

STRIDE POCKET PORTAL PLATFORM



CHAPTER 2

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Overview

The *STRIDE* Pocket Portal Platform is a secure and powerful platform based on a worldwide network of servers. It is focused on delivering and enhancing innovative remote service.

The *STRIDE* Pocket Portal device and platform provide a total end-to-end solution for remote asset monitoring and predictive maintenance of legacy industrial/commercial assets and sensors. The system is cost-effective and simple to set up.

The Pocket Portal records data from legacy industrial equipment & sensors and performs protocol translations, data filtering, aggregation & buffering of data, local rules processing, device provisioning and secure registration with the cloud-based *STRIDE* Pocket Portal platform. The cloud platform includes monitoring dashboards, notifications & alerts, user management, device management, sensor profile management and over-the-air (OTA) firmware updates.

The following example illustrates how a typical *STRIDE* Pocket Portal setup might be configured.



As shown in the example above the *STRIDE* Pocket Portal will connect a Modbus RTU slave device, digital I/O or analog inputs to the cloud-based Pocket Portal platform to allow remote data monitoring and data logging. The Pocket Portal connects to its cloud platform via the Internet using a locally-provided Wi-Fi access point, so no network wiring to the machine is necessary.

Terms of Use

The *STRIDE* Pocket Portal platform is powered by Shoreline IoT, and use of the service requires acceptance of Shoreline's Terms of Use. The Terms of Use can be found in your PocketPortal.com account.

Getting started

Getting started with the Pocket Portal Platform is quick and easy. A few prerequisites are needed:

- A Pocket Portal device, wired and mounted as described in Chapter 1
- An available Wi-Fi access point with connection to the Internet
- A Modbus RTU slave device, digital I/O or analog inputs to be monitored
- An iOS or Android device with Bluetooth for the initial setup. iOS versions 11.x and later are supported. Android versions 7.x and later are supported.

A PC to access the Pocket Portal web app may be more convenient than a mobile device for setup of the data profile after initial configuration. The current versions of Chrome, Edge, Firefox and Safari are supported.

The *STRIDE* Pocket Portal also requires maintaining a cloud data subscription. Subscription options may be reviewed and purchased on the Pocket Portal platform at <https://www.pocketportal.com>.

The subsequent sections will walk you through setting up the device and using it to log data to the cloud platform and monitor data on a PC or mobile device.



NOTE: Screen captures are intended to be as accurate as possible and provide a helpful image to supplement the text. Details shown in the images are for reference only and may be revised in the current browser app.

Setting up the Pocket Portal account

Create a new *STRIDE* Pocket Portal cloud account

A Pocket Portal cloud account needs to be created before any Pocket Portal device can be registered or provisioned to the cloud. The cloud account can be created from the Pocket Portal cloud web site (<https://www.pocketportal.com/>), or from the Pocket Portal mobile app if it is already installed on your iOS or Android device.

Click the Sign-up link, then select a default data plan subscription. Each Pocket Portal device used on your account needs a data plan subscription. The data plan for the first device and account default plan need to be selected when you create the account. If you select one of the paid plans, you will need to enter a credit card for billing. The Terms and Conditions for the data plans are available via a hyperlink at the bottom of the plan selection page.

After selecting a plan, enter the account details (email address, full name, password and organization) for the new account, accept the Terms and Conditions and click the “Sign Up” button to create the account. The organization name will be used in emails you initiate from the platform to invite additional users to have access to the data available on this device. Note that users can’t be deleted from an account.

A verification link will be sent to the email used to create the account. Please click the Verify Me link in the email to continue.

After the account email has been verified, you can log in to your account.

Setting up the Pocket Portal device

Initial setup and provisioning of the Pocket Portal device is conducted using a Bluetooth-connected iOS or Android device running the Pocket Portal App.

Installing Pocket Portal App on a mobile device

Installing the Pocket Portal App on an iOS device

The Pocket Portal App for iOS devices is available in the iOS App Store at <https://itunes.apple.com/us/app/stride-pocket-portal/id1456616358?mt=8> or by scanning the QR code to the right. iOS versions 11.x and later are supported.

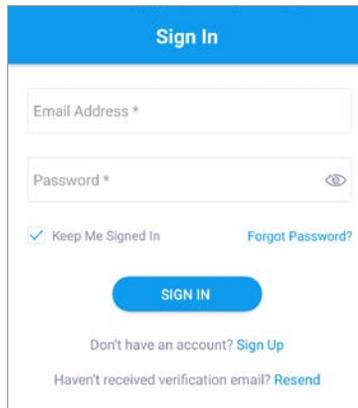


Installing the Pocket Portal App on an Android device

The Pocket Portal App for Android devices is available in the Google Play Store at <https://play.google.com/store/apps/details?id=com.shorelineiot.stridepocketportal> or by scanning the QR code to the right. Android versions 7.x and later are supported.



After the cloud app is installed on either mobile platform, the following screen will be displayed when the app is launched.

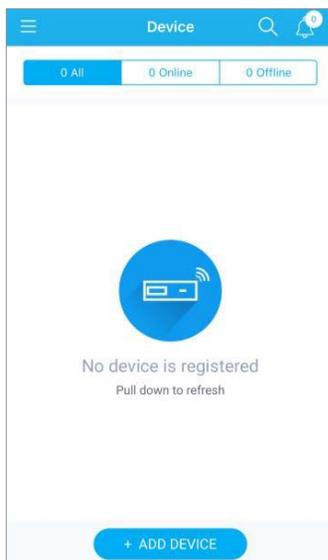


Sign in to your account with the login credentials created in the previous subsection.

Add a new Pocket Portal device

When logged in with no Pocket Portal devices associated with the account, the following screen is displayed.

If identifying the location of your Pocket Portal device is important, please allow your mobile app to access location services. The Pocket Portal device will use the location of the mobile device at the time of provisioning to establish its location.



Power on the Pocket Portal

Wire the Pocket Portal as described in Chapter 1, and apply 12–24VDC power. Verify that the Power (PWR) LED is on solid green.



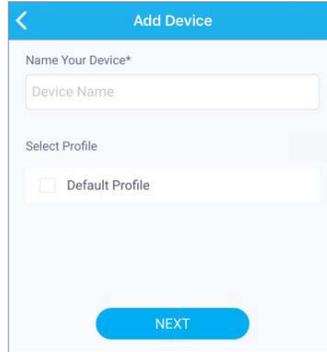
WARNING: Do not terminate communication leads while the plug-in connector is connected to a powered device.

Enter device details

From the mobile app Device screen, click the ADD DEVICE button as shown above. On the subsequent screen, enter a name for the device and select a device profile. Tap NEXT to continue.



NOTE: Each account includes a sample profile which can be used to register a new device. Selecting a profile is mandatory during device registration, but can be changed later. If a custom profile is already defined on the cloud platform, it can be selected during the initial device registration.



Select the Pocket Portal device to be provisioned

To provision a Pocket Portal device, it must be deleted from any account to which it's been associated and must be in its factory default state. If the device has been used previously, reset to the factory default settings by pressing and holding the yellow reset button for 10 seconds. A device ready to be provisioned will have a Power light on steady and the WiFi light will be blinking slowly.

A device may be deleted from the bottom of the Device Info > Settings page of the smart phone app or the browser account access.

Once the device details have been entered, make sure Bluetooth is active on your mobile device then turn on Bluetooth on the new Pocket Portal by pressing the blue button on the Pocket Portal.



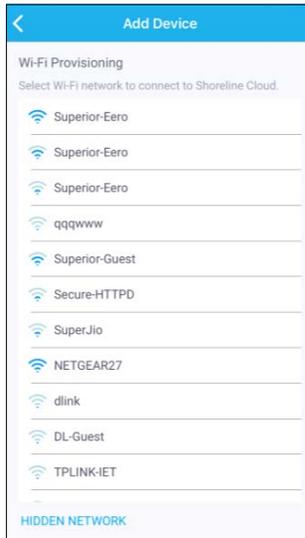
The BLE (Bluetooth Low Energy) LED on the Pocket Portal will blink to indicate that the device is in advertising mode and ready to accept connections.

When a connection is established between the Pocket Portal and your mobile device, the BLE LED will change to solid ON and “Device connected successfully” will be displayed in the app.

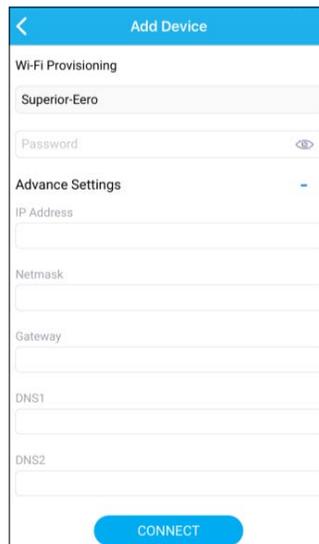
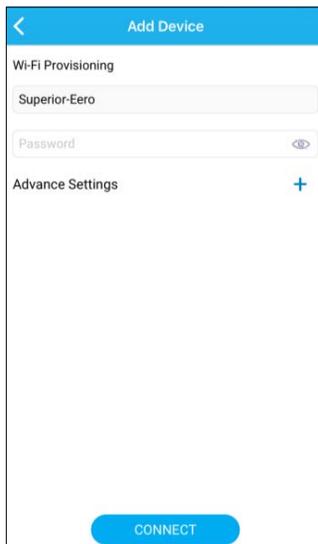
The provisioning process will include updating firmware to the current version, and may take several minutes. Progress will be shown on the mobile app.

Select the Wi-Fi network and connect to the Pocket Portal cloud platform

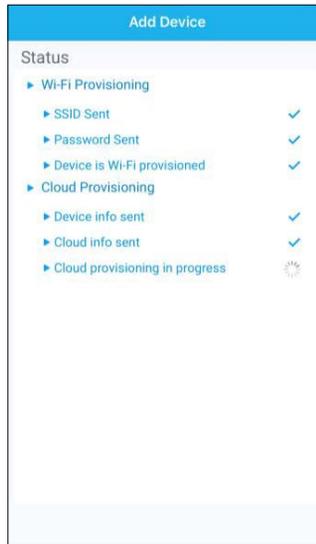
Once the Bluetooth connection is established, a list of Wi-Fi access points visible to the Pocket Portal will be displayed as shown below. Please select the Wi-Fi access point over which the Pocket Portal needs to connect to the cloud-based service.



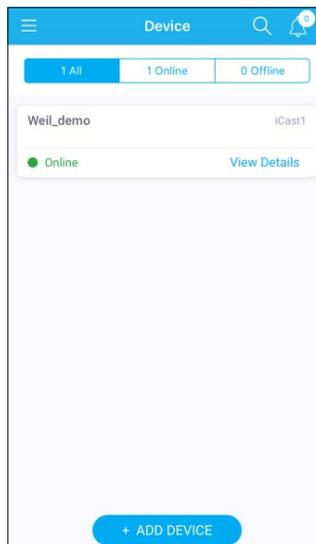
After selecting the Wi-Fi access point, enter the Wi-Fi password on the next screen. Network parameters can be manually configured by tapping on the “+” icon beside Advanced Settings. Click CONNECT to start the provisioning process.



During provisioning, the device will establish a Wi-Fi connection, then will be linked to your account on the Pocket Portal cloud platform. The mobile app displays the current status through the provisioning process as shown below.



After successful provisioning, the mobile app will display the Device screen with the newly added device as shown below.



To complete the setup and start using the device, see the next section on using the Web app.

Using the *STRIDE* Pocket Portal Web App

Main Web app interface

The Pocket Portal devices can be accessed via the Pocket Portal web app at <https://www.pocketportal.com>. From the web app dashboard, you can:

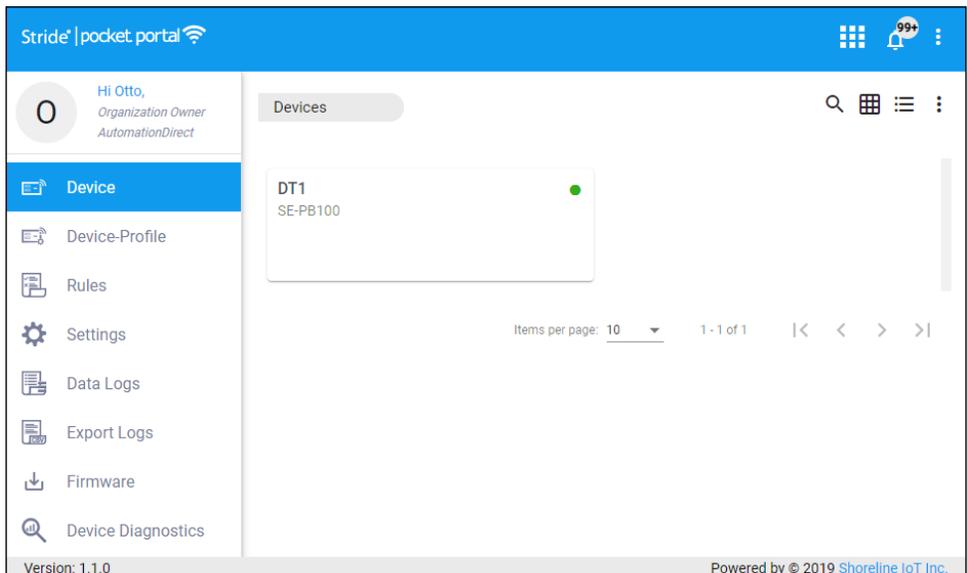
- View device details and monitor live data
- Define configuration profiles and assign them to devices
- View data logs & export data
- Upgrade device firmware
- Modify user settings

Supported browsers are the current versions of Chrome, Edge, Firefox and Safari.

Device page—viewing live data and editing device settings

The Device page is the default view of the web app, and displays the Pocket Portal devices configured on your account. Whether in a Grid or List view, the screen will display all devices, or only those currently online or offline.

For each device, the Device Name, model, and Online/Offline Status are shown. Clicking the device name will display Data and Settings tabs for the selected Device.



Data tab

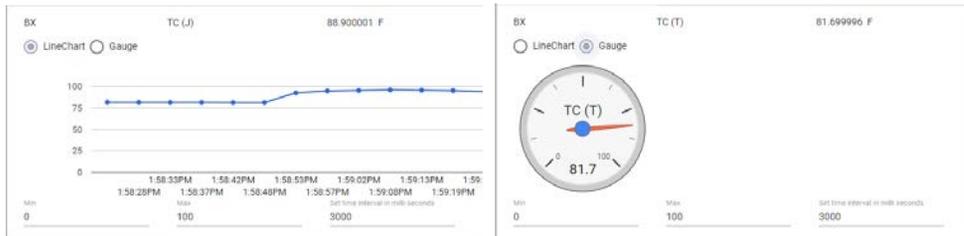
The Data tab displays the most recent value of all data points monitored by the current device and profile. It also allows you to write new values to Modbus registers, discrete bits/coils, and Digital I/O configured as outputs.

Writable variables can be edited by clicking the pencil icon adjacent to the current value, or clicking the toggle switch for boolean values.

The Data tab is accessed similarly from the user interface in the PC browser and from the user interface in the mobile apps.

Peripheral Name	Sensor Name	Value	Timestamp	Actions
BX	TC (J)	80.199996 F	a minute ago	
BX	TC (K)	78.5 F	a minute ago	
BX	ALGIN1	26	2 minutes ago	
BX	ALGOUT1	-	-	
BX	RELAY1		an hour ago	
BX	RELAY2		an hour ago	
BX	SWITCH1		an hour ago	

Data is logged with respect to UTC. On this tab, however, the screen may be toggled between Relative, Viewer Local and UTC time stamp display options. Data from one or more sensors can be visualized with a line chart or gauge by clicking the chart icon to the right of each data row.



NOTE: The Data Logs menu option will display up to 24 hours of recently logged data. See the description of the Data Logs screen on page 2-32.

Device Settings tab

The Settings tab allows you to edit the Device Name, Device Description, and Attached Profile. To change the Device Name or Device Description, click in the text box and edit the string. After editing either of these fields, click Save.

The attached device profile determines the equipment with which the Pocket Portal device will communicate, and the variables to be monitored. To attach a different device profile, click the Edit icon (✎) and select a Device Profile to attach to the Device. The new Device Profile will be downloaded to the device and it will reboot and reconnect to the platform.

The screenshot shows the 'Settings' tab for a device named 'DT1'. The interface is clean and modern, with a blue header and a white sidebar. The main content area is divided into two columns. The left column contains a list of settings, and the right column contains the details for each setting. The settings are as follows:

Setting	Value	Action
Device Name	DT1	Edit (✎)
Network	OttoMe	Dropdown (⌵)
Device Description		Edit (✎)
Attached Profile	BX_MBIQ_1	Edit (✎)
Controller Processor Firmware Version	2.02.011	
Peripheral Processor Firmware Version	1.03.006	
Device Type	SE-PB100	
Serial Number	1904241097M00	
WiFi MAC ID	DC:F5:05:39:AB:0E	
BLE MAC	DA:4F:36:53:BA:BF	
Location	34.18, -84.1	

At the bottom of the settings area, there are two buttons: 'Change Device Plan' and 'Delete Device'. The footer of the page shows 'Version: 1.1.0' and 'Powered by © 2019 Shoreline IoT Inc.'.

The Settings tab includes links to change the data subscription plan assigned to the present device, and to delete the device from your account. It also displays other read-only settings for the device:

- Wi-Fi Network (SSID)
- Wi-Fi IP address, gateway, netmask, and DNS servers (in dropdown menu beside Network)
- Device Type (SE PB100)
- Serial Number
- Firmware Version
- Wi-Fi MAC ID
- Controller Processor Firmware Version
- Device location (Lat/Lon, established by mobile device during provisioning)

Usage Monitor tab

The Usage Monitor tab allows you to keep track of your monthly usage of data point storage, emails sent, and data point retrieval. This information can be useful in both optimizing the data usage and selecting an appropriate data subscription plan. The screen includes a reminder of the current data subscription plan for the device and some key terms of the plan.



NOTE: Subscription details shown are representative. Current details and pricing can be found on the Pocket Portal platform.

Device Rules tab

The Device Rules tab shows a list of the notification rules that have been assigned to this device. Clicking the pencil icon will open the rule for editing in the top-level Rules tab, as will be discussed later in this chapter. A rule can be deleted by clicking the trashcan icon.

The screenshot displays the Stride Pocket Portal interface. The header shows the user 'Hi Otto, Organization Owner, AutomationDirect'. The left navigation menu includes 'Device', 'Device-Profile', 'Rules', 'Settings', 'Data Logs', 'Export Logs', 'Firmware', and 'Device Diagnostics'. The main content area is titled 'Device Update' and shows 'DT1' with a green status indicator. Below this, there are icons for database, settings, refresh, and a document. A table lists the rules:

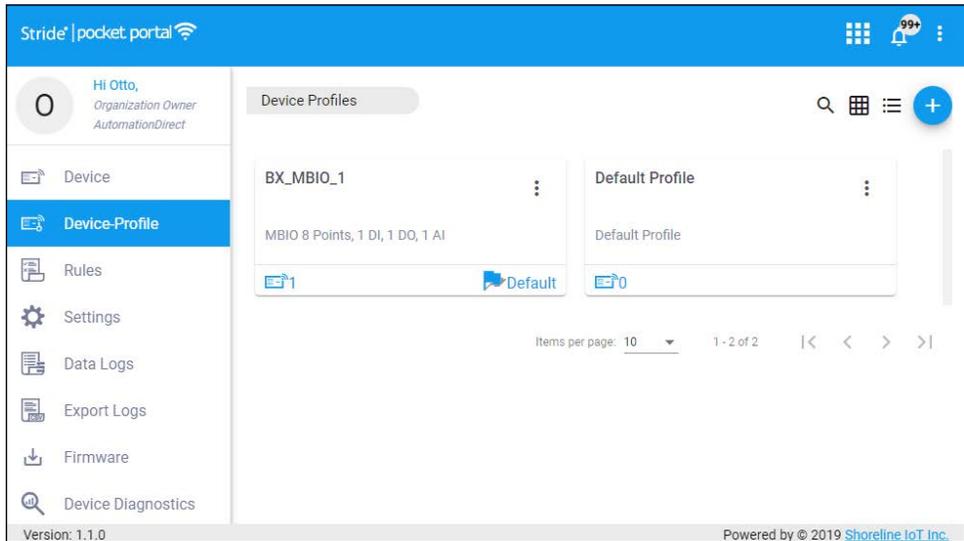
Rule Name	Device Name	Sensor Name	Rule	Value	Actions
Tank1 Level High	DT1	ALGIN1	>=	17000	
Switch 1	DT1	SWITCH1	==	1	

At the bottom of the table, there is a pagination control showing 'Items per page: 10' and '1 - 2 of 2' with navigation arrows. The footer indicates 'Version: 1.1.0' and 'Powered by © 2019 Shoreline IoT Inc.'.

Device Profile page—configuring connections to Modbus and local I/O

The Device Profile defines the operation of the Pocket Portal, including to what Modbus RTU device it connects, what data variables are read from or written to the Modbus slave, and the configuration of the discrete I/O and analog inputs.

The Device Profile tab displays all device profiles stored on the account, including their name, description, and the number of devices currently configured to use the profile.



Under the More Options (⋮) menu on each profile, you can download the profile to your PC, edit the profile or set it as the default profile for new devices. Any profile that is not currently attached to a device or set as default can be deleted.

The downloaded file is in JSON text format. It can be uploaded again to a different account, or uploaded to the same account and edited to create a new profile.

Create or edit a profile

To create a new profile, click the “+” icon on the Device Profiles screen. Select “New Profile” to create a new profile from scratch, or select “Import Profile” to load a saved profile from your local PC and use it as a template for the new profile.

To edit an existing profile, open the More Options (⋮) menu for the profile and click Edit.

The steps to create or edit a profile are outlined in the following subsections. The profile screens are divided into four cards for Common Settings, Analog Input, Digital I/O and Modbus settings. Click Save in each section after all required fields are entered, and make sure to click Save Profile after all sections are completed.

Common Details

Profile Name: Name of the device profile. Must be unique, must include only letters, numbers, underscores, hyphens, periods, spaces and hashes, and cannot exceed 64 characters.

Cloud Update Interval: The time interval at which the Pocket Portal device will upload logged data to the cloud platform. 1 second is the default. This is independent of the rate at which data is collected for each variable. **The Cloud Update Interval impacts the maximum number of data points logged per month.**

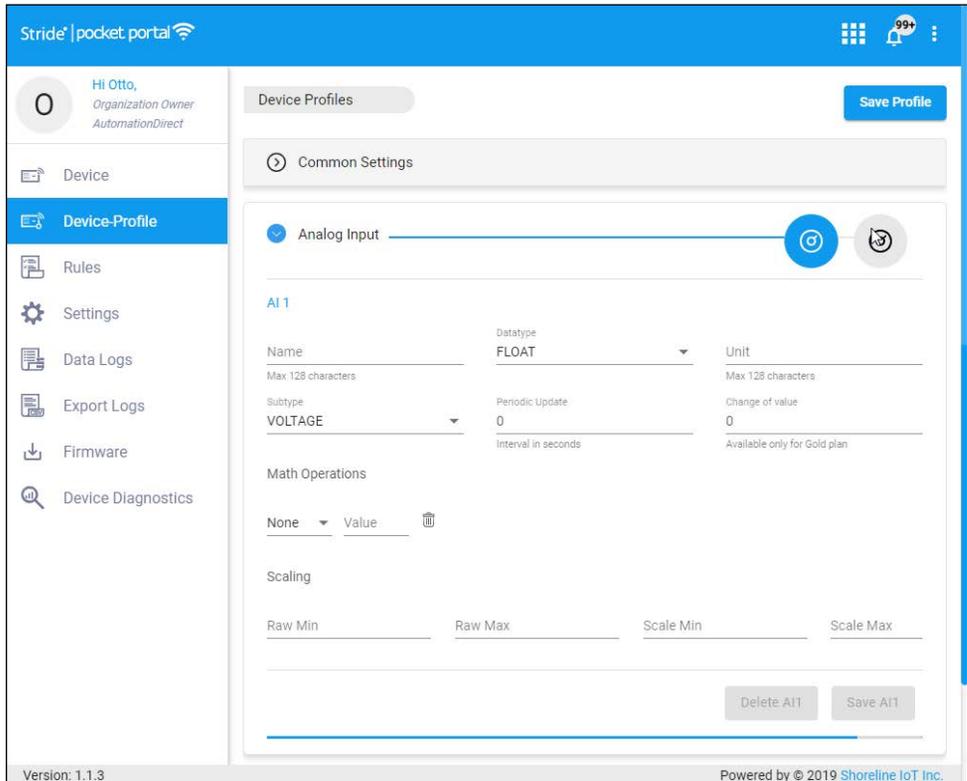
Product Category, Product Make and Product Model: These fields are required, and assist with documentation and organization of your device profiles. Fill them in with appropriate values for your devices.

Profile Description: A short description of the profile (150 characters max)

Additional Information: Up to 150 characters of additional text information may be added. Click Save to save the Common Settings and enable editing of the remaining parameters.

Analog Inputs

Open the Analog Input section, then select an Analog Input channel (AI1 or AI2) with the icons in the upper right of the section.



Name: Enter a unique name for the analog input.

Datatype: Select a data type for the variable. Valid types are INT, FLOAT (default) or BOOLEAN.

Unit: Enter a display unit for the variable, if desired.

Subtype: Select VOLTAGE or CURRENT.

Periodic Update: The time interval in seconds for periodic update to the variable.

Change of Value: The change of value after which the point value will be updated on the cloud irrespective of periodic update. 0 is disabled (default). This option is only available for devices subscribed to the Gold plan.

Math Operations: Basic math functions can be entered to manipulate the raw data values. Select an operation and enter a value if necessary. Click Add another operation if needed. Click the trash can icon beside any operation to remove it. Maximum of 4 math operations are allowed.

Scaling: Scaling is applied to the point value after the point is read/written to (optional). Enter Raw and Scaled minimum and maximum values.

Click Save when you are finished, then select and edit the other analog input if desired.

Digital I/O

Select the Digital I/O tab, then select a Digital I/O channel tab (DIO1–DIO4).

The screenshot shows the Stride Pocket Portal web interface. The top navigation bar is blue with the logo and a notification bell. The left sidebar contains a user profile for 'Hi Otto, Organization Owner, AutomationDirect' and a menu with options: Device, Device-Profile (selected), Rules, Settings, Data Logs, Export Logs, Firmware, and Device Diagnostics. The main content area is titled 'Device Profiles' and has a 'Save Profile' button. Below this are sections for 'Common Settings' and 'Analog Input'. The 'Digital IO' section is active, showing four channel icons, with the first one selected. The configuration for 'DIO1' is displayed in a form with the following fields:

Name	Type	Unit	Periodic Update
Max 128 characters	digital_input	Max 128 characters	0
Datatype	Active	Edge	Interval in seconds
BOOLEAN	HIGH	RISING	Function
Display label for value 0	Display label for value 1		

At the bottom of the form are 'Delete DIO1' and 'Save DIO1' buttons. The footer of the page indicates 'Version: 1.1.0' and 'Powered by © 2019 Shoreline IoT Inc.'

Name: Enter a unique name for the digital input or output.

Type: Select digital input or digital output.

Unit: Enter a display unit for the variable, if desired.

Periodic Update: The time interval in seconds for periodic update to the variable.

Display Labels: Labels for display of sensor raw values of 0 and 1 (e.g., OFF, ON).

For digital inputs, the following additional fields are needed.

Datatype: Must be set to BOOLEAN.

Active: Select whether the output is high or low when active.

Edge: Select whether the output is triggered on the rising edge, falling edge, or both.

Function: Must be set to RAW.

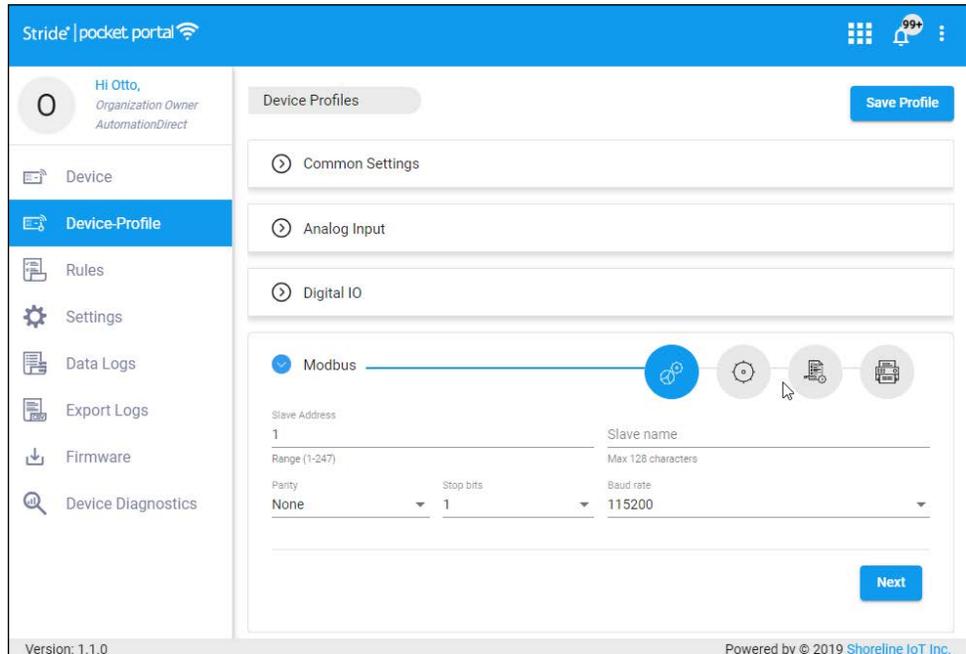
Click Save when you are finished, then select another digital I/O to configure if desired.

Modbus Settings

The Modbus settings are divided into four steps. Progress through the Modbus configuration is indicated by the icons in the upper right corner of the Modbus section.

Device Connection

Configure the Device Profile to communicate with one Modbus RTU Slave.



Slave Address: Address of the Modbus slave, in the range of 1–247.

Slave Name: Unique name of the Modbus slave. Must include only letters, numbers, underscores, hyphens, periods, spaces and hashes.

Parity, Stop Bits, Baud Rate: Set to match your Modbus RTU RS-485 port settings. Defaults to 115200 bps, No Parity, One Stop bit.

Click Next to continue.

Point Configuration

In the next step, data points are defined. If data points were imported, the next screen will be skipped. In that case you can add new data points by clicking “Add Point” on the Point Summary screen.

The screenshot shows the 'Device Profile' configuration screen in the Stride Pocket Portal. The left sidebar contains navigation options: Device, Device-Profile (selected), Rules, Settings, Data Logs, Export Logs, Firmware, and Device Diagnostics. The main content area is titled 'Device Profiles' and includes a 'Save Profile' button. Below this, there are sections for 'Common Settings', 'Analog Input', and 'Digital IO'. The 'Modbus' section is active, showing a progress bar with icons for 'Add Point', 'Configure', 'Save', and 'Print'. The configuration fields include:

- Point Name:** Text input field with a note 'Max 128 characters allowed'.
- Display datatype:** Dropdown menu set to 'FLOAT'.
- Point Address:** Text input field.
- Unit:** Text input field.
- Modbus Data Type:** Dropdown menu set to 'BIT'.
- Bit Offset:** Text input field.
- Bit Length:** Text input field.
- Change Of Value:** Text input field with a note 'Available only for Gold plan'.
- Scaling:** Section with 'Raw Min', 'Raw Max', 'Scale Min', and 'Scale Max' input fields.
- Periodic Update:** Text input field set to '0' with a note 'interval in seconds'.
- Read Function Code:** Dropdown menu set to 'FC01'.
- is Writable:** Dropdown menu set to 'No'.
- Math Operations:** Section with a dropdown menu set to 'None' and a 'Value' input field with a trash icon.

 At the bottom right, there are 'Add Point' and 'Next' buttons. The footer shows 'Version: 1.1.3' and 'Powered by © 2019 Shoreline IoT Inc.'

Point Name: Name of the Modbus point. Must include only letters, numbers, underscores, hyphens, periods, spaces and hashes. Must be unique.

Display Datatype: Data type into which the Modbus value is converted. FLOAT(default) or BOOL.

Point Address: Modbus data point address. Decimal value 0–65535.

Unit: Units assigned to the displayed value.

Modbus Data Type: Data type used by the Modbus slave. Defaults to BIT.

Bit Offset/Bit Length: If the Modbus datatype is BIT or UINT8, the bit offset will contain the range where the point value will be read from and the bit length will contain the number of bits which will be read from the offset.

Change of Value: The change of value after which the point value will be updated on the cloud irrespective of periodic update. 0 is disabled (default). This option is only available for devices subscribed to the Gold plan.

Scaling: Scaling is applied to the point value after the point is read/written to (optional). Enter Raw and Scaled minimum and maximum values.

Periodic Update: The interval at which the point value will be updated on the cloud irrespective of change of value. 0 is disabled (default).

Read Function Code: Values can be FC01–FC04 where FC01 and FC03 are writable registers.

Is Writable: Yes/No.

Periodic Write Update: The interval at which the point value will be written to the Modbus slave irrespective of change of value. 0 is disabled (default).

Periodic Write Value: Value to be written periodically to Modbus slave.

Write Function Code: Values can be FC05, FC06, FC15 and FC16. If the Modbus datatype is 4 bytes, the write function code can only have FC16 in case of FC03 and FC15 in case of FC01.

Math Operations: Basic math functions can be entered to manipulate the raw data values. Select an operation and enter a value if necessary. Click Add another operation if needed. Click the trash can icon beside any operation to remove it. Maximum of 4 math operations are allowed.

Click Add Point when finished to add the data point to the profile. Enter parameters for another data point and repeat as needed. Click Next when finished adding data points.

Point Summary

The Point Summary presents a list of the entered data points. If any data point configuration needs to be edited, click the pencil icon to the right of the data point. After editing the data point configuration, click Save Point to return to the Point Summary screen. If the list of data points is correct, click Next to continue.

Hi Otto,
Organization Owner
AutomationDirect

Device Profile Update Save Profile

- Common Settings
- Analog Input
- Digital IO
- Modbus**

Point Name	Read FC	Write FC	Point Address	Modbus Datatype	Periodic Update	COV	Unit	Actions
TC (J)	FC04		0	UINT16	15	0	F	
TC (K)	FC04		1	UINT16	15	0	F	
ALGIN1	FC04		4	UINT16	0	20		
ALGOUT1	FC03	FC06	0	UINT16	0	20		
RELAY1	FC01	FC05	0	BIT	0	1		
RELAY2	FC01	FC05	1	BIT	0	1		
SWITCH1	FC02		72	BIT	0	1		
SWITCH2	FC02		73	BIT	0	1		

Add Point Next

Version: 1.1.0 Powered by © 2019 Shoreline IoT Inc.

Scan List

The web app will create a scan list that consolidates the data points you have defined down to an optimized list of read and write operations. You can manually modify this scan list here if necessary. Click Save Modbus when finished with the Modbus configuration.

The screenshot shows the 'Device Profile Update' page in the Stride Pocket Portal. The left sidebar contains navigation options: Device, Device-Profile (selected), Rules, Settings, Data Logs, Export Logs, Firmware, and Device Diagnostics. The main content area is titled 'Device Profile Update' and includes a 'Save Profile' button. Below this are sections for 'Common Settings', 'Analog Input', and 'Digital IO'. The 'Modbus' section is active, showing a progress indicator with four steps: Modbus (checked), Analog Input, Digital IO, and Common Settings. Below the progress indicator is a table of Modbus configurations:

No.	Read FC	Write FC	Address	Modbus Datatype	Periodic Write Update	Periodic Write Value	Length	Actions
1	FC01	FC05	0	BIT	0	0	2	
2	FC02		72	BIT	0	0	2	
3	FC03	FC06	0	UINT16	0	0	1	
4	FC04		0	UINT16	0	0	2	
5	FC04		4	UINT16	0	0	1	

At the bottom of the Modbus section are two buttons: 'Add To Scan List' and 'Save Modbus'. The footer of the page indicates 'Version: 1.1.0' and 'Powered by © 2019 Shoreline IoT Inc.'.

You may navigate back to any section of the device profile by clicking the name of the subsection to open it. Remember to save that subsection again if changes are made.

When the device profile is complete, click Save Profile to continue to the Profile Summary.

Profile Summary

The Profile Summary screen presents an overview of the estimated data usage for the profile compared to the limits of the presently selected data plan. If the device profile will generate data exceeding your data plan limit, you can click Edit Profile to modify the profile. Keep in mind that the Cloud Update Interval under Common Settings affects the maximum allowed data points per month, and the Periodic Update interval for each data point affects the total number of points generated per month.

Click Commit Changes to finalize the profile and store it in your cloud account. You can commit the changes even if the data points exceed the limit of you current data plan. In that case, you should consider upgrading your data plan for any devices that will use this device profile.

Profile Summary

Profile Name: BX_MBIO_1
 Description: MBIO 8 Points, 1 DI, 1 DO, 1 AI
 Update Interval: 15 second(s)
 Maximum allowed points according to plan: 1,500,000
 No. of points generated per month: 552,960

	Analog	Digital	Modbus
Points Configured	1	2	8
Periodic Updates Configured	1	1	8

Percentage plan usage by profile

- Calculations are based on the assumption that the device is continuously online for the span of 30 days
- Calculations don't consider COV
- Number of points configured for COV are: 8

Awesome!
You are well within your plan limit.

[Edit Profile](#) [Commit Changes](#)

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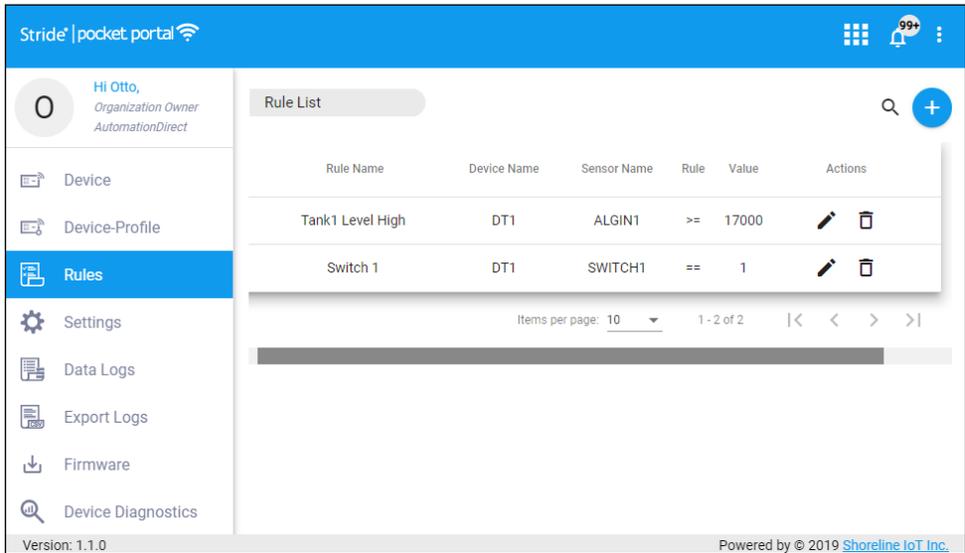


NOTE: Subscription details shown are representative. Current details and pricing can be found on the Pocket Portal platform.

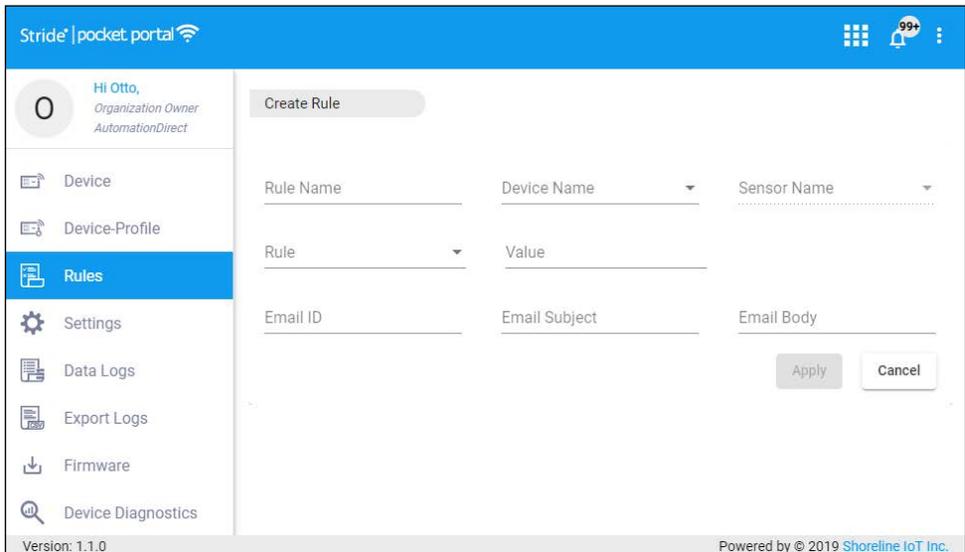
Profiles must be attached to a Device from the Device screen. Go to Device > Settings, click the Edit icon (✎) near the “Attached Profile Name” field and select a Device Profile to attach to the device. The device will download the new profile and reboot. A counter at the bottom of each profile in grid view, or at the right of the table in list view, indicates the number of devices on the account currently using the profile.

Rules page—set email notifications triggered by data values

The Rules page lets you set up notifications to be emailed based on the current value of monitored variables. By default the page will display a list of the currently configured rules.



To create a new rule, click the “+” icon and fill in all fields on the Create Rule dialog.



Rule Name: Enter a unique name for the rule.

Device Name: Select the Pocket Portal device from the dropdown list.

Sensor Name: Select the data point, as defined in the current device profile, from the dropdown list.

Rule: Select the comparator (=, ≠, ≤, ≥).

Value: Enter the value to be compared.

Email ID: Enter the email address or addresses to which the notification should be sent.

Email Subject: Enter the email subject line.

Email Body: Enter the body text of the notification email.

After all fields are entered, click Apply to create the rule.



NOTE: An email notification will be sent when the value of a data point is uploaded to the cloud that matches the criteria of a rule you have established. Thus, the time delay from when a value matches your defined criteria to when a notification is sent is affected by the update interval set for your device.



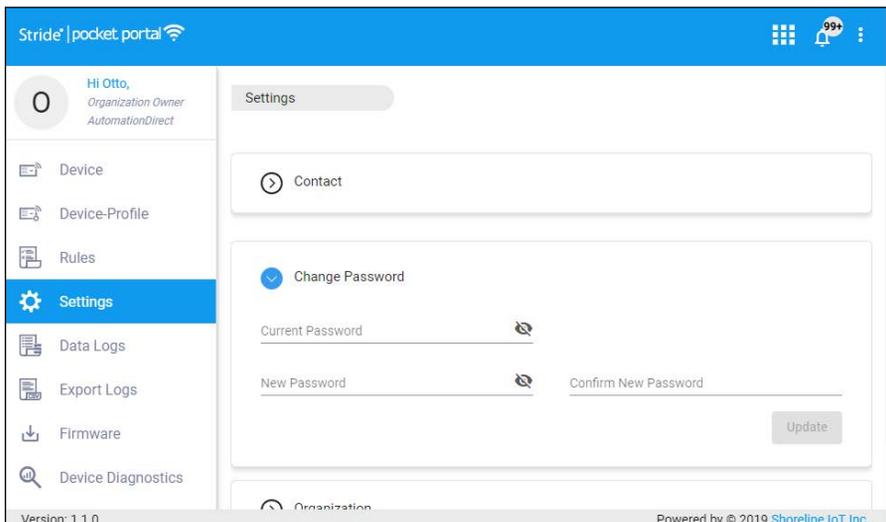
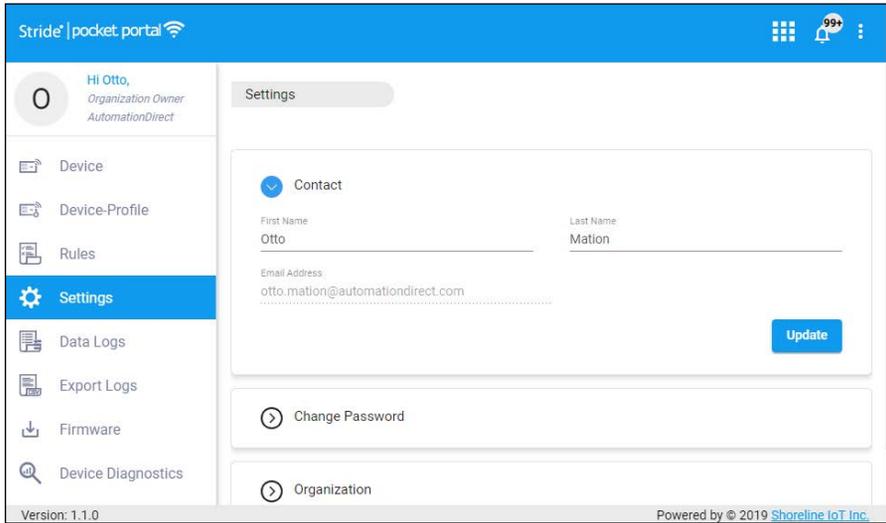
NOTE: One email notification is sent to each address when the Pocket Portal platform detects that a rule is matched. After a rule is triggered, the rule will be evaluated approximately every 5 minutes and a new email notification will be sent each time the rule is evaluated to be true. Email notifications will continue to be sent until the rule is evaluated as false.

Settings page—updating account, user, organization, and subscriptions

The Settings page allows you to update the contact name and organization name, change the login password, and give access to the account to new users.

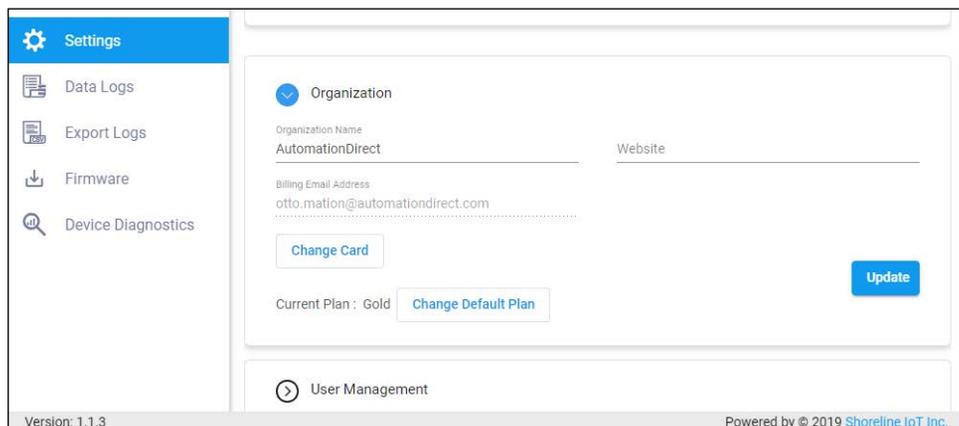
Contact information and password

The user's name and password can be updated on the first two sections, respectively. Note that the email address is tied to the account, and is not editable. A new email address can be added by adding a new user under User Management.



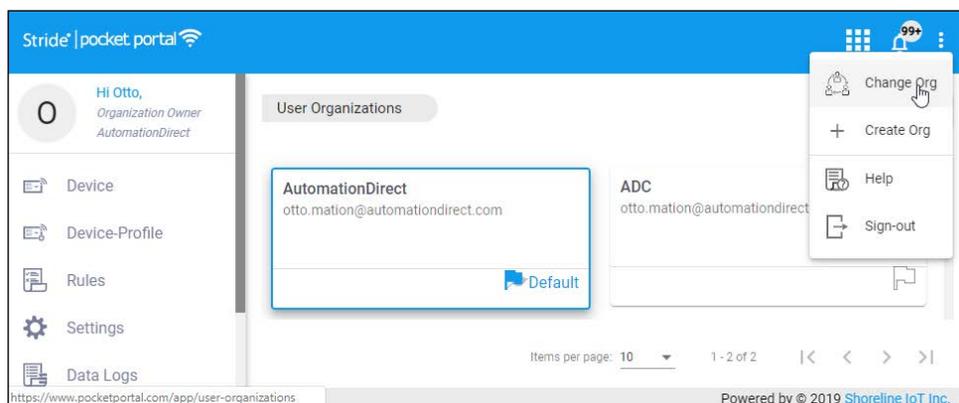
Organization

The organization name and website for the current organization can be updated in the Organization subsection. The current organization is shown in the upper left corner of the web site.



From this subsection, you can update the credit card to which your invoices are billed, and can change the default data plan subscription for new devices added to the account. Note that data plans for current devices must be changed within the device settings.

The current organization can be changed and new organizations can be created by clicking the More Options menu in the upper right corner of the web interface. To change the current organization, click Change Org, click the desired organization, and click the Change button.



To create a new organization, click the Create Org option. On the Create Organization screen, enter a new organization name and select a default data plan

Choose default plan

SILVER

MONTHLY YEARLY

Billed Monthly \$8/month Billed Yearly \$75 (\$6.25/month)

Select

GOLD

MONTHLY YEARLY

Billed Monthly \$15/month Billed Yearly \$139 (\$11.6/month)

Select

<p>Data points per month (Based on Cloud update)</p> <p>Data Storage</p> <p>Read Data Points</p> <p>Users per account</p> <p>Devices Per User</p> <p>Device Profile Sharing</p> <p>Device Management</p> <p>User Management</p> <p>Asset Monitoring/ Charts</p> <p>Email Alerts & Notification</p> <p>Multiple Organizations</p> <p>Rules and Action</p> <p>Export Data</p> <p>No Ads</p>	<p>Up to 200K*</p> <hr/> <p>3 months</p> <hr/> <p>Unlimited**</p> <hr/> <p>Unlimited</p> <hr/> <p>Unlimited</p> <hr/> <p>Optional***</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>1K</p> <hr/> <p>4K**</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>✓***</p>	<p>Up to 1M*</p> <hr/> <p>6 months</p> <hr/> <p>Unlimited**</p> <hr/> <p>Unlimited</p> <hr/> <p>Unlimited</p> <hr/> <p>Optional***</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>4K**</p> <hr/> <p>✓</p> <hr/> <p>✓</p> <hr/> <p>✓***</p>
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*Cloud update interval	Data points - Silver	Data points - Gold
10 min or higher	Up to 200K	Up to 1000K
10 sec or higher	Up to 100K	Up to 500K
1 sec or higher	Up to 50K	Up to 250K

*Data point is max 4 bytes data from MODBUS or Analog or Digital port — This selected plan can be changed later from Organization Settings page

** Read Data Points Unlimited subject to Fair Usage Policy mentioned in Terms & Conditions

++ Emails will be throttled to maximum 30 emails per day after exceeding Gold plan limit

*** No Ads: Organizations containing only free plan devices are supported by advertisements on the web and mobile dashboards

+++ Profile sharing refers to device profiles which configure MODBUS device registers, sensor parameters, and more. Sharing device profiles benefits users by building a community supported library of common MODBUS device and sensor profiles to save time when provisioning new devices



NOTE: Subscription details shown are representative. Current details and pricing can be found on the Pocket Portal platform.

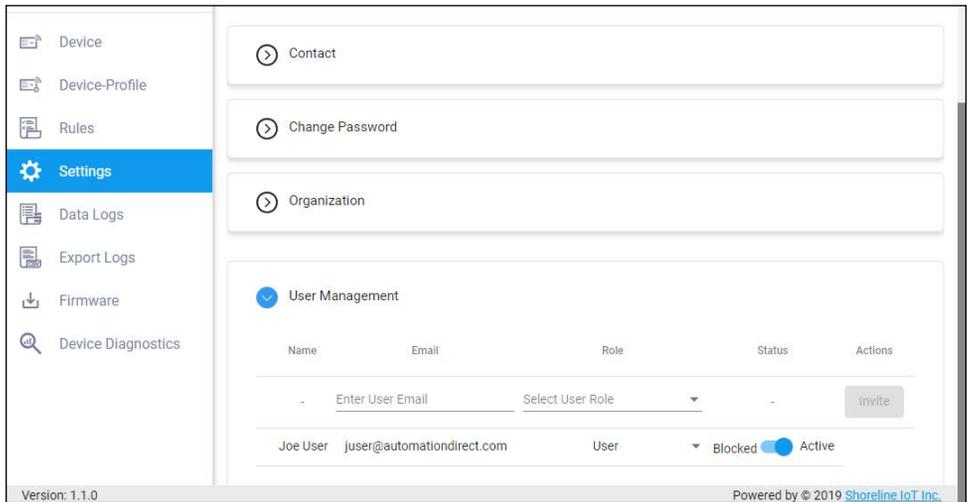
Click the desired default data plan and click the Proceed button that will appear. Note that at this dialog, the default data plan is set. The data plan may be changed for individual devices at the Device > Settings page.

Enter the billing information for this organization in the subsequent screen.

You will receive a confirmation email with a link to activate the account.

User Management

Multiple users can be invited to join the account from the User Management tab. From here, you can manage to access rights of each user or can disable a user's access.



The access rights of each user on the account is managed through role-based access control. Each user is assigned one of the following roles:

- Organization Owner
- Admin / Finance Administrator
- User
- Site Manager

The actions allowed by each role are delineated in the table on the next page.

Role-Based Access Control User Rights Management					
Role		Org. Owner	Admin	Site Manager	User
Number of Allowed Users with this Role		1	0+	0+	0+
Resource	Action				
Organization	Create	✓	✓	✓	✓
	View	✓	✓	✓	✓
	View_details	✓	✓	✗	✓
	Update, Delete	✓	✗	✗	✗
Device	Add, Update, Delete	✓	✓	✓	✗
	View, View_details	✓	✓	✓	✓
	View_data, Live_data	✓	✓	✓	✓
	Reprovision	✓	✓	✓	✗
	Actions	✓	✓	✓	✗
	Add_rule, Update_rule	✓	✓	✓	✗
	View_device_debug_log	✓	✓	✓	✓
Firmware	View	✓	✓	✓	✗
	Apply	✓	✗	✓	✗
Device Profile	Create	✓	✓	✓	✗
	View, View_details	✓	✓	✓	✓
	Update	✓	✓	✓	✗
	Attach	✓	✓	✓	✗
	Delete	✓	✓	✓	✗
User	View	✓	✓	✗	✓
	Invite, Remove, Block	✓	✓	✗	✗
User Organization	View, View_details	✓	✓	✓	✓
	Update	✓	✓	✗	✗
Role	View, Update	✓	✓	✗	✗
Rule	Create, View, View_details	✓	✓	✓	✗
	Update, Delete	✓	✓	✓	✗

Subscriptions

The Subscriptions tab displays all current data plan subscriptions, and allows deletion of any paid subscription plan that is not currently attached to a device.

Hi Otto,
Organization Owner
Automation@direct

- Device
- Device-Profile
- Rules
- Settings**
- Data Logs
- Export Logs
- Firmware
- Device Diagnostics

Change Password

Organization

User Management

Subscriptions

Delete Available Subscriptions

Pricing Plan	Frequency	Device Name	Start Date	Next Billing Date
Free	Monthly		Jan 14, 2020	-
Free	Monthly		Jan 14, 2020	-
Free	Monthly		Jan 14, 2020	-
Free	Monthly		Jan 14, 2020	-
Free	Monthly		Jan 14, 2020	-
Gold_2019	Monthly	DT1	Aug 8, 2019	Aug 8, 2019

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Data Logs page—viewing recent data online

The Data Logs page lets you view up to the last 24 hours of historical logged data. To retrieve a set of logged data, select a time frame, a device and either All Sensors or an individual sensor from the three dropdown boxes, and click Get Data. If an individual sensor is selected, the data can optionally be graphed by clicking the graph icon to the right of the Get Data button.



NOTE: The data logs contain historical data only. To view the latest data, or to write to Modbus registers, Modbus bits/coils, and discrete I/O, use the Data tab on the Device page, as discussed on page 2-10.



NOTE: Viewing data on the Data Log screen counts toward your monthly data retrieval limit. Viewing current data from the Device screen does not.

The screenshot shows the 'Data Logs' page in the Stride Pocket Portal. The user is logged in as 'Hi Otto, Organization Owner AutomationDirect'. The page title is 'Data Logs'. There are three dropdown menus: 'Time span' set to 'Last 1 hr', 'Select Device' set to 'DT1', and 'All Sensors'. A 'Get Data' button is visible. Below the filters is a table with the following data:

Sensor Name	Value	Timestamp
AI1	9.294376	Jun 26, 2019, 3:05:48 PM
DIO1	1	Jun 26, 2019, 3:05:29 PM
DIO1	1	Jun 26, 2019, 3:05:19 PM
AI1	9.295901	Jun 26, 2019, 3:05:18 PM
AI1	9.296206	Jun 26, 2019, 3:04:48 PM
AI1	9.298646	Jun 26, 2019, 3:03:38 PM

The screenshot shows the 'Data Logs' page in the Stride Pocket Portal. The user is logged in as 'Hi Otto, Organization Owner AutomationDirect'. The page title is 'Data Logs'. There are three dropdown menus: 'Time span' set to 'Last 24 hrs', 'Select Device' set to 'DT1', and 'TC_K'. A 'Get Data' button is visible. Below the filters is a line graph showing the data for 'TC_K' over a 24-hour period. The y-axis ranges from 76 to 80. The x-axis shows time from 9:00 PM to 12:00 PM. The graph shows a relatively flat line around 77, with a slight peak near 80 around 10:00 AM.

Export logs page—downloading historical log data to your PC

The Export logs page lets you export logged data manually or on a schedule. To retrieve a set of logged data manually, select a starting date, ending date and device from the three dropdown boxes, and click Export. The request to export data is submitted to the cloud platform, and a comma-delimited text file containing the data set should be sent to the email address associated with your account within about 20 minutes.

To schedule regular data exports, select the device, time period to export, the frequency of reports, and when to send them. Reports can be sent daily, weekly, or monthly, at specific time, day of week, or day of month.



NOTE: Exporting data counts toward your monthly data retrieval limit. For optimum data efficiency, plan the time period and frequency to avoid retrieving duplicate data.

The screenshot shows the 'Export Data' page in the Stride Pocket Portal. The user is logged in as 'Hi Otto, Organization Owner AutomationDirect'. The left sidebar contains navigation options: Device, Device-Profile, Rules, Settings, Data Logs, and Export Logs (highlighted). The main content area has a 'Manual Exports' section selected, with fields for 'Start Date', 'End Date', and 'Select Device', and an 'Export' button. Below it is a 'Scheduled Exports' section.

The screenshot shows the 'Export Data' page with the 'Scheduled Exports' section selected. The left sidebar now includes 'Export Logs', 'Firmware', and 'Device Diagnostics'. The main content area shows a table of scheduled exports with a '+' button to add a new one.

Report Name	Date	Email Frequency	Device Name	Edit / Delete
Daily	Last 1 day(s)	Every 1 day(s) 7:0	DT1	

Items per page: 10 | 1 - 1 of 1 | < >

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Firmware page—updating device firmware

The Firmware page allows you to push firmware and other updates to Pocket Portal devices. To update a device, click on the firmware update to be installed, select the devices to be updated, then click View Summary and Apply.

The screenshot shows the 'Firmwares' page in the Stride Pocket Portal. The left sidebar contains navigation options: Device, Device-Profile, Rules, Settings, Data Logs, Export Logs, Firmware (highlighted), and Device Diagnostics. The main content area displays a table of firmware updates:

	Firmware Version	Firmware Description	Created On	Release Notes
<input checked="" type="radio"/>	2.02.012	Firmware with SB54 - 2.02.012	Jul 5, 2019, 5:22:37 AM	
<input type="radio"/>	2.02.008	Firmware with SB54 - 2.02.008	Jul 5, 2019, 9:39:12 AM	
<input type="radio"/>	2.02.011	Firmware with SB54 - 2.02.011	Jul 5, 2019, 9:47:21 AM	

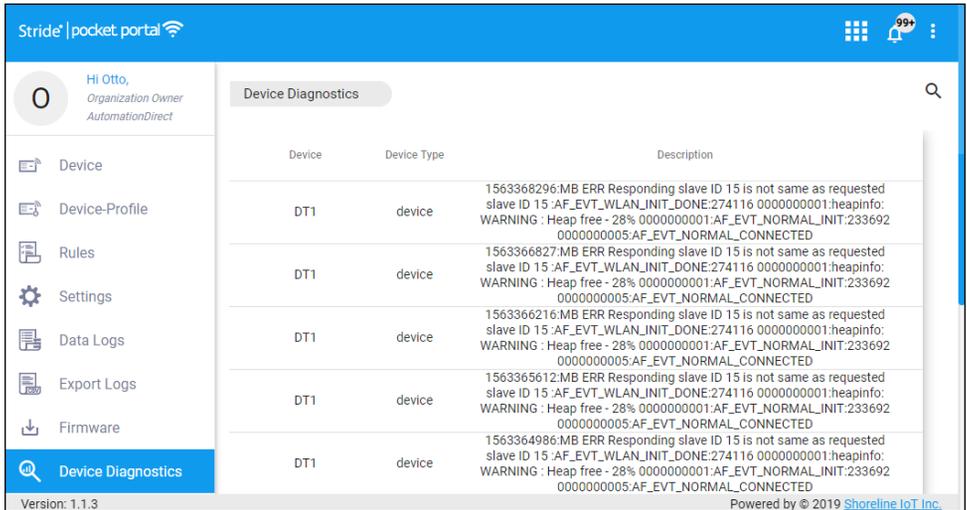
At the bottom of the table, it shows 'Items per page: 10' and '1 - 3 of 3'. A 'View Devices' button is located in the top right corner of the main content area.

The screenshot shows the 'Firmwares' page with a modal window open for selecting devices compatible with a specific firmware version. The modal title is 'Devices compatible with Firmware 2.02.012'. It includes a 'Cancel' button and a 'View Summary' button. The modal contains a table with the following data:

<input checked="" type="checkbox"/>	Device Name	Description	Type	Current Firmware
<input checked="" type="checkbox"/>	DT1		SE-PB100	2.02.012

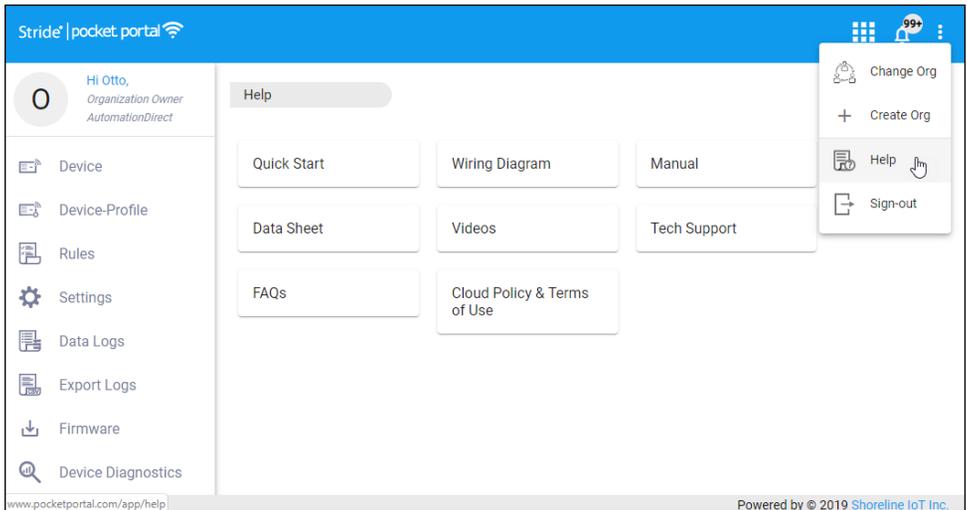
Device Diagnostics page—information for technical support

The Device Diagnostics page displays status information from the devices. If you are working with our technical support staff on a support issue, they may ask for a portion of the information displayed in this screen as a part of troubleshooting.



Help page—accessing online documentation

The Help page provides links to online documentation from within the web app.



Notifications

The bell icon in the upper right of the web app shows a counter of the number of current notifications. Click the icon to view the notifications.

The screenshot shows the Stride Pocket Portal interface. At the top, the user is identified as 'Hi Otto, Organization Owner AutomationDirect'. A notification bell icon in the top right corner shows 99+ notifications. The main content area displays a list of notifications:

Level	Content	Description	Type	Timestamp
!	DT1: Modbus Error	Timeout: No respons...	MODBUS	7 days ago
!	DT1: Modbus Error	Timeout: No respons...	MODBUS	7 days ago
!	DT1: Modbus Error	Timeout: No respons...	MODBUS	7 days ago
i	DT1: Profile download complete	Profile download co...	PROFILE	7 days ago
i	DT1: Profile download started	Profile download star...	PROFILE	7 days ago
i	DT1: Profile download complete	Profile download co...	PROFILE	7 days ago
i	DT1: Profile download started	Profile download star...	PROFILE	7 days ago

The page footer includes the URL www.pocketportal.com/app/notifications and the text 'Powered by © 2019 Shoreline IoT, Inc.'

Using **STRIDE** Pocket Portal on Your Mobile Device

Mobile Apps for the Pocket Portal are available on the iTunes App Store and the Google Play Store. A mobile device with the Pocket Portal App is necessary for initial setup and provisioning of the Pocket Portal device, and can also be used to manage the devices and monitor the data collection. Bluetooth is necessary only for the initial setup. After configuration, the mobile device connects to the cloud platform, not directly to the device.

The mobile apps allow you to:

- Add a new device
- View device details, and monitor and control live data
- Assign device profiles to devices
- Modify user settings

Installing Pocket Portal App on a mobile device

Installing the Pocket Portal App on an iOS device

The Pocket Portal App for iOS devices is available in the iOS App Store at <https://itunes.apple.com/us/app/stride-pocket-portal/id1456616358?mt=8> or by scanning the QR code to the right. Versions 11.x and later are supported.



Installing the Pocket Portal App on an Android device

The Pocket Portal App for Android devices is available in the Google Play Store at <https://play.google.com/store/apps/details?id=com.shorelineiot.stridepocketportal> or by scanning the QR code to the right. Versions 7.x and later are supported.



Adding a new Pocket Portal device to your account using the mobile app is covered in “Setting up the Pocket Portal device” on page 2-4. Other features of the mobile app are discussed here.

View Device List in mobile app

The list of Pocket Portal devices linked to your account can be viewed from the Device screen in the mobile app as shown below. The Device screen also displays counts of Online devices (devices connected to the cloud), Offline devices (devices not reachable or that have lost connectivity to the cloud) and All devices on the account.

View and edit live data

Tap the device name to bring up the Data tab, which displays the most recent value of all data points monitored by the current device and profile. Writable variables can be edited by clicking the pencil icon adjacent to the current value, or clicking the toggle switch for boolean values.

Change device settings, profile, and Wi-Fi network

From the Device view, tap the Settings header to access device settings. The device name, attached profile, Wi-Fi network and device data plan can be changed from the mobile app. All other information is read only.

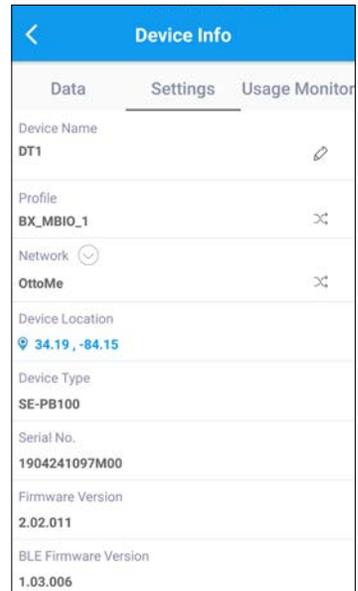
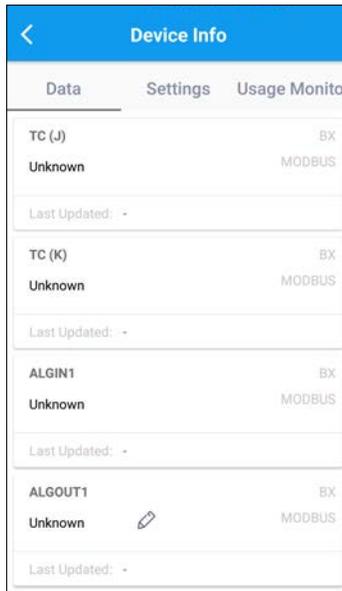
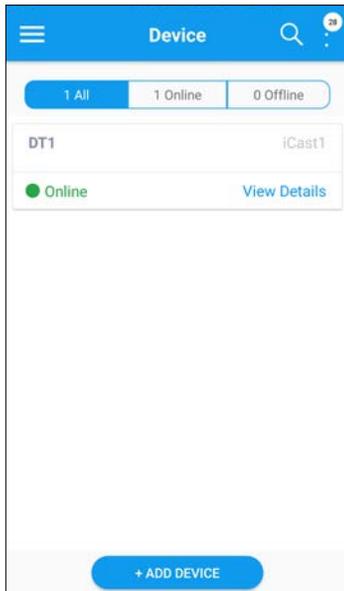
To edit the Device Name, tap the pencil icon and enter a new name. Note that the name must be unique on the account.

To change the attached Device Profile, tap the icon to the right of the current profile name, then select a new device profile from the list.

Note that creation of a new Device Profile must be done on the web app.



NOTE: Screen caps are representative. There may be differences in the current App version, including format and pricing of the subscription details.



To change the Wi-Fi network used by the device, you must be close enough to it to establish a Bluetooth connection. Tap the icon to the right of the Wi-Fi network name, and follow the onscreen prompts to connect to the device via Bluetooth.

Then, select a Wi-Fi network and fill in the password. If you need to manually specify connection details for your network, tap Advanced Settings and enter the IP address, subnet mask, gateway, and DNS servers.

After you tap Connect, the device will update its network connection and reconnect to the Pocket Portal cloud.

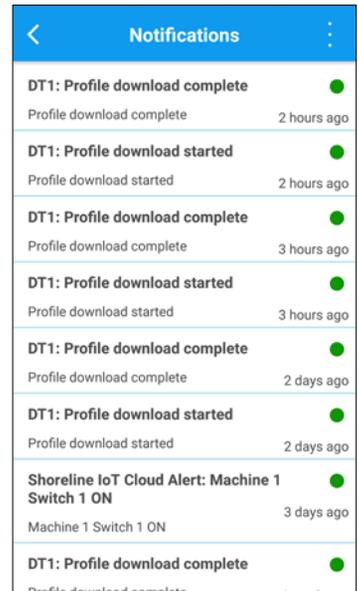
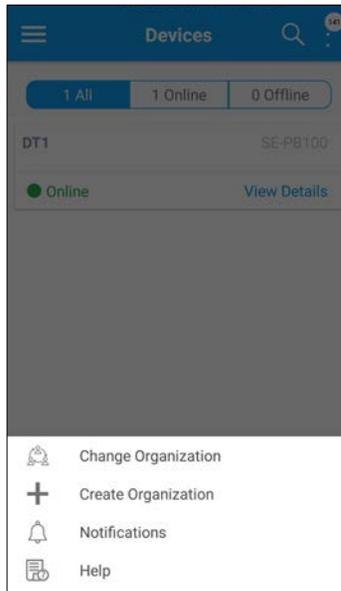
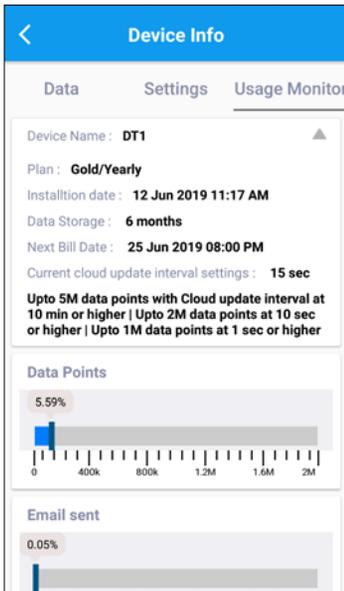
To change the data plan for a device, select Change Data Plan at the bottom of the settings screen. Select the new plan and click Proceed.

View Notifications

The More Options icon in the upper right of the mobile app shows a counter of the number of current notifications. Tap the icon then tap the bell icon to view the notifications. While viewing notifications, tapping the More Options icon will allow you to filter the list of notifications to include only Info, Warning, Error, or All types.

Change or Create Organization

The More Options icon also allows you to switch your currently active organization or create a new organization. In the case of a new organization, you will need to select a default data plan and enter billing information.



Help

Help resources are found under the More Options menu. The help screen provides access to product documentation, videos, and tech support.

Report Issue

To report a problem with the device or service, select “Report Logs” (“Report Issue” on iOS devices) from the Help menu. Briefly describe what went wrong, then click Send to email our technical support team.

Other Settings

The Settings menu, accessible from the ‘hamburger’ menu icon in the upper left corner of the screen, contains options to edit your contact information, password, and organization details. These options are essentially the same as those available on the web platform, as discussed earlier.

View or Export Data Logs

The Data Logs menu, accessible from the ‘hamburger’ menu icon in the upper left corner of the screen, will display all logged values for a one selected sensor over a selected time period.

The Export Logs menu, accessible from the ‘hamburger’ menu icon in the upper left corner of the screen, will generate a csv file containing all logged values for all sensors on a selected device over a selected time period. A link to the log file will be emailed to the addresses you enter at the time the log is exported.

