

# AP-SNC2000

## Smart Sensor Network Controller

High-performance Medium Scale Sensor Network Controller Solution



# **AddPac**

**AddPac Technology**

Sales and Marketing

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# Contents

- Product Overview
- Benefits and Features
- Hardware Specification
- Software Service
- Network Service and Features
- IoT Service and Features
- Application
- Ordering Information

# 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

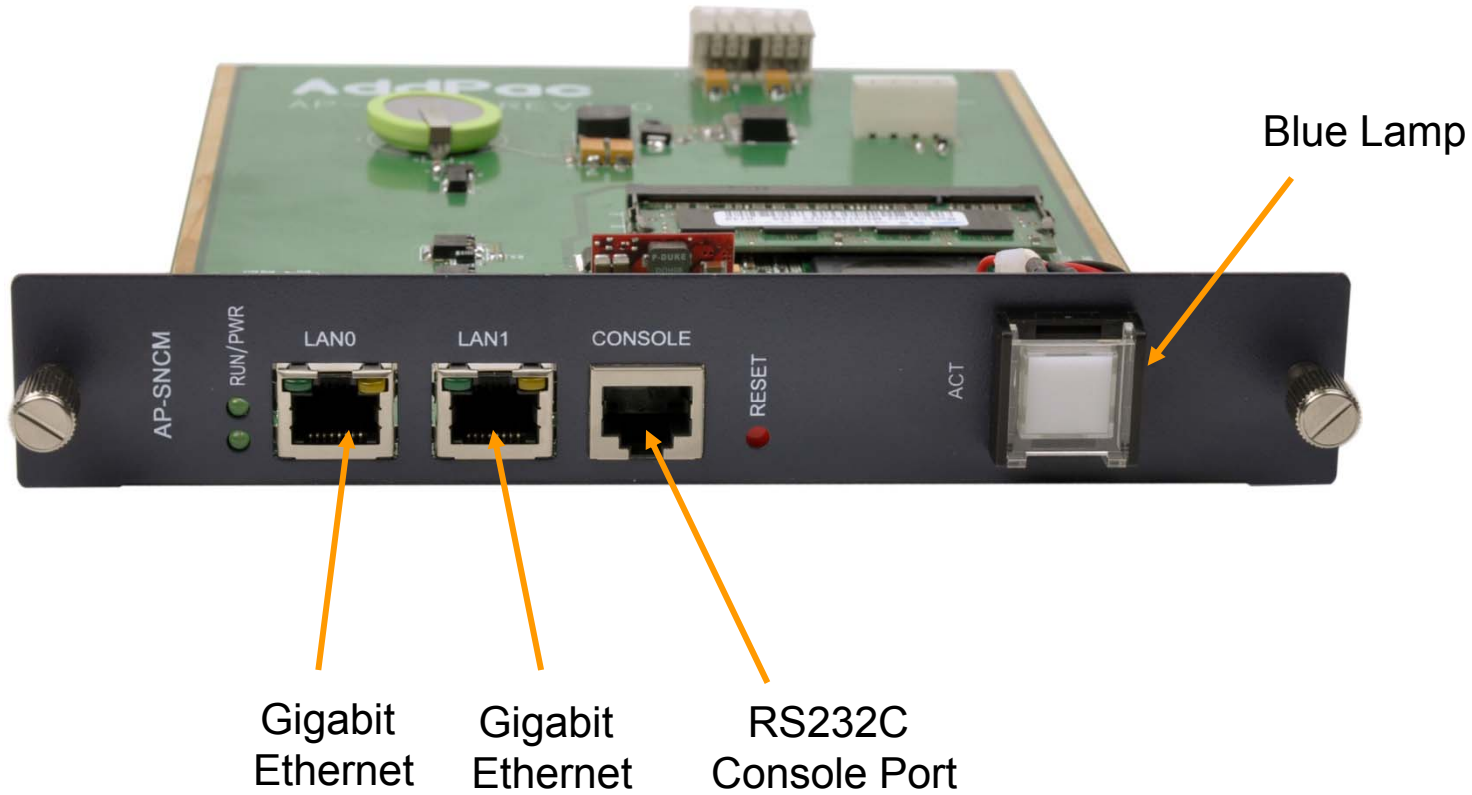


# Hardware Specification

AP-SNC2000 Smart Sensor Network Controller



## AP-SNCM Sensor Network Control Module

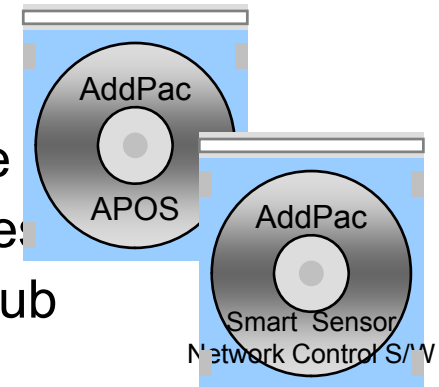




# Software Service

## 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

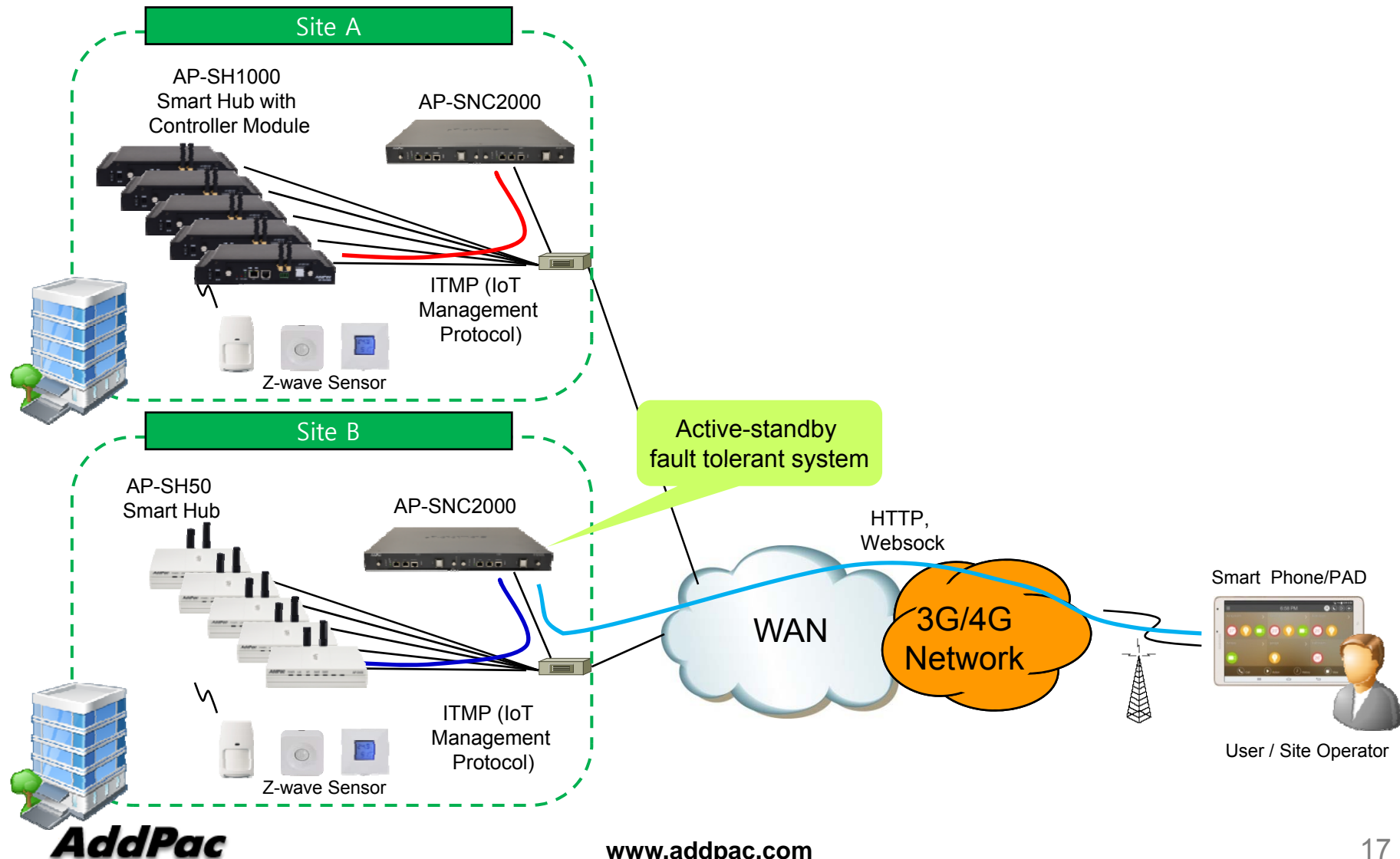
AP-SNC2000 Smart Sensor Network Controller

- **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



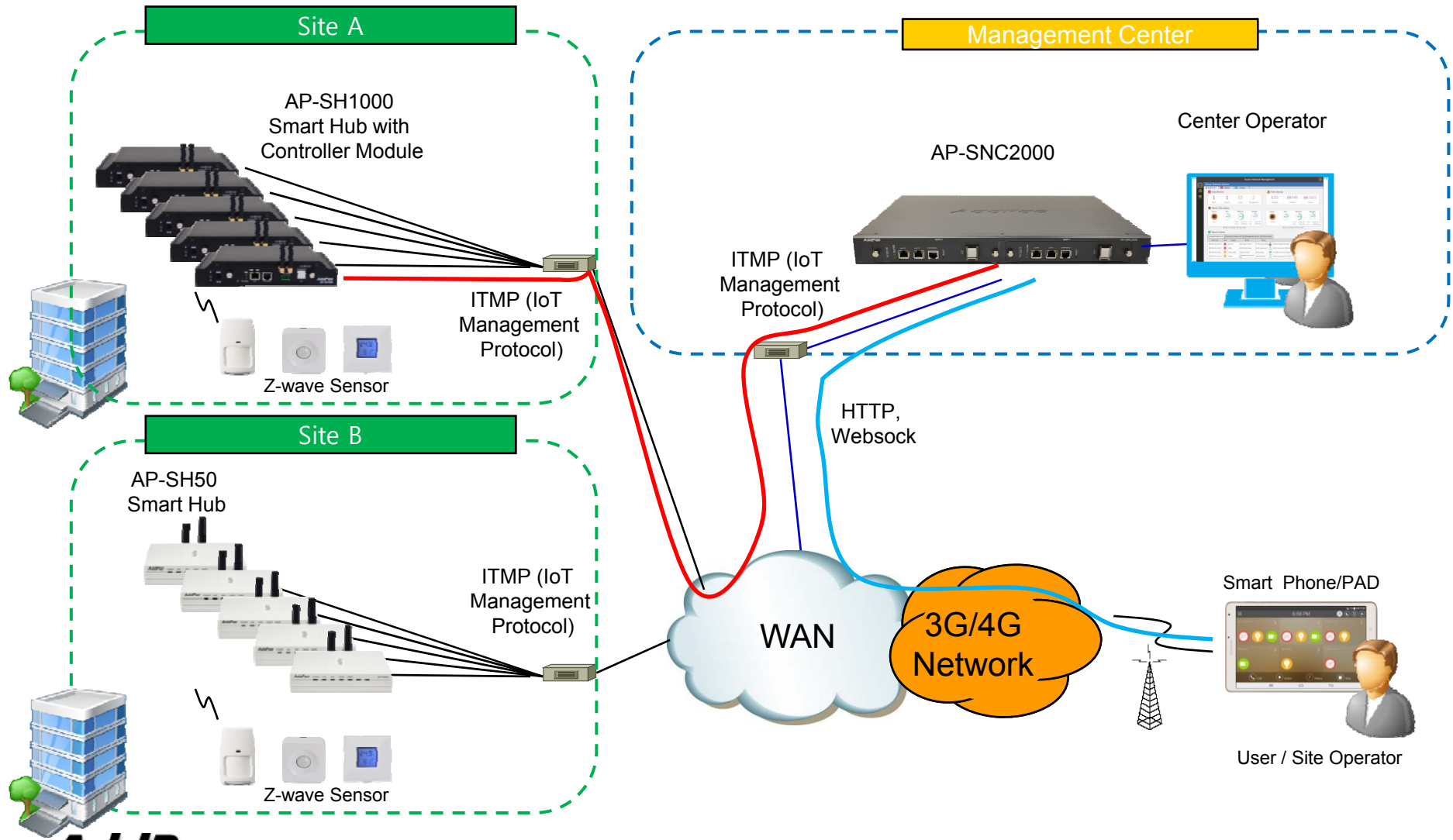
# Multi Sites with Center Manager Model

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

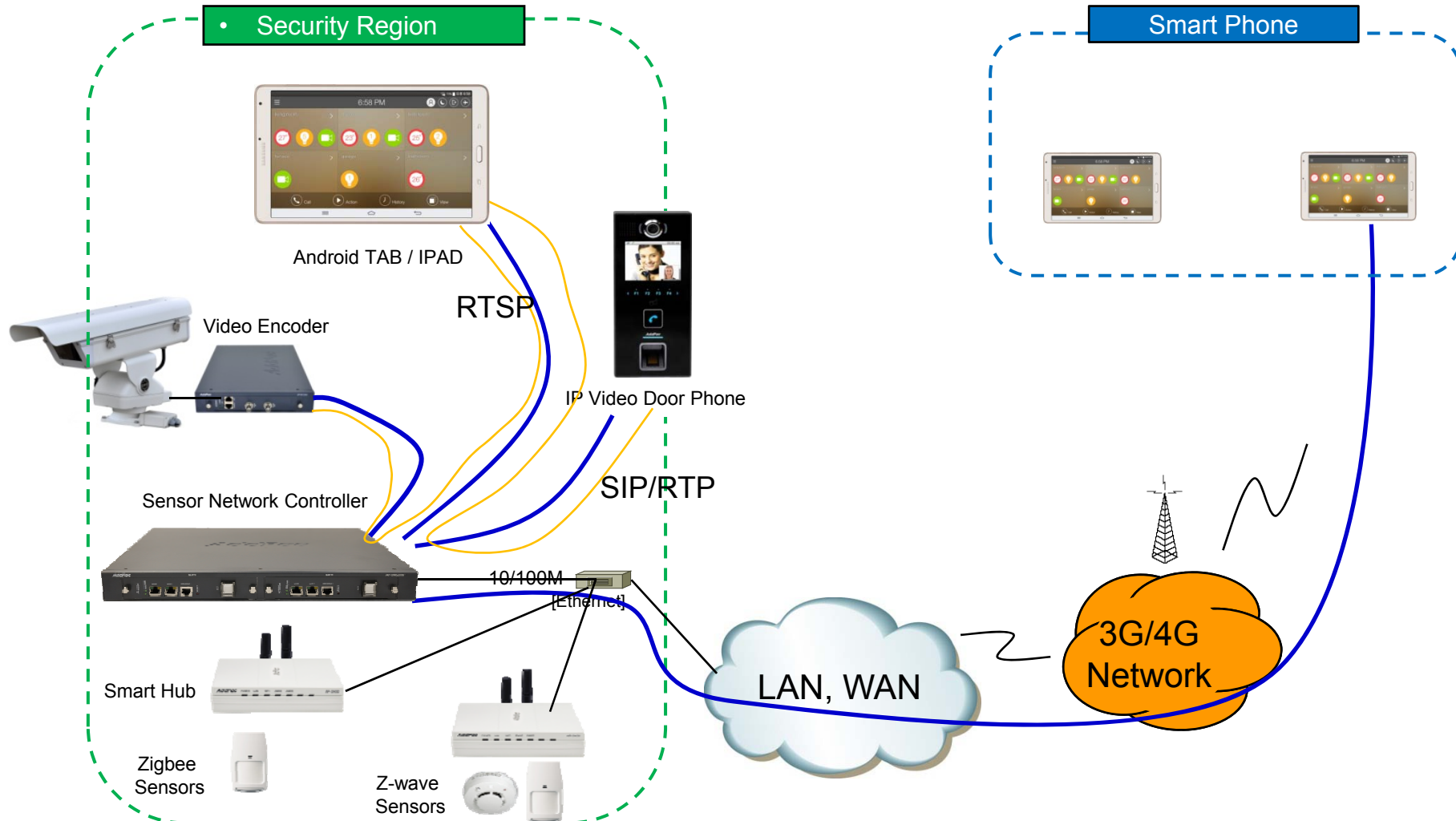
AP-SNC2000 Smart Sensor Network Controller

- **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](http://www.addpac.com)





# Thank you!

**AddPac Technology Co., Ltd.**  
Sales and Marketing

Phone +82.2.568.3848 (KOREA)

FAX +82.2.568.3847 (KOREA)

E-mail [sales@addpac.com](mailto:sales@addpac.com)