

AP-SNC2000

Smart Sensor Network Controller

High-performance Medium Scale Sensor Network Controller Solution



AddPac

AddPac Technology

2014, Sales and Marketing

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Product Overview

AP-SNC2000 Smart Sensor Network Controller

- Embedded H/W Platform with Dual CPU Module Slots
- Fault Tolerant and Reliability Service
- Support Multiple Smart Hub for Zigbee/Zwave sensors
- Support RTSP based Network Video Encoder (Video Codec, IP Camera, etc) Control
- Support RTP based Video Door Phone Control
- Mini Call Manager Function Support for Smart Phone, Tab/PAD registration
- Load Balance using RTSP Redirect Service
- Web Server Function for Smart Tab, Smart Phone Appl.

Product Highlights

AP-SNC2000 Smart Sensor Network Controller

Smart Sensor Network Controller Solution

Embedded H/W Platform for Stability & Low Power Consumption

High-End RISC based Computing Power

Multiple Smart Hub Control for Z sensors

RTSP based Network Video Camera Control

Firmware Upgradable Architecture

RTP based Video Door Phone Control

APOS™ Technology Multimedia Network Protocol

RTSP over TCP, UDP Support

IP based Network Protocol & Video/Voice Traffic QoS

Broadband IP Networking with 10/100/1000Mbps Gigabit Ethernet

Fault Tolerant Streaming Service Using Dual CPU Module

Benefits and Features

AP-SNC2000 Smart Sensor Network Controller

- Multiple Smart Hub Support for Zigbee/Zwave sensors
- RTP based Video Door Phone Support
- RTSP based Network Video Encoder Support
- TCP/UDP Transport Protocol Support
- Two(2) Module Slots for Embedded Sensor Control Service Module
- Fault Tolerant and High Reliability Service using Dual CPU Module
- Load Balance and Hot-Swap Service
- Compact Size and Low Power Consumption compare with Commercial Server
- IP based Network Protocol Support
- Smart Tab, Smart Phone Appl. Support for Sensor Control, Network Camera, Video Door Phones.
- Mini Call Manager Support for Standard SIP based Smart Phone Application Services

Hardware Specification

AP-SNC2000 Smart Sensor Network Controller

High-end
RISC

- High-end Programmable RISC Hardware Architecture
- Two(2) Module Slots for Redundancy and Load Balance
- Smart Sensor Network Control Module (AP-SNCM)
 - Network Interface
 - Two(2) 10/100/1000Mbps Gigabit Ethernet
 - One(1) Console Port



Hardware Specification

AP-SNC2000 Smart Sensor Network Controller

High-end
RISC

AP-SNC2000 Front View



Sensor Network Controller Module

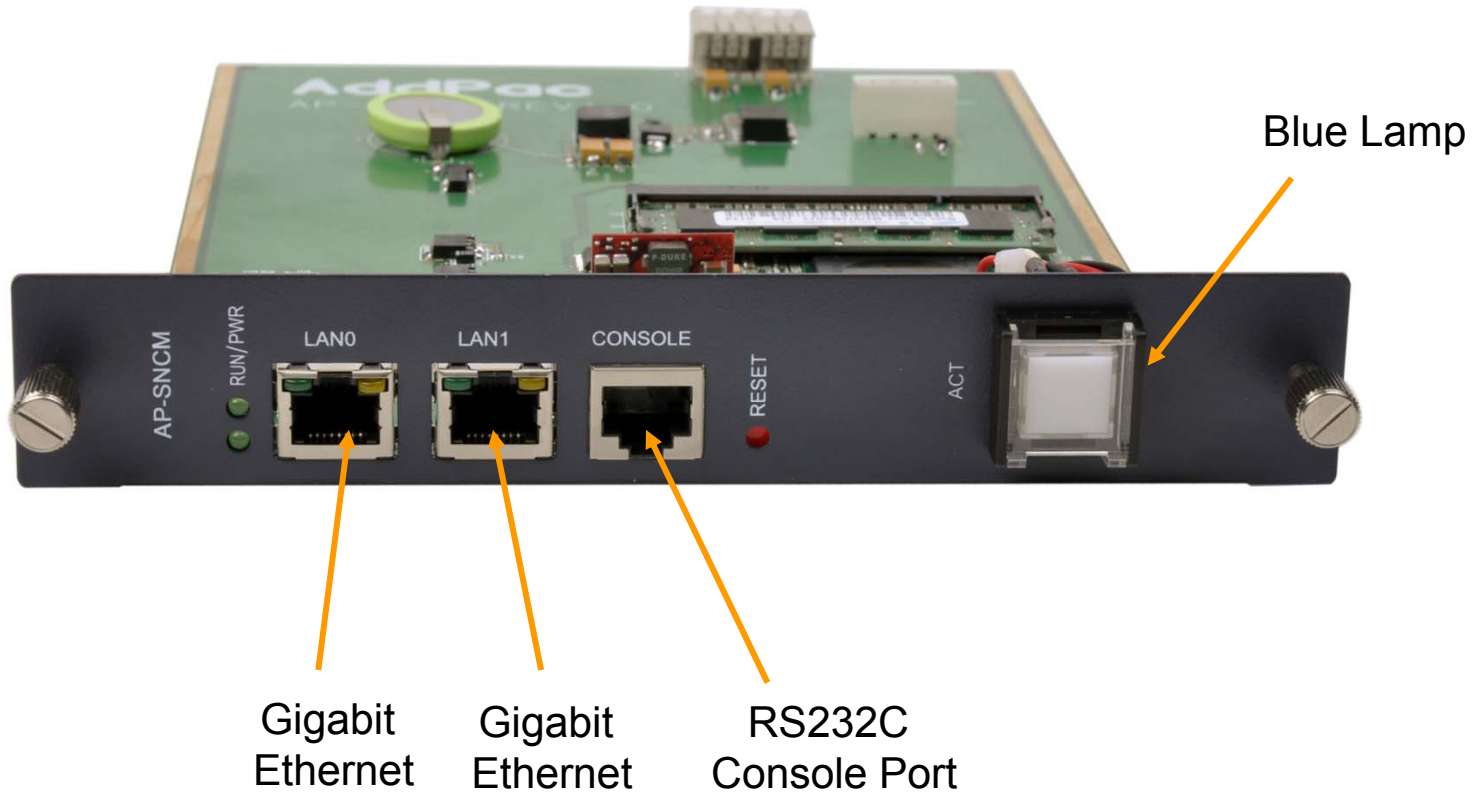


Hardware Specification

AP-SNC2000 Smart Sensor Network Controller



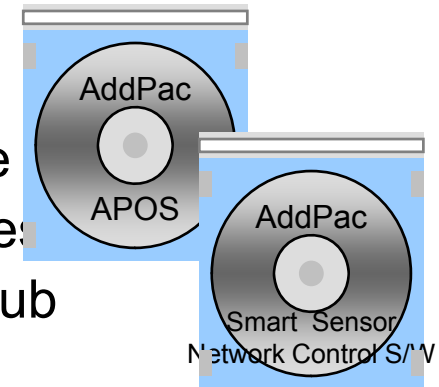
AP-SNCM Sensor Network Control Module



Software Service

AP-SNC2000 Smart Sensor Network Controller

- Built-in AddPac APOS Internetworking Software
 - Scalability, Functionality, and Stability Features
 - Video Traffic QoS Control
- Firmware Upgradeable RISC Computing Architecture
- Industry Standard IP based Network Protocol Features
- Sensor Network Control Service for Multiple Smart Hub
- RTP based Video Door Phone Interworking Service
- RTSP based Video Service for Network Encoder
 - Server and Client Architecture
- Smart Web Server for Tab, Smart Phone Appl.



Network Service and Features

AP-SNC2000 Smart Sensor Network Controller

- RTSP (Real Time Streaming Protocol)
 - TCP transport
 - [Session Description Protocol](#) (SDP)
- Load balance
 - 302 Moved Temporarily
 - REDIRECT method (**Optional, when the client support REDIRECT**)
- Video and Audio Support
 - Video Only
 - Audio Only
 - Video + Audio

Network Service and Features

AP-SNC2000 Smart Sensor Network Controller

- Network Managements
 - Standard SNMP Agent (MIB v2) Support
 - Remote Management using Console, Telnet
 - Web based Management using HTTP Server Interface
- Security Functions
 - Standard & Extended IP Access List
 - Enable/Disable for Specific Network Protocols
 - Multi-level User Account Management
 - Auto-disconnect for Telnet/Console Sessions
 - PPP User Authentication Supports (PAP & CHAP)
- Operation & Managements
 - System Performance Analysis for Process, CPU, Connection Interface
 - Debugging, System Auditing, and Diagnostics Support
 - System Booting and Auto-rebooting with Watchdog Feature
 - System Managements with Data Logging
 - IP Traffic Statistics with Accounting

Network Service and Features

AP-SNC2000 Smart Sensor Network Controller

- Other Scalability Features
 - DHCP Server & Relay Functions
 - Network Address Translation (NAT) Function
 - Port Address Translation (PAT) Function
 - Transparent Bridging (IEEE Standard) Function
 - Spanning Tree Bridging Protocol Support
 - Remote Bridging Support
 - Concurrent Routing and Bridging Support
 - Cisco Style Command Line Interface (CLI)
 - Network time Protocol (NTP) Support



IoT Service and Features

Key Concepts for Enterprise IoT Solution

AP-SNC2000 Smart Sensor Network Controller

- **Enterprise Requirements**

- The things in enterprise are controlled on much more complex environment and configurations than home.
- Network conditions and management requirements are also much more various than home.

- **Our Solution**

- We do support flexible configuration of Smart IoT Controllers and Managers to meet various enterprise requirements.
- We do support several type of Smart IoT Controllers and Managers to meet various enterprise environments.
- We do support flexible management authority and access control for center/site operators and users.

Hierarchical Administrative Domains

AP-SNC2000 Smart Sensor Network Controller

- **Super Administrator**
 - He can manage multiple sites and site operators.
- **Site Operator**
 - A site is logically independent administrative domain which can be a building or a set of offices and buildings.
 - A site operator can manage his site and group operators of it.
- **Group Operator**
 - A site is composed by multiple sections that are build up by hierarchical groups.
 - A group operator can view and control the sections that are belong to the group.
- **User**
 - An user can view and control his section.

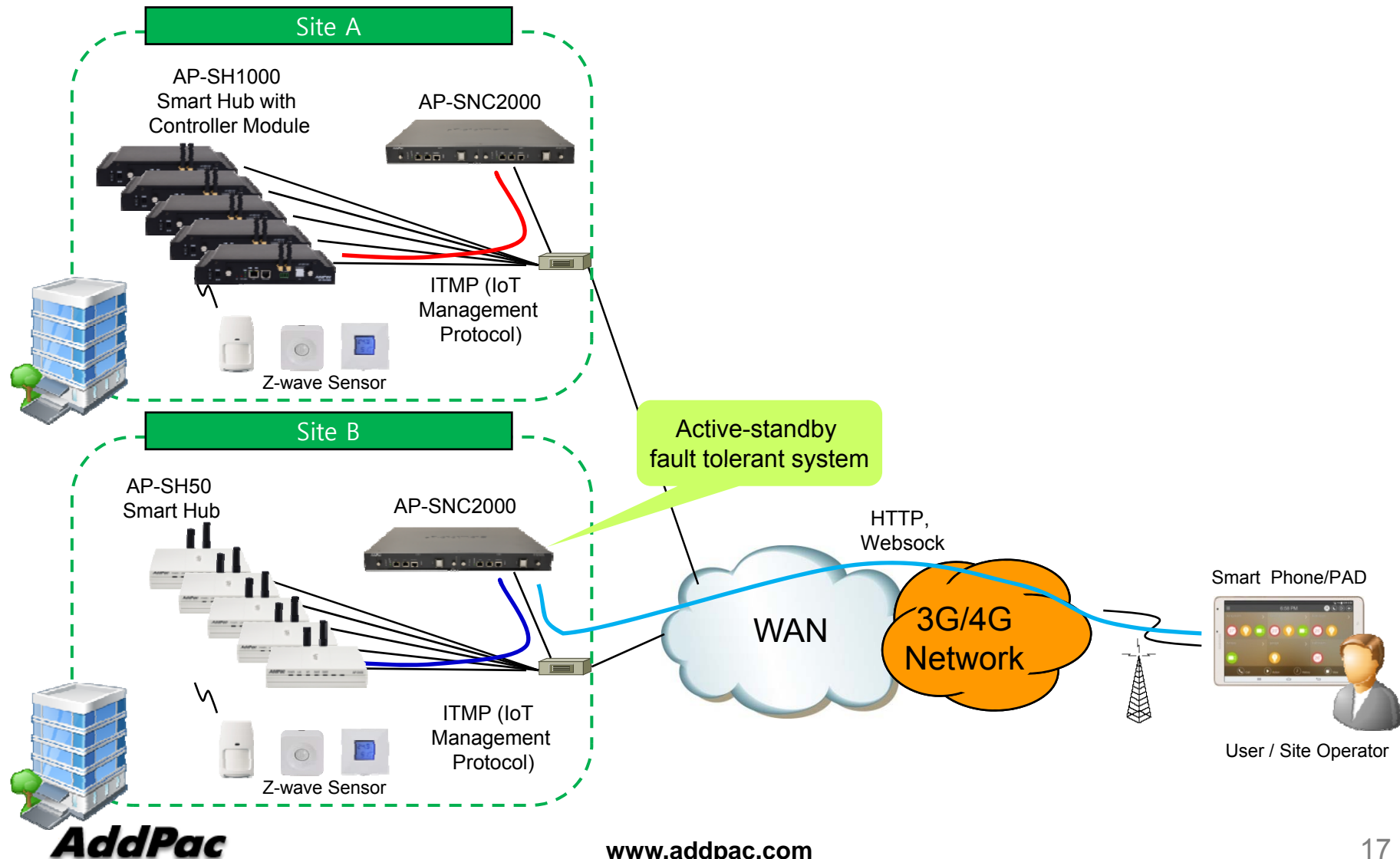
Single Site Standalone Model

AP-SNC2000 Smart Sensor Network Controller

- **Smart IoT Site Controller and Manager**
 - A Smart IoT Controller and Manager is located in a enterprise building with secure and robust connection to Smart Hubs in the site.
 - A **AP-SNC2000** system has ITMS-SS™ software modules with active-standby fault tolerant configuration.
 - **ITMS-SS™** is manager module for single site which manages multiple sections and heretical group of sections in a site.
- **Smart Hubs**
 - The Smart Hubs with / without built-in controller can be controlled and managed by ITMS-SS™.

Single Site Standalone Configuration

AP-SNC2000 Smart Sensor Network Controller



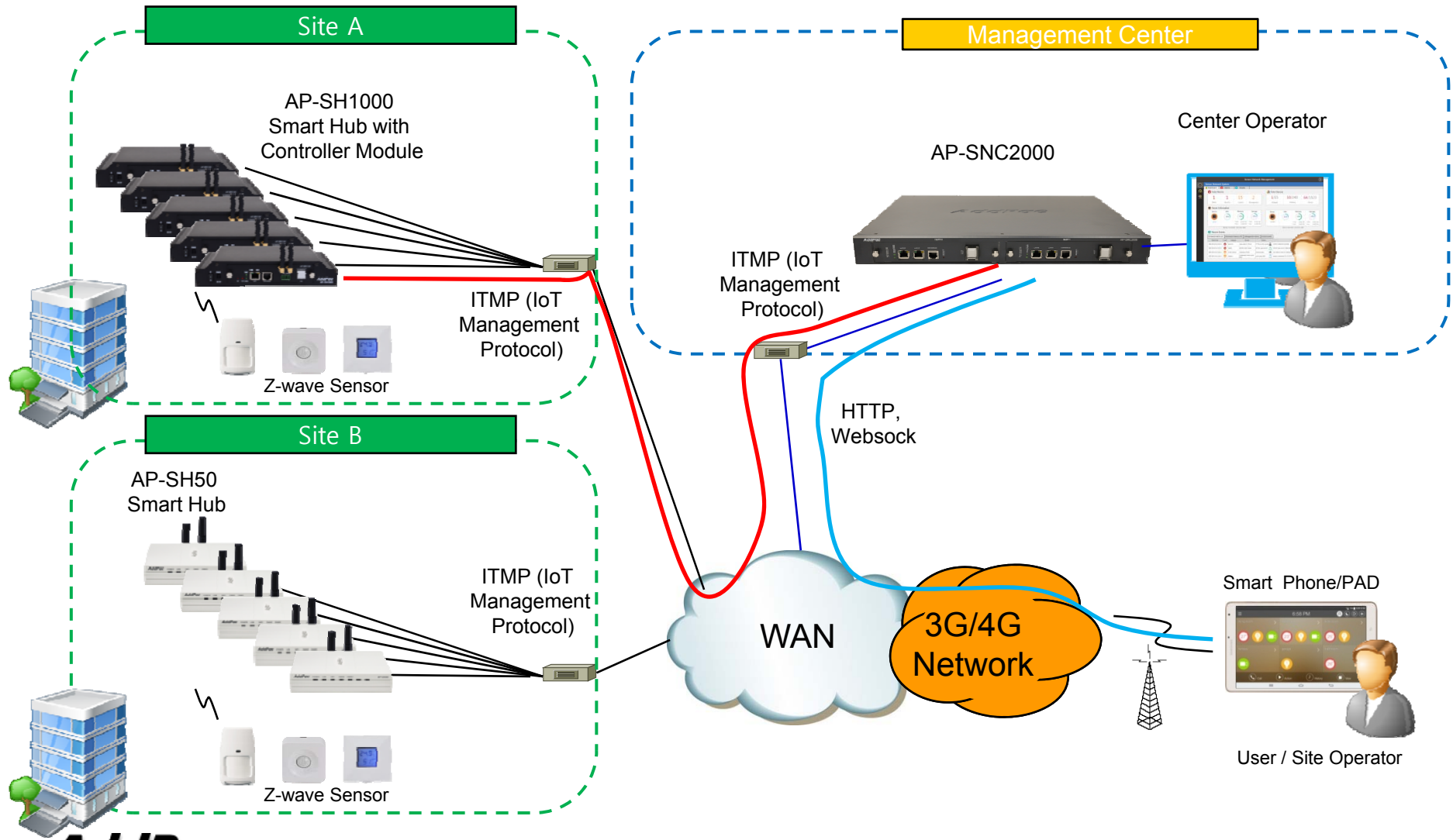
Multi Sites with Center Manager Model

AP-SNC2000 Smart Sensor Network Controller

- **Smart IoT Center Controller and Manager**
 - A management center has a AP-SNC2000 with **ITCS-MS™**, **ITMS-MS™** software modules with active-standby fault tolerant configuration.
 - **ITMS-MS™** is manager module for multiple sites which manages multiple sections and heretical group of sections in multiple sites.
- **Smart Hubs**
 - The Smart Hubs with / without built-in controller can be controlled and managed by **ITMS-MS™** in a center.

Multi Sites with Center Manager Configuration

AP-SNC2000 Smart Sensor Network Controller



Smart IoT Manager ITMS

AP-SNC2000 Smart Sensor Network Controller

- ITMS™ is software module to manage set of Smart Hubs and controllers.
- ITMS-SS™ can manage single site and ITMS-MS™ can manage multiple sites.
- It manages super administrator, site operator, group operator.
- It manages sites, groups, sections.
- It monitors alarms, events and logs.
- It monitors servers and devices in the site.
- It provides dashboard of site, group, and section.
- It provides provisioning, upgrade, replace of Smart Hubs.

Video Call and Streaming with IoT

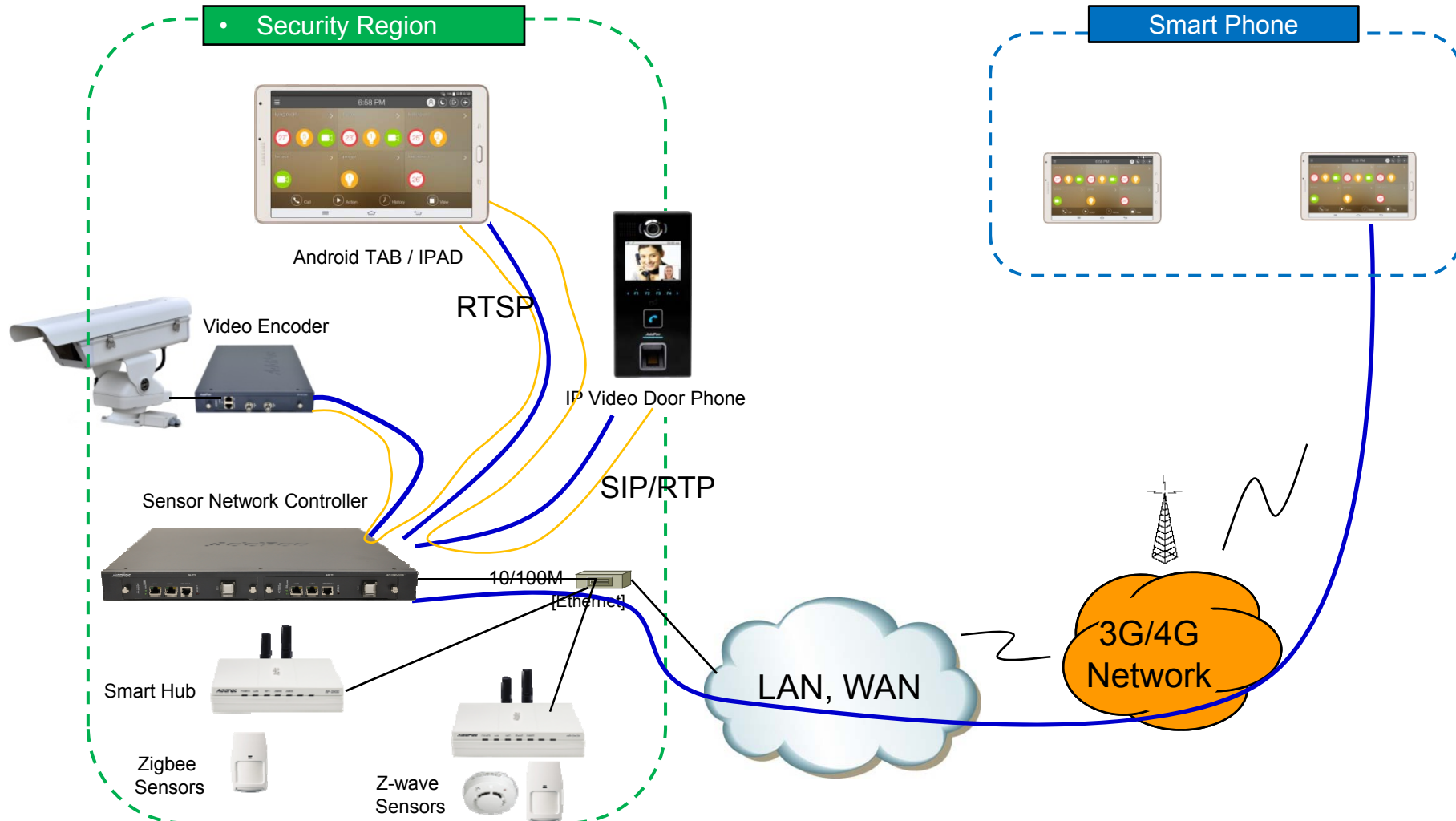
AP-SNC2000 Smart Sensor Network Controller

- **Video Call Control**
 - It supports SIP based Call Control
 - It handles call between Door Phone and Smart Phone App.
 - It handles call between Video Wall Pad and Smart Phone App.
 - It handles call between Video Wall Pad and Door Phone.
 - It handles call between Video Wall Pads.
 - It handles call between Smart Phone Apps.
- **IP Camera Streaming**
 - It supports RTSP based Video Streaming.
 - It handles video streaming between IP Camera and Video Wall Pad.
 - It handles video streaming between IP Camera and Smart Phone App.

Application

- **Standard Application**
 - Multiple Smart Sensor Hub Controller
- **Supplementary Application**
 - Multiple Smart Sensor Hub Controller
 - Mini SIP Call Manager (IP Video Door Phone Handling)
 - RTSP Video Streaming Server (Relay Server, Client, Server)

Application Network Diagram



Ordering Information

- **AP-SNC2000 Smart Sensor Network Controller Platform**
 - Embedded H/W Platform
 - Programmable RISC Architecture
 - Two(2) Module Slots for AP-SNCM
- **AP-SNCM : Smart Network Control Module**
- **Built-in APOS Internetworking Software for AP-SNC2000**
- **Including 1 Year Hardware Warranty**
- **Product Documents**
 - Install and Operation Guide (PDF)
- **Pricing**
 - AddPac Technology Regional Sales Manager
 - Authorized Sales and Marketing Representatives
 - Please Contact www.addpac.com



Thank you!

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