

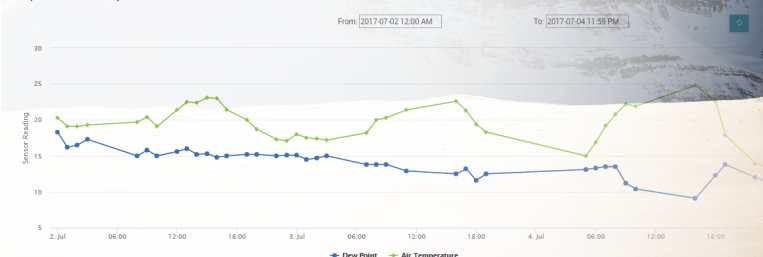


## Data Services

Collection, hosting, processing, delivery, display, and support

# Data made easy.

Temperature - Smart City External 10



Campbell Scientific's dedication to helping clients make the best measurement possible does not stop with the equipment – without proper data acquisition and storage the loss of precious data can occur. Campbell Scientific Data Services offers customized solutions to assist with collection, hosting, storage, and processing of data with the goals of simplifying the process for the client and providing ongoing support.

**We aim to provide the most effective solution to our clients, and will work with you to suit your particular needs.**

We customize our services to fulfill requirements on a client-by-client basis. Our staff is experienced at setting up new networks and integrating into existing networks thus enabling us to accommodate a variety of systems. Depending on your needs, we can offer basic assistance such as activating a SIM card and configuring a communications device, or we can manage the entire project and support the infrastructure required for your data collection. Whether it is one station or a hundred, we ensure that your data is safe, secure, and accurate.

## Why use Data Services?

- 1. Cost savings** - A data services provider can save you money on data acquisition costs. Outsourcing this function to a provider saves you the human resources and infrastructure costs required to support a data acquisition (DAQ) network in-house.
- 2. Expertise** - Our Data Services group has expertise in this field and may be able to provide service on a level that is otherwise difficult to achieve on your own.
- 3. Customization** - We are able to provide you with a fully customized arrangement tailored to your needs.

More info: 780.454.2505

[campbellsci.ca/data-services](http://campbellsci.ca/data-services)

## Services Offered

We offer the following services as either a complete package or individually.

- ▶ Activation of cell modem (Telus, Rogers, Bell) and satellite modem SIM cards
- ▶ Setup and testing of modem equipment with activated SIM cards
- ▶ Automated remote data and image collection using an Ethernet connection, cell modem, telephone modem, or satellite modem

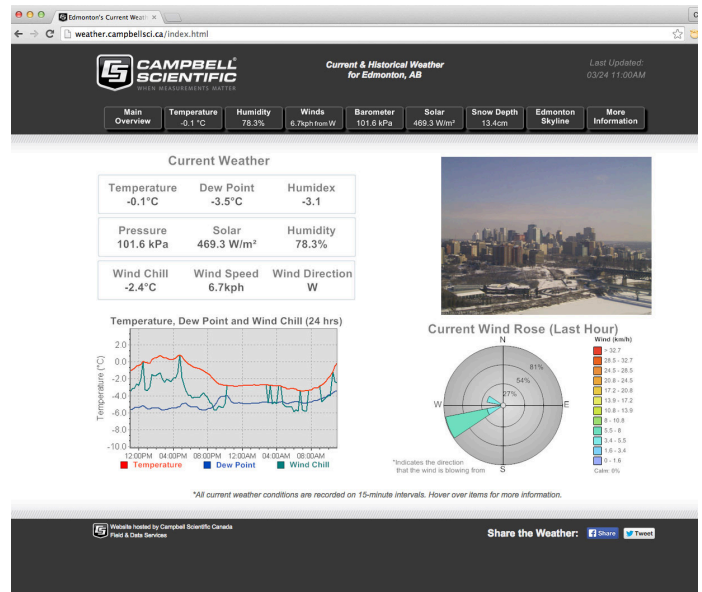
## Example Application

**Client Requirements:** Monitoring and collection of hourly and daily met parameters via an iridium satellite modem at a remote northern site location. This remote station will need to include air temperature, relative humidity, wind speed and direction, barometric pressure, solar radiation, snow depth, and a daily image. The data is to be collected on a daily basis and uploaded to a custom web display. Only a weekly image is required from this station.

To fulfill the needs of this client, Campbell Scientific is able to offer the following services as a complete package or individually:

- ▶ A Campbell Scientific Measurement Consultant will provide assistance in equipment selection as well as field installation and data collection options that will be most suitable for the application and budgetary requirements.
- ▶ Once an equipment order that includes a data collection plan is placed, a Campbell Scientific Data Services representative will contact the client to obtain further information for proper set up of the client's station within our network, and to discuss payment options. Web display formatting and any additional requirements are also discussed at this point.
- ▶ Any sensor programming requirements agreed upon for the order should be discussed in further detail with the initial Campbell Scientific Measurement Consultant.
- ▶ Prior to shipping, our Data Services staff set up and test the iridium communications hardware with an activated SIM card (SIM card is provided and activated by Campbell Scientific). Sensor and communications programming, and sensor testing (where applicable) will also be completed prior to shipping.
- ▶ Once the equipment has been shipped, if a field installation was arranged, a Campbell Scientific representative will assist the client with the on-site installation of this station. Please visit our [Field Services web page](#) for further details on this service.
- ▶ A remote test of communications is arranged to ensure the iridium communications hardware is functioning as expected prior to the client and/or the Campbell Scientific representative leaving the site location.

- ▶ Storage and backup of collected data
- ▶ Data delivery via FTP, email, and website display
- ▶ Mobile-friendly, secure website hosting with automatic refresh on data collection
- ▶ Formal data quality assurance/quality control (QA/QC)
- ▶ Monthly and annual data reports
- ▶ Communication hardware rentals



*This example Campbell Scientific weather website demonstrates many of the web display features available through Data Services.*

- ▶ Campbell Scientific Data Services will then initiate scheduled data collections via the satellite communications at the previously determined interval. Client/station specific secure FTP access will be created for viewing and downloading the station data files, and web display will be finalized. Once collected, the station files are uploaded to a secure Campbell Scientific server and synced almost immediately to the FTP site and web display. For an example web display (pictured above), visit <http://weather.campbellsci.ca>.
- ▶ Data Services will monitor the station health and communications on an ongoing basis.
- ▶ Data Services will notify the client of potential problems with the station so preventative measures can be taken where possible.

*Contact [dataservices@campbellsci.ca](mailto:dataservices@campbellsci.ca) to discuss your customized data solution.*