



# DATASHEET

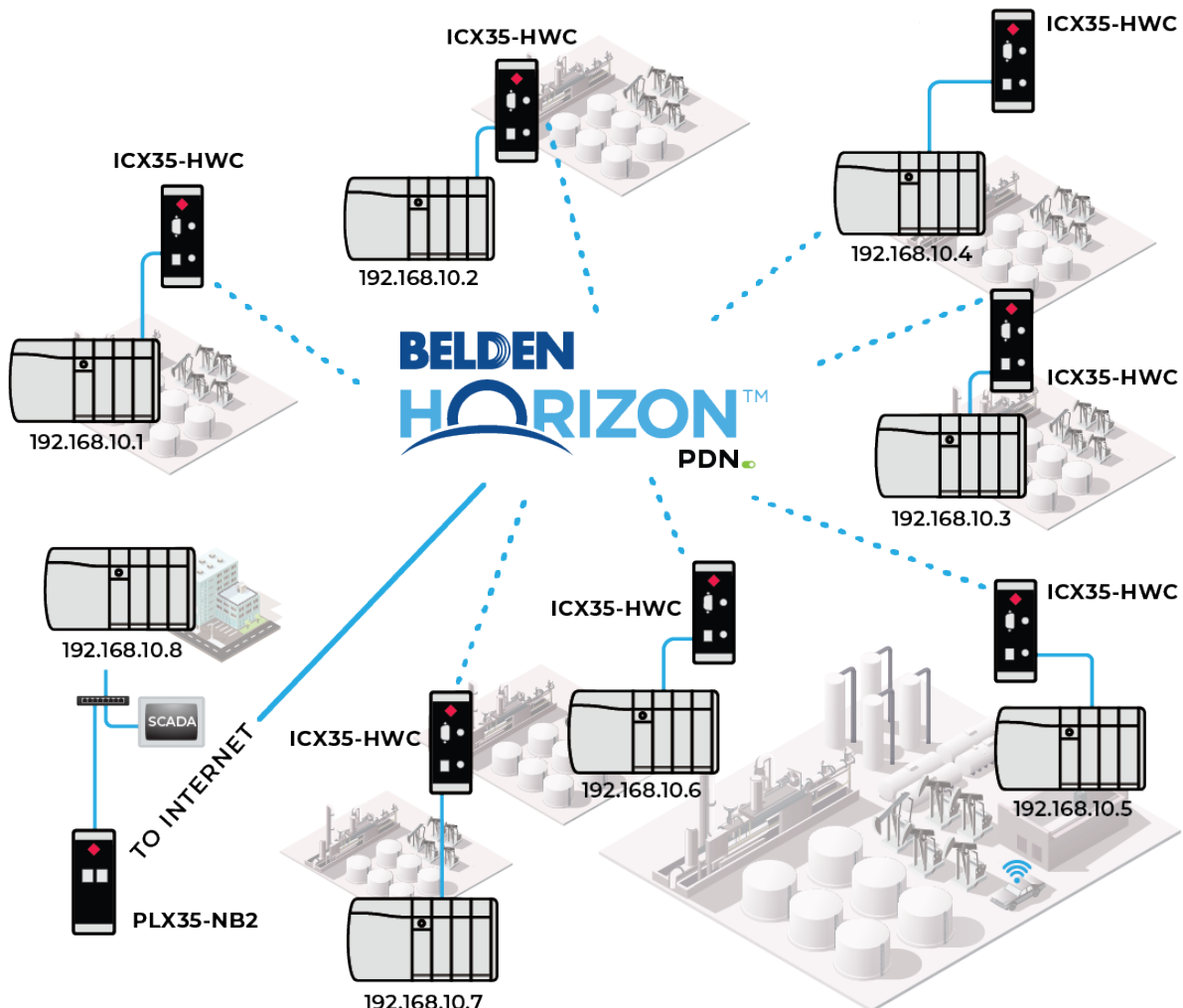
## Persistent Data Network (PDN) Belden Horizon™ Application

ProSoft Technology®

Persistent Data Network (PDN) is an application on Belden Horizon™ - Belden's secure, cloud-native service optimized for high reliability and availability. PDN is a **simple, secure, and managed** infrastructure network designed to enable remote communications between geographically dispersed automation devices. PDN is intuitive and easy to set up, without the need to configure complicated communication settings or manage security certificates. An activity log provides detailed account activity information.



PDN users can establish safe and secure remote communications with their machines anywhere in the world. Using Belden Horizon's unique EasyBridge™ technology, automation programming tools (such as Studio 5000, Unity® Pro, TIA Portal, and many more) can communicate directly to the automation devices.



## Simple

PDN is the simplest way to create a secure remote communications infrastructure network. To create a PDN network, users need:

- ❖ An account in Belden Horizon (Sign up at [www.belden.io](http://www.belden.io))
- ❖ A paid Subscription plan (see below)
- ❖ ICX35-HWC-A/E (with a cellular data plan) or PLX35-NB2 gateways

The user must create the PDN project and add the gateways to the project. This creates the Layer 2 VPN connection between the remote sites.

## Security

All communications with Belden Horizon are secured using a multilayered approach.

- ❖ Gateways are activated using two-factor authentication
- ❖ Each gateway uses a unique one-time key to establish a tunnel to a local tunnel service
- ❖ Tunnels are encrypted using 256-bit AES encryption
- ❖ A separate and secure Web Sockets control path maintains communication with gateways

Remote access to sites is achieved using Belden Horizon Secure Remote Access. If Virtual Lockout-Tagout (vLOTO™) is enabled, the user must obtain permission for remote access. If Single Sign-On (SSO) is enabled, then IT can manage user access.

## Projects

Gateways and users are organized into Projects within the organization in Belden Horizon. All gateways added to a PDN Project are connected to form one Layer 2 network (single subnet). Automation devices connect to this network through the gateways, and communicate with each other just as they would if connected to the same Ethernet switch. Each organization requires a PDN subscription.

## Subscription Plans

A Belden Horizon PDN subscription is required. Plans are based on the number of sites in a network. Each site needs a cellular (ICX35-HWC-A/E) or wired (PLX35-NB2) gateway.

**Note:** Cellular sites will also need a cellular data plan. A minimum of 4GB data plan (or higher) is recommended.

## What is included with a PDN Subscription?

- ❖ 3GB of VPN data per month per site
- ❖ Single Sign-On (SSO)
- ❖ Configurable password policy
- ❖ Advanced Two-Factor Authentication (2FA)
- ❖ Virtual Lockout-Tagout (vLOTO™)
- ❖ Concurrent tunneling (for Secure Remote Access)
- ❖ Activity log for 30 days
- ❖ Alarm Notification

## Managed Layer 2 VPN Network

A Persistent Data Network (PDN) is intended to enable quick and easy SCADA style applications. A PDN is a collection of ProSoft Technology gateway endpoints that participate in a Layer 2 network between the regional tunnel server and the gateways. Belden Horizon manages the tunnel connections between the gateway and the tunnel server.



Where Automation  
Connects™

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## Advanced Two-Factor Authentication (2FA)

With 2FA, customers can be confident that only registered users can access the account. When advanced 2FA is enabled, users must enter a username, password, and a unique time-based one-time password. The time-based, one-time password is auto-generated via an authenticator app on the user's phone.

## Single Sign-On (SSO)

Single Sign-On allows users to access multiple applications with one set of credentials. With SSO, IT can manage user access which improves security, productivity. SSO uses SAML 2.0. SSO works by sending the login request to a known federated identity provider (IDP) and the credentials are checked against the organization's active directory server. If the credentials are correct, then the user will be allowed to access the application.

## User-Configurable Password Policy

With a configurable password policy, users can determine password complexity requirements and mandatory rotation periods in line with existing policies. Configurable policy rules include enforcing minimum password length, password expiration period, requiring alpha-numeric characters and much more.

## Virtual Lockout-Tagout (vLOTO™)

vLOTO allows authorized plant personnel to control when and how their machines are remotely accessed. The Belden Horizon user requests access for a specific period of time, which the authorizer(s) must approve. The authorizer does not need to be a Belden Horizon user – the person can be an IT manager, plant engineer, shift supervisor, or other authorized person. The authorizer(s) can deny or revoke access at any time. Companies can also access activity logs of permissions, acceptances, and denials.

## IP Allow List

Access specific IP addresses when remotely connected to the gateway.

## VPN Tunneling

The cloud to gateway connections in the PDN network are IPsec over HTTPS. Belden Horizon provides an AES256 encrypted Layer2 VPN connection between the sites in a PDN network.

## User Accounts and Access Control

The Belden Horizon Organization owner and project administrators can invite team members to join projects in the organization. Access control for users is managed by the account administrator. Users are assigned rights to administer, connect, and configure gateways, or to connect only. An Organization Owner can transfer ownership of remote access devices (for example, a machine builder granting ownership to an end user once the OEM no longer needs control of the equipment).

## Ethernet/Cellular Connections

Connections from gateways use HTTPS only, and can only be initiated outbound from the gateway. Client VPN connections use SSTP via TCP port 443 or L2TP via ports 500, 4500, and 1701.

## No PC Client Software

User-installed software is not required for Belden Horizon. Belden Horizon is compatible with current versions of Chrome, Firefox, and Internet Explorer 10 or later. EasyBridge uses the OS-native SSTP or L2TP client software. Windows 7 or later is recommended.

Belden Horizon works with the ICX35-HWC Industrial Cellular Gateway and the PLX35-NB2 Network Bridge. ProSoft Technology offers data plans (U.S. Only) for the ICX35-HWC with AT&T or Verizon activated at the factory.



## Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms. For a complete list of products, visit our website at: [www.prosoft-technology.com](http://www.prosoft-technology.com)

## Ordering Information

Go to [www.belden.io](http://www.belden.io) to sign up.

PDN subscription is per site:

PSC-PDN-SITE-1Y: 1 site / 1 year

PSC-PDN-SITE-2Y: 1 site / 2 year

PSC-PDN-SITE-3Y: 1 site / 3 year

PSC-PDN-ACT: One-time activation of the PDN service for the Belden Horizon™ organization.

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to: [www.prosoft-technology.com](http://www.prosoft-technology.com) and select *Where to Buy* from the menu.

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