

# Data Products Home

## Please log in to request data products via Data Search

Please log in to run requests for data products (searches). There are numerous benefits. If we have your email address we can contact you if we find any errors in the data. If there are any problems running your request, we can work with you to fix them. There are a few cases where the requested searches are too big to complete within server uptime (usually two weeks). Logged-in users have access to the service help desk and help buttons. Non-logged in searches may not be re-run if interrupted by a server restart. Your browser remembers what non-logged-in searches are yours by using a local file. So if you switch browsers, computers, or clear your browser's data, you will lose your non-logged-in searches. User metadata is private. All you need to create an account is an email address.

## Data Products

Here's the place to learn and talk about our data products - both current and future. Data products are primarily available through [Data Search \(Data Search Help page\)](#), as well as the [Data Preview page](#) and [Hydrophone Viewer](#) tool.

We have also developed public [web services / API](#) to access these data products, which can be used to automate data requests from Oceans 2.0.

The aim of this documentation is to help our users understand and make use of our data products. It is also useful as a detailed resource about data product specifications. This documentation is maintained as data products are improved and added. User input for new and improved data products is encouraged: you can email us ([info@oceannetworks.ca](mailto:info@oceannetworks.ca)) or press the (?) button in [Data Search Step 3](#).

## New Features and Highlights

- See the latest release notes [here](#).
- Nortek Correlation options
- Live log files
- SIDSSE data products
- Coming soon: ASL raw binary data products, improvements to cast and water column products

## Current Data Products

ID	Data Product
1	<a href="#">Time Series Scalar Data</a> (incl. stationary and mobile scalar devices)
2	<a href="#">Time Series Scalar Plot</a> (incl. stationary and mobile scalar devices)
3	<a href="#">Borehole Temperature Time Series Plot</a>
4	<a href="#">Log File</a>
5	<a href="#">RDI ADCP Time Series</a>
7	<a href="#">Audio Data</a>
9	<a href="#">RDI ADCP Daily Current Plot</a>
10	<a href="#">RDI ADCP Daily Intensity Plot</a>
14	<a href="#">AVI Video</a>
18	<a href="#">AGO Time Series Plot</a>
19	<a href="#">BioSonics Time Series</a>
20	<a href="#">Satlantic ISUS Time Series</a>
21	<a href="#">Time Series Staircase Plot</a>
22	<a href="#">Nortek Time Series</a> (raw and processed formats)
23	<a href="#">MP4 Video</a>

24	ASL Acoustic Profiler Time Series (AZFP, AWCP and ZAP echosounders)
25	CSEM Receiver Time Series
26	RDI Wave Time Series
27	Satlantic Radiometer Time Series
30	Imagenex Raw Data
33	COVIS Plume Imaging Raw Files
34	COVIS Diffuse Flow Raw Files
35	COVIS Plume Doppler Raw Files
38	Hydrophone Array Raw Data
40	COVIS Plume Imaging Time Series
41	COVIS Diffuse Flow Time Series
42	MOV Video
43	OGG Video
44	MPG Video
45	Hydrophone Spectral Data
47	COVIS DIFFUSESLOW Special Run Raw Files
48	Kongsberg Mesotech Rotary Sonar Data Product - SWEEP
49	Nortek Profiler Daily Currents Plot
51	Hydrophone Spectral Probability Density (SPD) Plot
52	Imagenex Manufacturer Formats
56	Cast Scalar Profile Plot and Data
57	Not currently available: Satlantic Radiometer VPS Cast Data Product
58	Not currently available: Nortek Time Series VPS Cast Data Product
59	Not currently available: Satlantic ISUS VPS Cast Data Product
60	Not currently available: ASL AWCP VPS Cast Data Product
61	Time Series Scalar Profile Plot and Gridded Data
63	Image Set raw.zip
64	Image Set bmp.zip
65	Kongsberg Mesotech Rotary Sonar Data Product - SCAN
66	Kongsberg EM Series Raw ALL Data
67	COVIS Plume Doppler Data
68	EK60 Echosounder Data

71	Hypack raw navigation data
76	Kongsberg EA600 Raw Data
77	Navigation Data
79	RDI ADCP Raw Data
82	Sequoia LISST Data
90	Time Distance Variable Scalar Plot
91	Spatial Scalar Plot
93	WorkBoat Output Files
97	Kistler Accelerometer Data
98	Kistler Accelerometer Raw Files
100	Imagenex Rotary Data Product
102	Seismometer Data
109	Ice Buoy Time Series Profile Plots
110	Ice Buoy Profile Plots
111	SIDSSE UURS Spectral Data
114	CODAR Currents Data
115	CODAR Raw RNG Data
116	CODAR Raw CSS Data
117	CODAR Raw CSQ Data
119	ARIS Sonar Data
120	ARIS Movement Detections
123	Time Series Scalar Thomson Detided
124	Track Plot
129	AQUAlogger Manufacturer Format
130	McLane Sediment Trap Manufacturer Format

## Search Type / Sort By Options

Currently, the default search type is "Instruments by Location". This is the option visible on Data Search Step 1, entitled "Sort By:". The default option, "Instruments by Location", allows user to navigate to a location and select an instrument/device category from which to request data products in Data Search Step 2. For these search requests, data from multiple instruments of the same category are combined together to form a continuous time series. For example, to form a long time series of CTD data in Saanich Inlet, an "Instruments by Location" would stitch together the data from approximately 23 different CTD device deployments. The "Variables by Location" search type option is similar, except that users navigate to a location and select a sensor category variable, such as temperature, and then temperature sensor data is stitched together into a time series from the most appropriate devices at that location; also known as a "primary sensor search" or "search by water property". For many users, this search type is advantageous, as it does not require the user to know which device categories host which sensors and which of those are the best to use. For instance, many devices have temperature sensors, often auxiliary to the devices' main function, while the CTD devices generally have the best temperature sensors. The "Instruments By Category" search type option enables users to navigate to a device category, such as Hydrophone, then to a specific device (e.g. Ocean Sonics icListen HF Hydrophone 1252 (23155)) and then to a single device deployment (e.g. Cambridge Bay (03-Sep-2013 to 16-Sep-2014)). Users of this option are generally internal users and scientists who know the exact device they are interested in.

## Data Product Options

For all scalar data products and some complex data products, users will be presented with options to customize their data products. These options are described in the individual data product pages. A compilation of the options is presented in the [data product options page](#).

## Data Quality

Data quality information is supplied by way of [data quality flags](#) and comments in the data products, as well as annotations listed in the [metadata](#) reports. See the [Quality Assurance Quality Control](#) page for more information.

## Metadata

[Metadata](#) reports available with nearly all different data products. These PDF reports are produced automatically when a data search is completed and are made available via a link adjacent to the data, see step 3 in [data search help](#). The reports contain extensive information about the data, including instrument location, deployment, calibration, data quality and data gaps.

## Mobile Data

See the [mobile device page](#) to see how data products handle data from mobile devices.

## Data Availability

Data availability is indicated in step 2. of [Data Search](#). The green data availability bar is based on archived data and may not show data for the last 24 hours (until it is archived). All data that goes through the shore-station drivers is archived in a raw format nightly: [log files](#). Some devices provide data through FTP or HTTP file transfers; the data availability graph will be accurate in that case and data products will be available in near real-time (usually delayed by a few minutes). Although the data availability bar doesn't show it, scalar data is available live: data is usually only a few seconds delayed as it comes up the wire and through the various parsing, conversion, calibrated and QAQC steps. Many complex data products (data that is multidimensional, such as acoustic backscatter or profile data) produce data from log files. These complex data products can, since October 2015, access the raw data prior to archiving, to produce near-live data, usually delayed by a few minutes. In all, users should be able to access near real-time data for all active devices, in addition to accessing historic data from as far back as 2002 (currently, we continue to acquire historic data).

## Attribution

The data products shall contain attribution information wherever feasible, so that all contributed parties maybe credited and acknowledgements given. Roles and dates will be included. The MAT file products all contain a [metadata structure](#) with citation information. While the [text file products \(CSV, ODV\)](#) have attribution line(s) in their headers and plots will show a shortened version of the same text (no dates) below the plot. If a special attribution is blank, the company default shall be used, if that is blank, the company name and role are used. Attribution text appearing all products may be hidden with the "is attribution required" field on the Network Console (for internal use only). All plots are capable of supporting a special logo, see the [spectrogram data product as an example](#). The logo is taken from the highest priority citation with the "is logo required" field set to yes. Metadata reports will provide information on how to cite ONC data, alternatively, see <http://www.oceannetworks.ca/data-tools/data-help/data-policy/how-cite-us>.

## Conventions

**Time-stamps:** Time-stamps are always in UTC. For file-names and string dates, the format conforms to the ISO8601 convention: yyyyymmddTHHMMSS. In some cases, the millisecond portion may be added: yyyyymmddTHHMMSS.FFFZ. Numerical time-stamps within data product files may follow a different format as noted on the data product pages. For instances, numeric time-stamps within MAT files are in the [MATLAB serial date format](#). When [resampling](#), the time-stamps are generally taken from the the centre of the resample interval.

**File-names:** Note that the underscore character, "\_", is used to separate the components of the names, while spaces, dots and other special characters are not included in file-names. File breaks are avoided as much as possible, but do occur for many reasons, including configuration or device changes, plus some data products have daily file breaks.

For an "Instrument by Category" search (see the "Sort By:" option in Step 1), files will be named as follows:

DEVICECODE\_SENSORNAME\_yyyymmddTHHMMSS.FFFZ\_yyyymmddTHHMMSS.FFFZ-MODE.EXT where:

- DEVICECODE is a descriptive string unique to each instrument.
- SENSORNAME is the sensor name as it appears in data search, and is only included if a single-sensor data product was requested.
- The first yyyymmddTHHMMSS.FFFZ is the time-stamp (ISO8601 format) of the first record in the file; the second yyyymmddTHHMMSS.FFFZ is the last time-stamp in the file (including data flagged and replaced with NaN). The date-to time stamp is not mandatory for all files; in particular, files streamed directly from the file archive will not get a data-to in their file-names. The time-stamp format optionally includes milliseconds: yyyymmddTHHMMSS.FFFZ, where 'FFF' are the milliseconds. If there is a data gap at the beginning and/or end of the search time range, the file-name dates will be different from the search time range. In the case of plotted products, the search time range sets the range of time axis so that users effectively control the horizontal scaling. Consequently, the file-name dates for plots will match the search time range, not the data time range.
- MODE is optional text which allows files of the same extension to be differentiated. It is used for different operation modes (Kongsberg [scan](#) or [sweep](#) for instance) or different data product options or multiple formats of the same extension. For example, [scalar MAT files](#) will get an 'ANCILLARY' when on ADCPs so they are not confused with [RDI MAT files](#). Data product option mode strings are used on scalar data products primarily, examples: '-NaN', '-clean', '-NaN\_clean\_avg15minute', '-MinMax1hour', see [here](#) for more details. Other data products supply file modes as described in their documentation.
- EXT is the file extension.

For an "Instrument by Location" search (see the "Sort By:" option in Step 1), files will be named as follows:

STATIONNAME\_DEVICECATEGORY\_SENSORNAME\_yyyymmddTHHMMSS.FFFZ\_yyyymmddTHHMMSS.FFFZ-MODE.EXT, where:

- STATIONNAME is the station name, including node and station names separated by dashes, for example: *BarkleyCanyon-VPSUpperSlope*.
- DEVICECATEGORY is the device category, such as "CTD". If there is more than one device in the category, the file will contain multiple devices combined together for a long record of data.
- SENSORNAME is the sensor name and is omitted for a device-level data product that contains multiple sensors.
- yyyymmddTHHMMSS.FFFZ, MODE and EXT are as above.

For a "Variables by Location" search (see the "Sort By:" option in Step 1), files will be named as follows:

STATIONNAME\_variables\_SENSORCATEGORY\_yyyymmddTHHMMSS.FFFZ\_yyyymmddTHHMMSS.FFFZ-MODE.EXT, where:

- STATIONNAME is the station name, including node and station names separated by dashes, for example: *BarkleyCanyon-VPSUpperSlope*.
- SENSORCATEGORY is the sensor category, such as "Temperature" or "Conductivity". If there is more than one device in the category, the file will contain multiple devices combined together for a long record of data.
- yyyymmddTHHMMSS.FFFZ, MODE and EXT are as above.

## Interoperability Partners

These data products are linked to from Data Search Step 1.

ID	Data Product
15	<a href="#">ISDM Data Product</a>
16	<a href="#">PANGAEA Data Product</a>
17	<a href="#">POKM Data Product</a>

## File formats

Additional resources for available file formats is available [here](#).



If you have any data product related questions or would like to see additional data products, please [let us know](#).