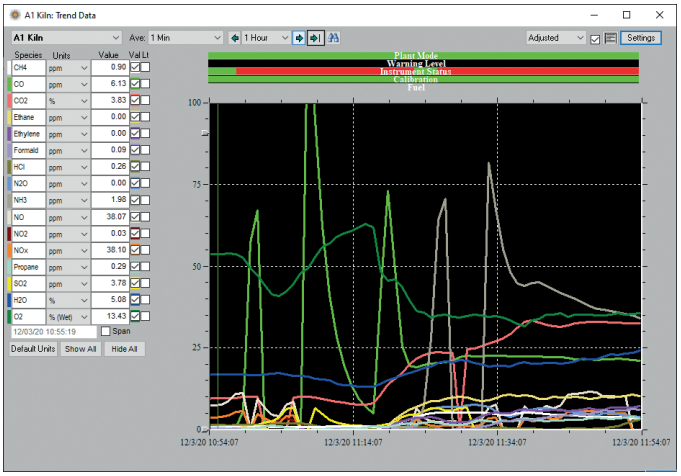


Figure 2: *Charts displaying trends for CEM and external sensors, in re-sizeable graphs and windows.*

ProDAHS

Wide range of data sources:

- Gases (SO_2, NOx, CO, CO_2, HCl, NH_3, HF)
- VOCs
- Oxygen
- Temperature, Pressure
- Air speed and volumetric air flow
- Opacity
- Dust
- Mercury

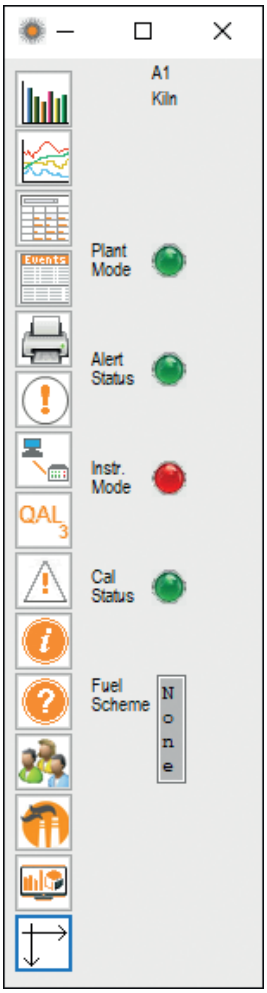
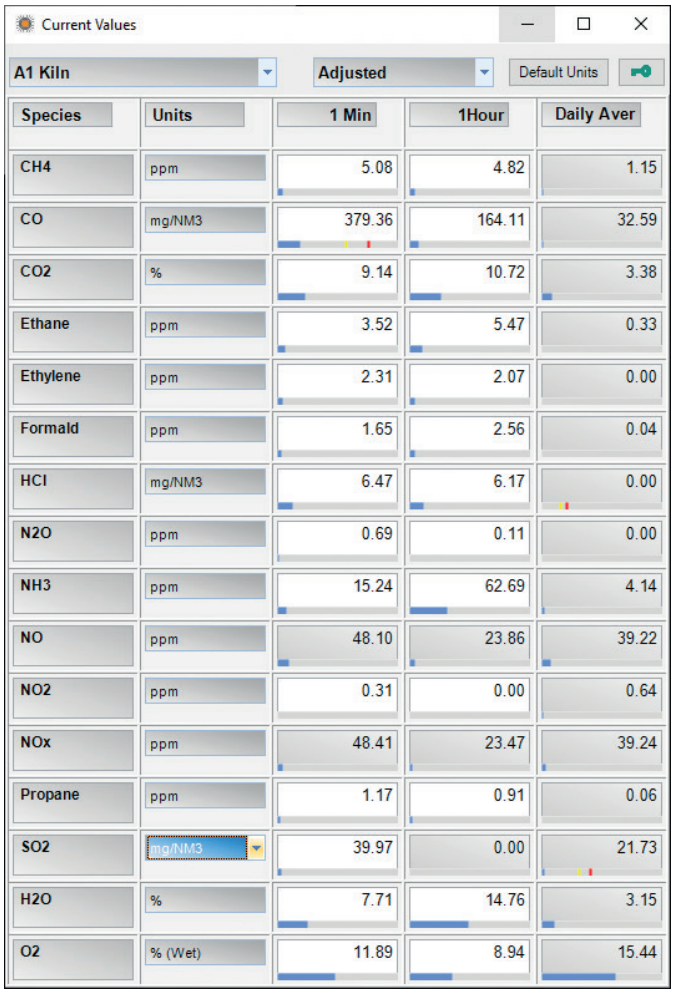


Figure 3: *Simple Single Button Control Panel for all software functions.*



Species	Units	1 Min	1Hour	Daily Aver
CH4	ppm	5.08	4.82	1.15
CO	mg/NM3	379.36	164.11	32.59
CO2	%	9.14	10.72	3.38
Ethane	ppm	3.52	5.47	0.33
Ethylene	ppm	2.31	2.07	0.00
Formald	ppm	1.65	2.56	0.04
HCl	mg/NM3	6.47	6.17	0.00
N2O	ppm	0.69	0.11	0.00
NH3	ppm	15.24	62.69	4.14
NO	ppm	48.10	23.86	39.22
NO2	ppm	0.31	0.00	0.64
NOx	ppm	48.41	23.47	39.24
Propane	ppm	1.17	0.91	0.06
SO2	mg/NM3	39.97	0.00	21.73
H2O	%	7.71	14.76	3.15
O2	% (Wet)	11.89	8.94	15.44

Figure 4: *Dynamic time-weighted average tables.*

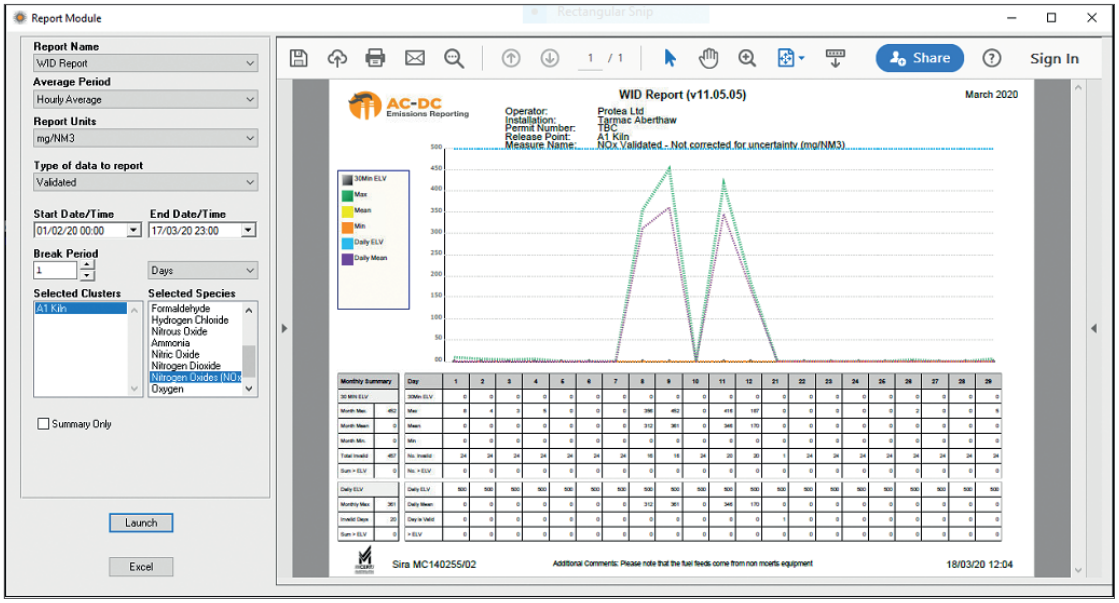


Figure 5: *Report Module gives wide and flexible reporting options.*

ProDAHS

Features

Displays and Trends	• Selectable Raw, Validated and Adjusted readings • Block, Rolling and Partial averages • Trend charts • Bar charts • Data grid displays user defined averaged data in textual and graphical format • Error and Event logs storing all alarms, systems warnings and maintenance
Warning	• On screen warnings • Email • SMS / Text message • Plant wide audible sirens • Physical warning lights
Reports	• User Configurable Averaged Data Report • System Configuration Report
Data	• Modbus Serial • Modbus TCP/IP • ProfiBUS • ProfiNET • FieldBUS, • ODBC • OPC • Analogue signals • CSV export and others on request

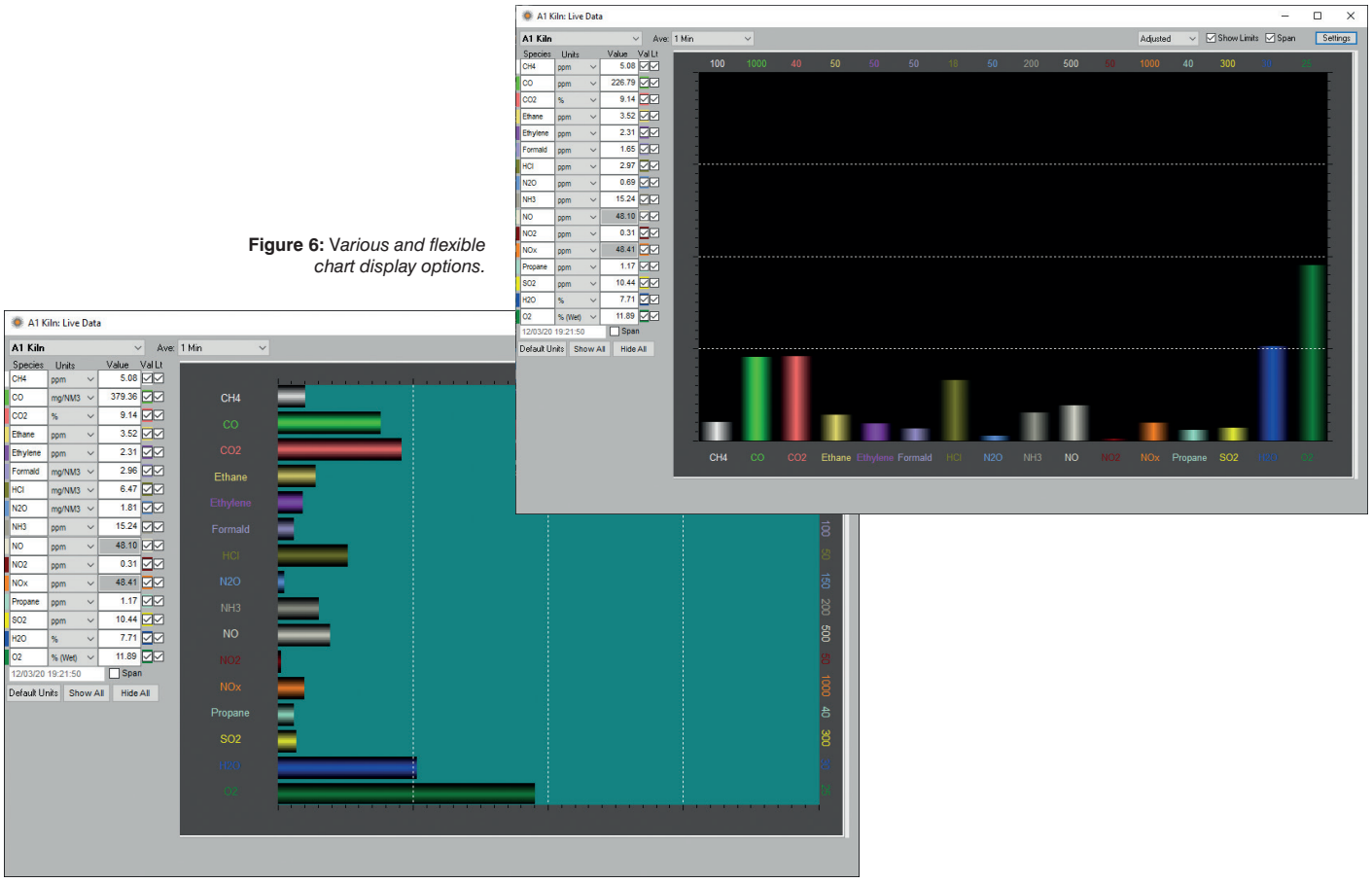


Figure 6: *Various and flexible chart display options.*

ProDAHS

Set-up, Support and Benefits

Set-Up Simplicity

As an emissions analyser manufacturer, Protea has a wide experience of instrument set-up and configuring, be it using ProDAHS with Protea analysers or others. If ProDAHS is provided by Protea with any of our in-situ or extractive analysers, the full CEM emissions reporting system is set-up and configured before shipment to site. ProDAHS will be tested fully as part of the CEM Factory Acceptance Test (FAT) and be ready to operated when delivered.

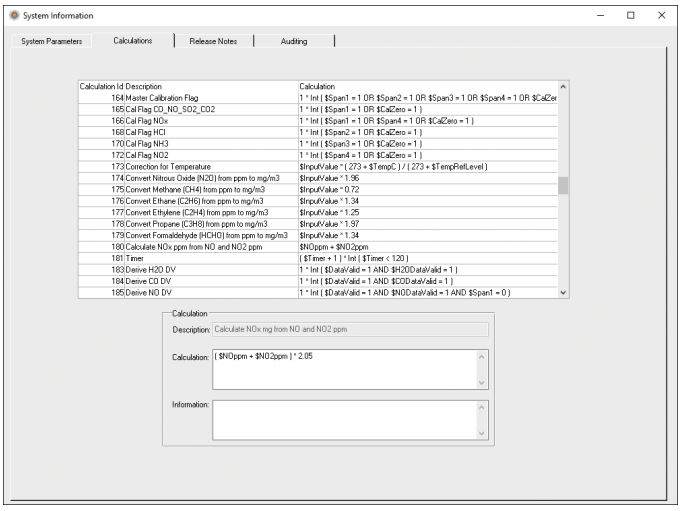


Figure 7: Calculations set-up by Protea during CEM acceptance. Can be added, checked and changed to give unlimited options for data processing and presentation.

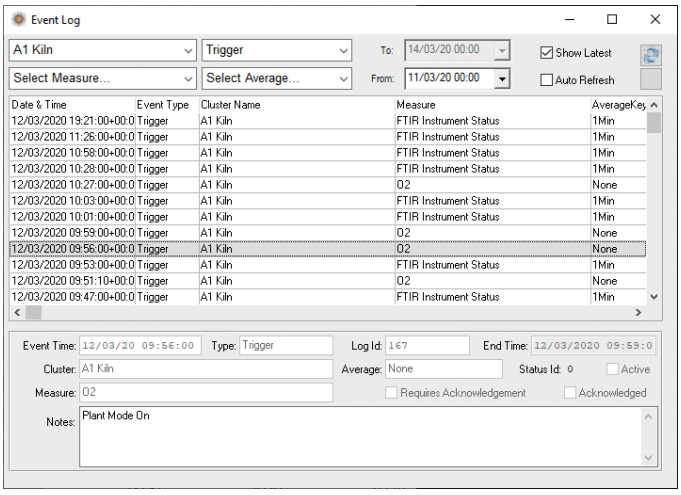


Figure 8: Detailed event log for CEM and Plant status and alarms.

Combined Support

Protea provides support for ProDAHS alongside the CEM analyser hardware, meaning the customer has a single source of support for hardware and reporting software. Protea are best placed to ensure the entire emissions system is fit-for-purpose, being able to make changes to the analyser and the reporting software as and when needed e.g. range changes

Figure 9: Protea offers complete support for CEM and DAHS direct or through our Distributors.

Maintenance contracts for ProDAHS are provided as add-ons to the service contracts for the CEM, so costs can be reduced in terms of separate call out charges.

Facilitating remote access to the ProDAHS is standard practice, and Protea can provide permanent 4G router connection to reporting server to help support the application.

Training

Protea's software is written and supported by our UK team of engineers and emissions professionals, either directly or through our partner network. Training courses can be provided for various levels of customer need, from running simple reports to setting up and configuring full DAHS systems.

Protea Distribution

Protea operate a worldwide distributor and customer support network guaranteeing that our customers receive outstanding support both before and after sale. All our distributors have factory trained service engineers to support our products.

Supplier: