TELECOM SITE AUTOMATION PRODUCTS & SERVICES

An Overview of Telecom Site Solutions by Asentria

Asentria®

Introduction

Telecom site automation improves the reliability and efficiency of a telecom network.

Asentria is a 30 year-old company based in Seattle, with multiple deployments managing greater than 15000 remote sites for some of the largest telecom operators worldwide.

Typical customers: mobile network operators, tower leasing companies, utilities, public safety, transportation, radio and tv broadcast, and other specialized telecom operators.

Typical Use: Managing unmanned telecom sites including tower locations (cellular, microwave, radio & tv broadcast) as well as fiber networks points-of-presence (POP), cable head-ends, and datacenters.

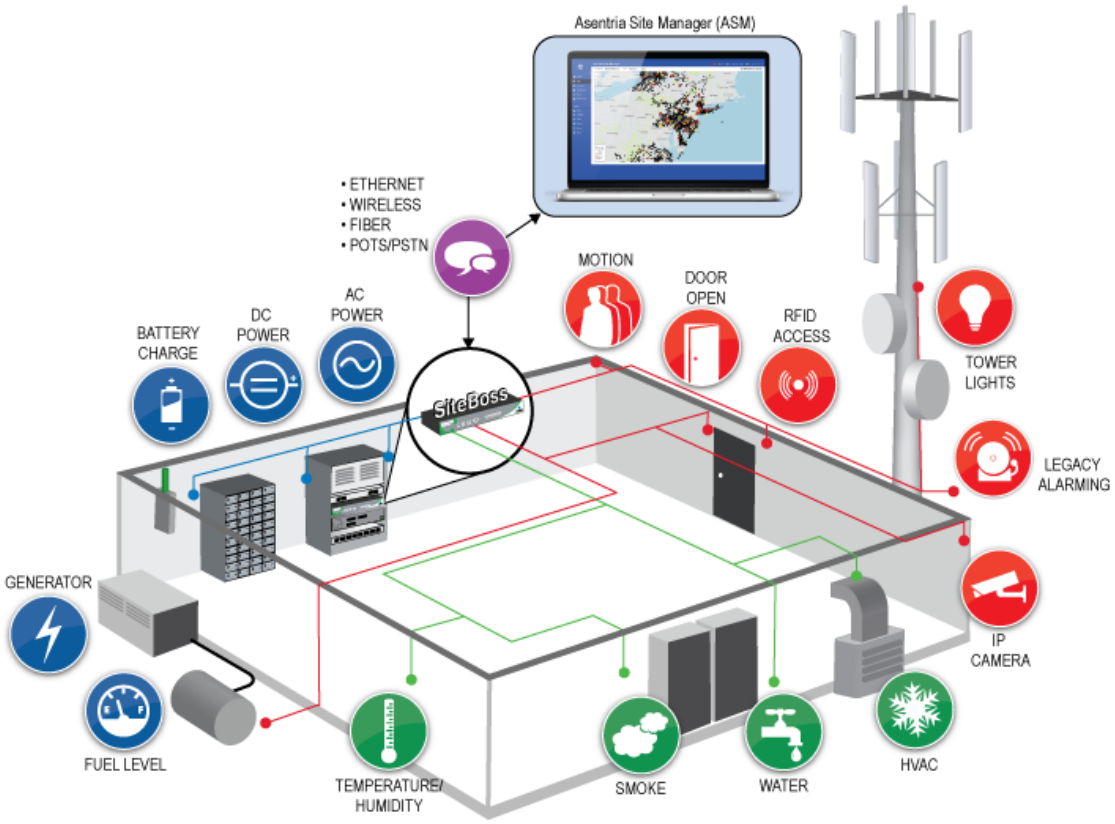
Solution Overview

Asentria solutions are specialized IoT solutions for telecom network operator's remote sites. Telecom site automation centrally manages telecom remote site power, security, and environmental sub-systems such as DC rectifiers, generators, cameras, access controllers, and HVAC systems at remote sites. Asentria integrates these systems into a single SiteBoss site controller to provide alarming and site optimization, and provides a centralized software for management of the site devices.

Telecom site automation solutions generate alarm and telemetry data and provides access to the underlying power, security, and environmental sub-systems at a site. OPEX reducing cell site optimization examples include: automated HVAC control for energy savings, switching power sources between generators and batteries to extend site life during power outage, interfacing maintenance or fuel level data to OSS systems to automate work orders for service visits or during mass outages. A full list of applications can be found in the whitepaper, "Telecom Site Automation Applications Overview" at www.asentria.com.

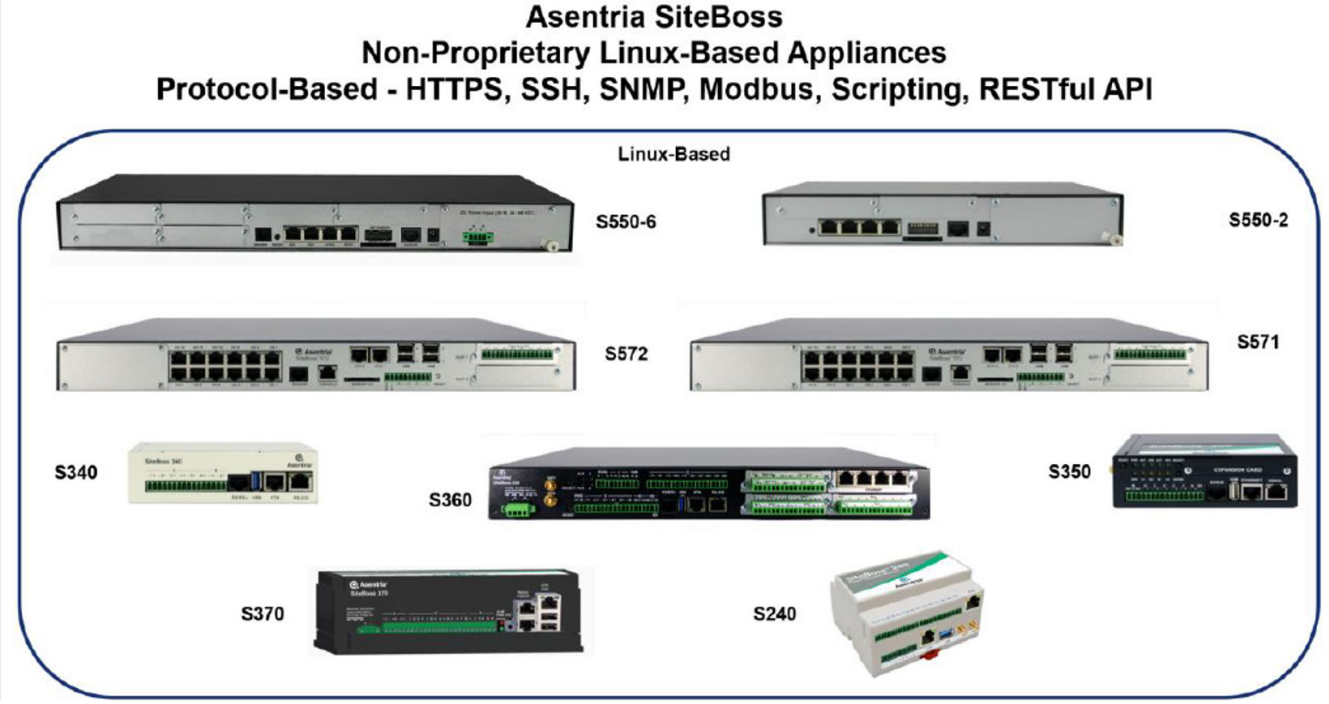
A complete telecom site automation solution includes an intelligent SiteBoss device at telecom sites, possibly the addition of sensors, cameras, or other peripheral equipment, a centralized software to manage the SiteBoss units, and some amount of integration, installation, or other services.

The diagram below is a basic model showing the hardware and software included in the solution.



Hardware Overview

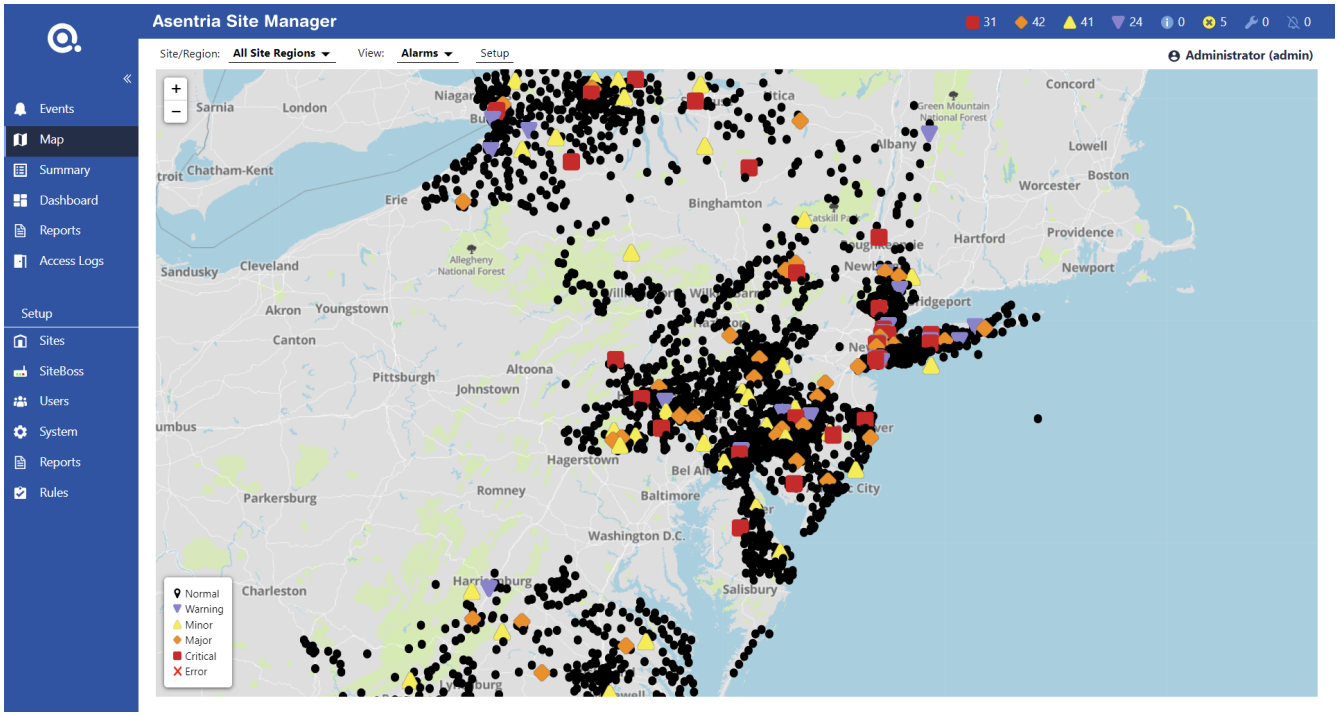
The heart of any Asentria telecom automation solution is a SiteBoss unit. These units are a tool that can be used to integrate almost any regularly found power, security, or environmental sub-system at a site. The firmware on a SiteBoss is very mature and includes all the features to create any needed solution. There are many different SiteBoss base units to fit different site types and needs.



There are also a wide range of interface cards for some of the larger SiteBoss units. Smaller SiteBoss units can have customized mixes of I/O to fit large projects.

Software Overview

Asentria Site Manager (ASM) software is a React/NodeJS based high-availability tool to manage larger numbers of SiteBoss devices. ASM can manage firmware and settings updates, user rights and access to remote SiteBoss units, manage remote connectivity to units, and consolidate data from sites. ASM, while leveraging REST API, can also manage northbound interfaces to other existing systems a telecom operator may wish to integrate with, as well as a wide range of specialized functions such as door access control.



Integration Overview

All larger telecom site automation projects are going to involve integration. It could be integration of new or existing sensors or equipment at a site to a SiteBoss unit, integration of SiteBoss units to ASM or some other Network Management Software (NMS), or integration from ASM to some other software systems. This integration is usually performed by what Asentria refers to as a Sales Engineer. The Sales Engineers are tasked with solving the issues outlined by customers during a proof-of-concept (POC) phase. Proof-of-concept is a critical step in any telecom site automation project and should be performed early in the process. Significant integration may occur during a POC at no charge, but specific further integration may be requested by customers.

Installation Services

Frequently a customer may wish for installation services of either site equipment, ASM, or both. Asentria can work with directly or with local partners to accomplish turn-key installation of our solutions.

Custom Manufacturing Services

It is common for kitting, cables, and specialized labeling or packaging to be a part of any project. There may be manufacturing services related to sourcing outside 3rd party products. It is also common to have shipping logistics and even warehousing. Asentria Manufacturing can provide services to handle these special needs

Custom Engineering Services

It is possible in some projects that new or altered versions of hardware, firmware, or software may be required. Asentria Engineering does all the design of our products, and is capable of altering existing hardware, or creating entirely new hardware, including even OEM equipment in some specialized cases.

Ongoing Support

Asentria provides ongoing support of our solutions. This could be in the form of simple technical support, or could even include ongoing network operation center (NOC) capabilities or specialized support services.

Trial Process

The best way to understand how our solutions work is by doing a trial. We would recommend trying to do a trial that includes as many functions as possible, so the customer can judge the usefulness of each monitored subsystem. It is common for us to have a customer contact us to manage a single variable like generator diesel fuel levels, but then find that we can cost-effectively manage a number of other issues as well. ATS control, generator alarming, as well as completely separate issues like security cameras or AC power metering.

It is often difficult for a customer to understand how these solutions work without just seeing a few sites in operation and learning from that. From Asentria's perspective, it is often difficult to propose a definite solution without first seeing what a customer's site looks like, and what equipment is located there. The best solutions are based on an initial trial, followed by optimizations of both cost and function.

Please contact Asentria Sales at sales@asentria. com to learn more about starting the trial process.

Conclusion

There are many different aspects to a telecom site automation solution. No single project would use all of the products listed above, but all solutions use at least some of these products. The process used to determine the best fit for a customer almost always involves a proof-of-concept. Asentria offers a wide range of equipment, software, and services, and a trial allows for collaboration between Asentria and a customer to arrive at a solution that is the best overall fit for a customer.

More information is available at our website, www.asentria.com

We look forward to working with you!

Asentria is a 30-year-old company based in Seattle, Washington, and has multiple hardware deployments of 10,000 or greater sites in the largest mobile network operators worldwide.

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