

AV3000

HD Video Codec Module

High-performance/High Quality NVR Solution

High Quality Satellite based Video Monitoring Service



AddPac

AddPac Technology

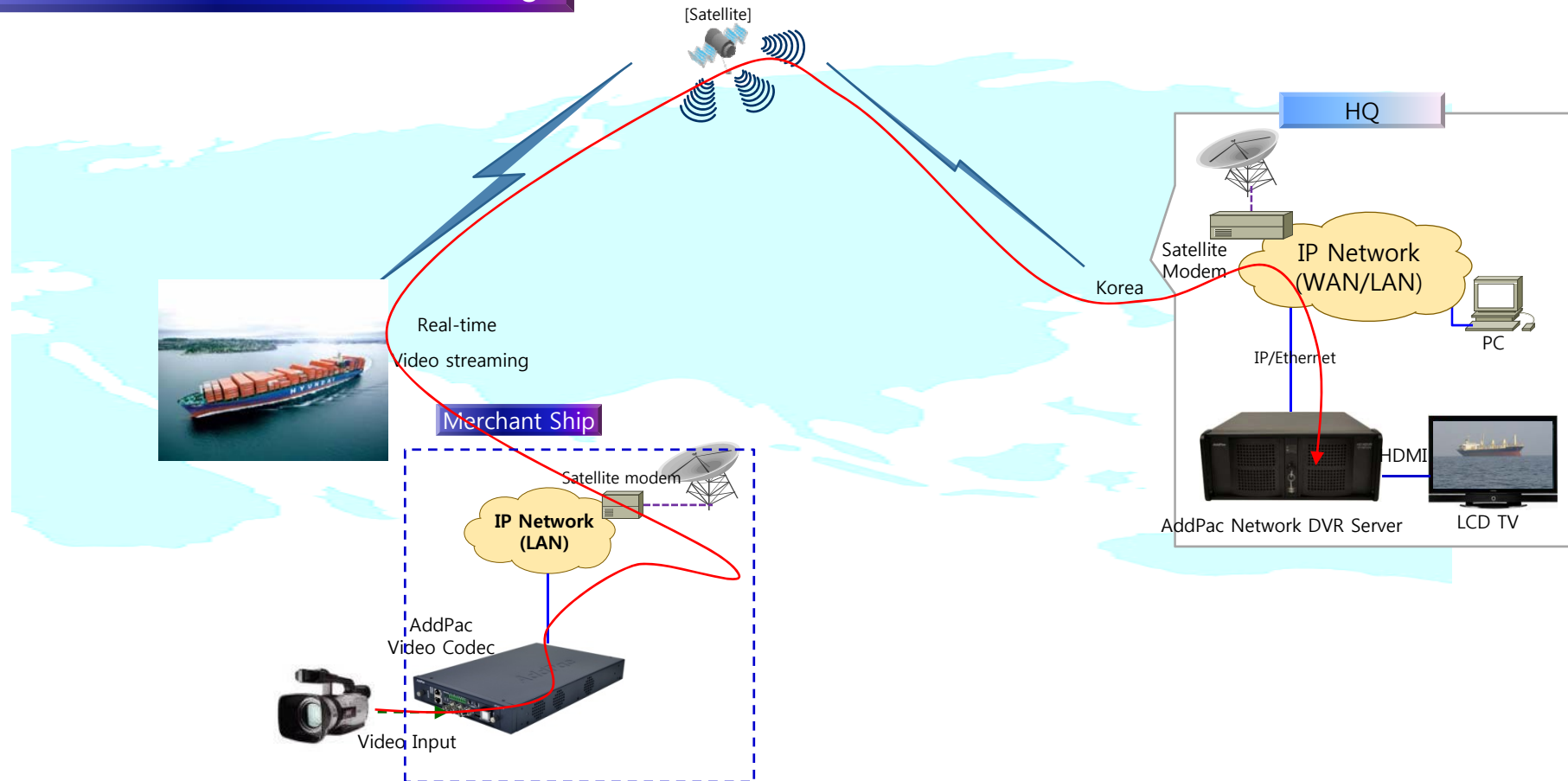
Sales and Marketing

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Satellite based Video Monitoring Service

Satellite based Video Monitoring



Satellite Video Service Requirement

AV3000 Video Codec Module

- Satellite Network Traffic Characteristic
 - Low Bandwidth
 - High Jitter Variation
 - High Delay
 - High Packet Loss
- Proposed AddPac AV3000 Video Codec Solution
 - High/reasonable Video Quality at Low bandwidth (384K, 256K, etc)
 - Ultimate High-end H.264 Video Codec (High Profile)
 - Use embedded DSP technology to reduce internal video encoding processing delay
 - For high video quality, support the HD-SDI/SDI digital interface in addition to analog video interface.
 - Video Downscaling Support (HD→ CIF, D1-→CIF)
 - Transmission Control Service Function for QoS

Product Overview

AV3000 Video Codec Module

- Up to HD (720P) Video Encoding/Decoding Service Features
- Video Codec : H.264 HP/MP/BP
- Video Input Interface : HDMI, HD-SDI, Analog (NTSC, PAL)
- Video Output Interface : HDMI, HD-SDI, Analog (NTSC, PAL)
- RTSP/RTP, TCP/UDP Protocol Support
- IP based HD Video Transmission Solution
- High-performance Video, Audio, and Voice Service
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Web based Management Service
- AP-NC2000, AP-NC3000, AP-NC3500, AP-NC5000 Platform Available

Hardware Specification

AV3000 Video Codec Module

RISC
CPU

High-End
VP

- **RISC + Video Processor Computing Power**
- **AV3000 Video Module**
 - **Network Interface**
 - One(1) 10/100/1000Mbps Gigabit Ethernet
 - **Video Interface**
 - One(1) Channel HD-SDI Input
 - One(1) Channel HDMI Input
 - One(1) Channel CVBS Input or Output (selected by DIP Switch)
 - One(1) Channel HD-SDI Output
 - One(1) Channel HDMI Output
 - **One(1) RS-232 Console Interface (RJ45)**
 - **Camera Control Interface**
 - One(1) RS-232C, RS485 Interface
 - **I/O Interface**
 - Two(2) Alarm Input /One(1) Relay Out

Hardware Specification

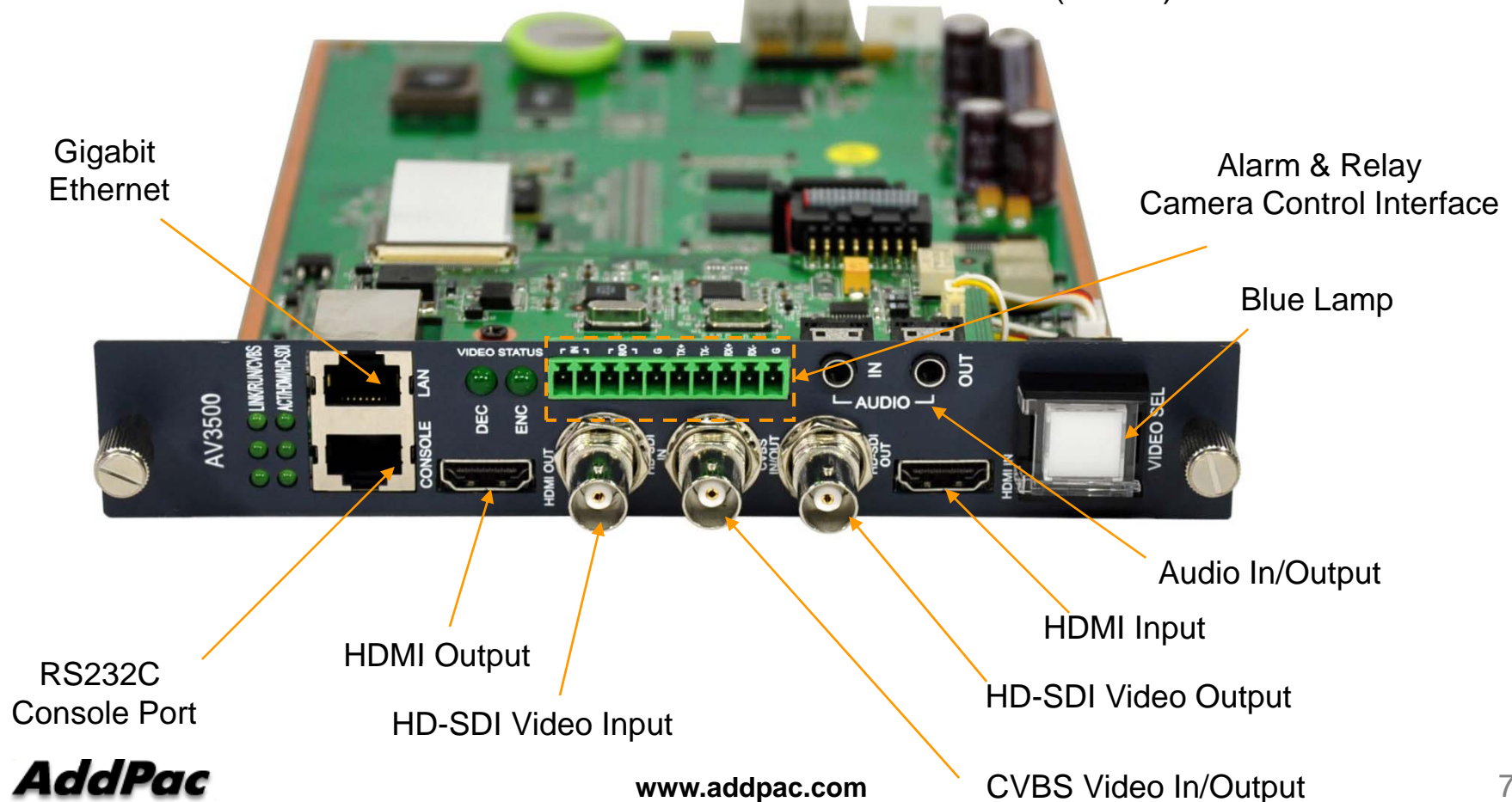
AV3000 Video Codec Module

RISC
CPU

High-End
VP

Hardware Module Specification

AV3000 HD Video Encoder/Decoder Module(H.264)



AV3000 Technical Specification

AV3000 Video Codec Module

RISC
CPU

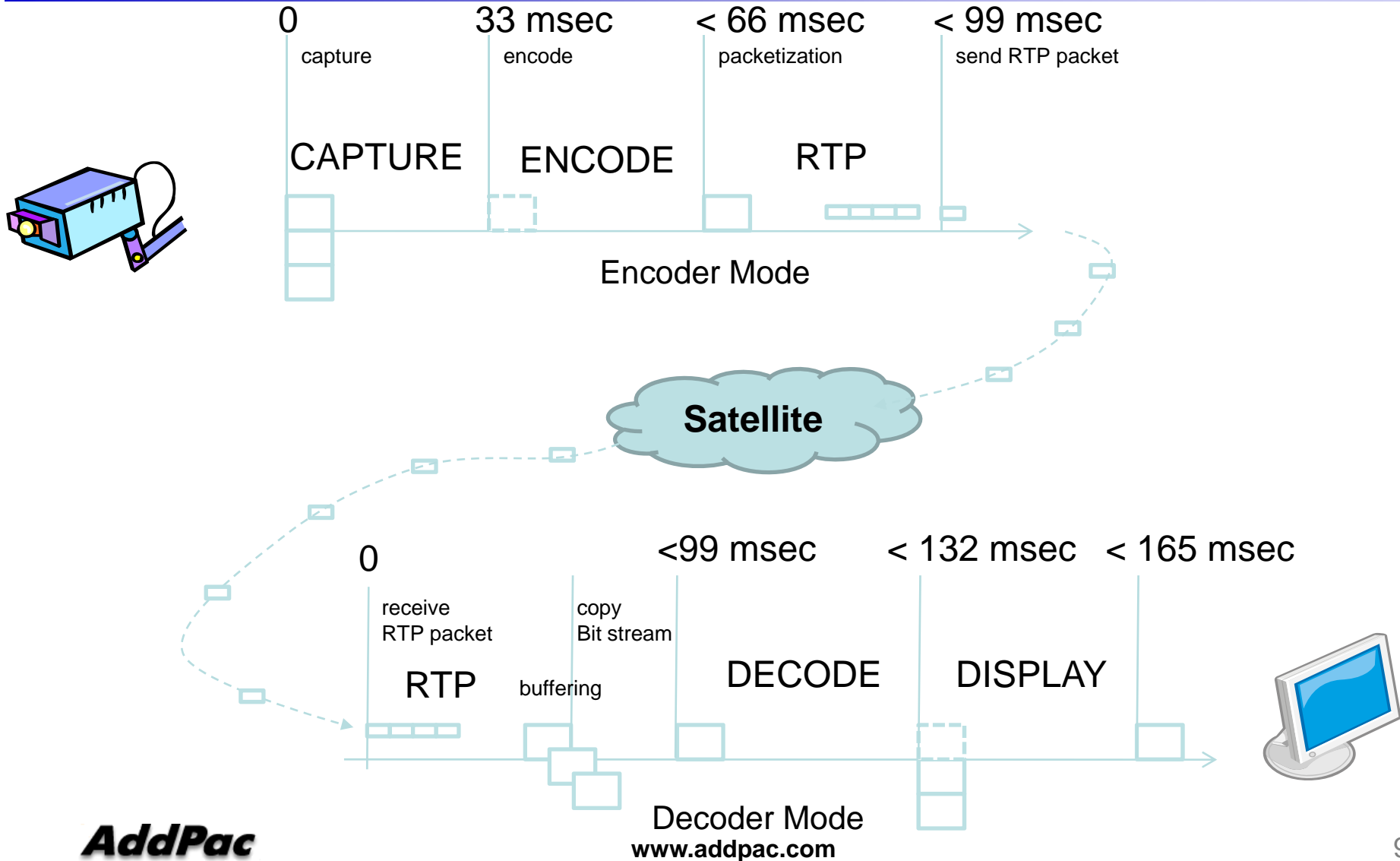
High-End
VP

AV3000 Specification

Video	Input	HD-SDI, HDMI, Analog CVS
	Output	HD-SDI, HDMI, Analog CVS
	Format	720P, D1, CIF
	Coding	H.264 (HP/MP/BP)
Audio	Coding	AAC-LC, G.711, G.726, etc
Network Interface		1 x 10/100/1000Mbps Gigabit Ethernet, 1 x RS232 Interface for Console
Protocol		RTSP (TCP, UDP), RTP

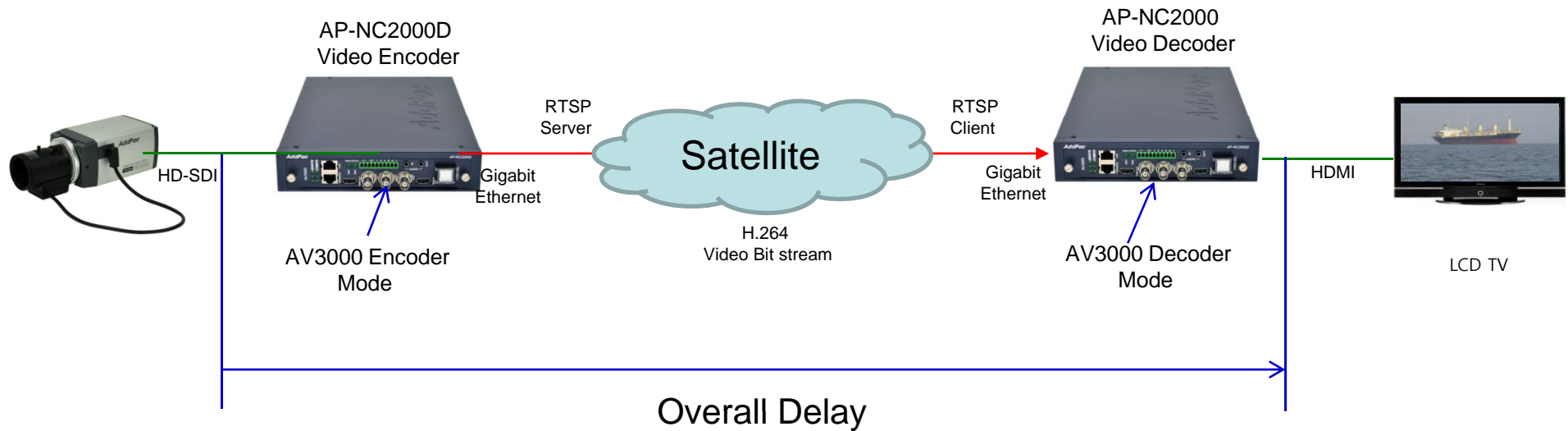
AV3000 IP Video Codec Latency

AV3000 Video Codec Module



AV3000 IP Video Codec Latency





AV3000 Video Codec Module



$$\text{Overall Delay} = < 165\text{msec} + \text{Satellite Delay} + \text{RTP Rx Buffering Delay}$$

Hardware Platform for AV3000

AV3000 Video Codec Module

	AP-NC2000	AP-NC3000	AP-NC3500	AP-NC5000
Model				
Module Slot	1 Module Slot	2 Module Slot	4 Module Slots	10 Module Slots
Power Supply	Internal Power Module(AC)	Internal Power Module (AC)	Internal Power Module (AC)	Internal Power Module (AC)
Power Type	Built-In	Built-In	Built-In	Module Type

Hardware Platform for AV3000 (Example)

AV3000 Video Codec Module

AP-NC2000 Front View



AV3000 Video Module

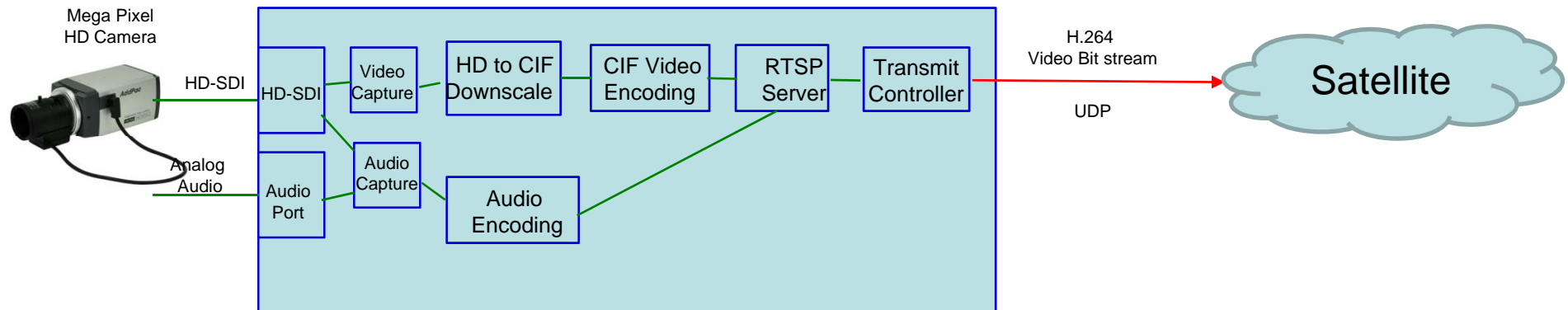


AC Power Input

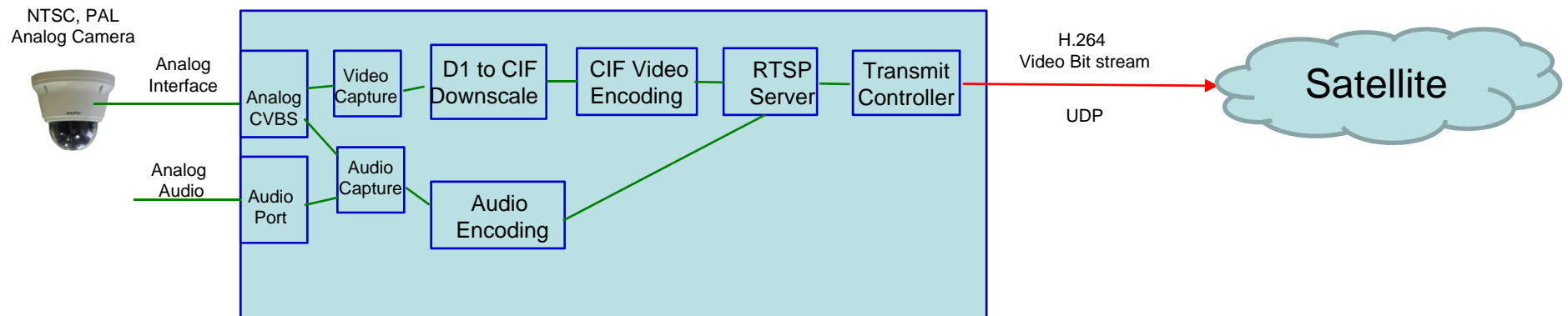
Power On/Off Switch

AV3000 Video Encoding Path

HD-SDI based Video Camera Source

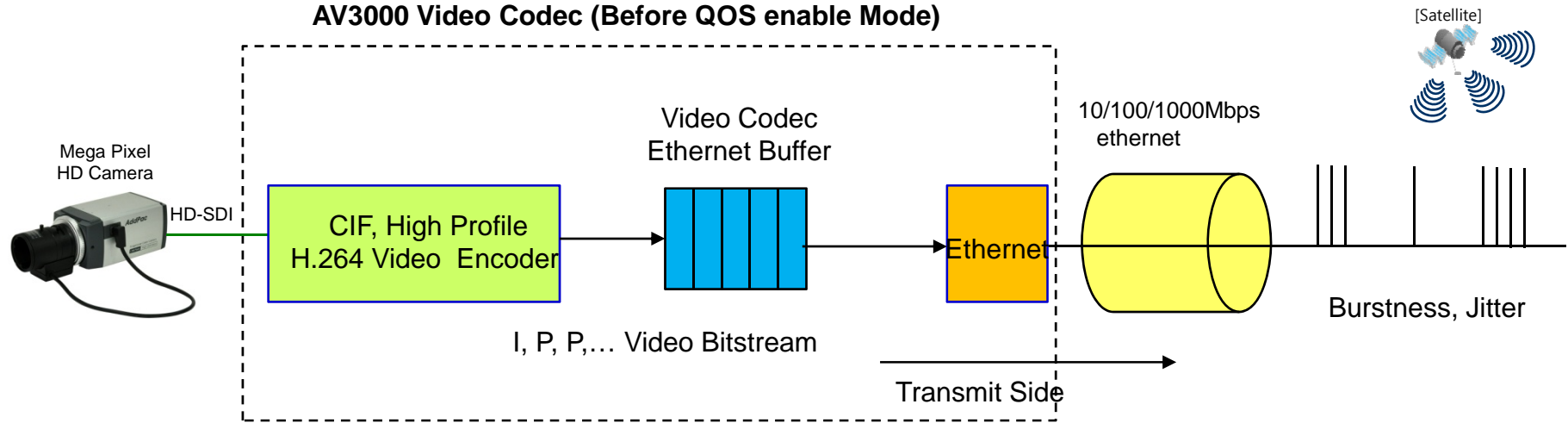


Analog(NTSC,PAL) based Video Camera Source

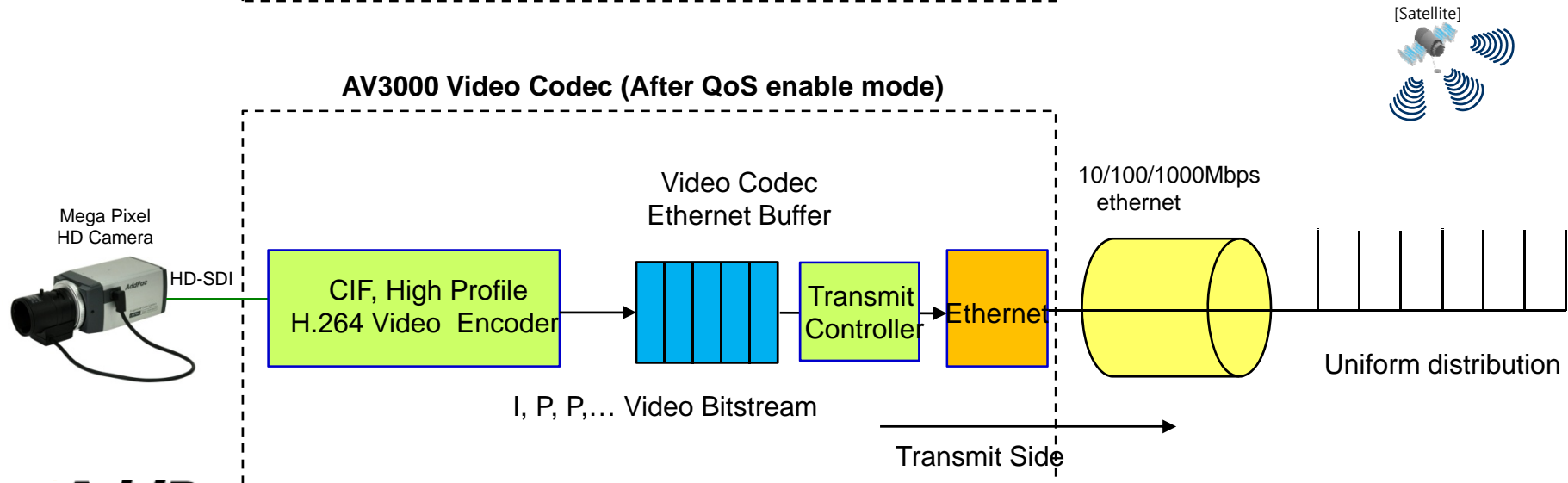


AV3000 Transmit Controller Scheme for QoS

AV3000 Video Codec (Before QoS enable Mode)



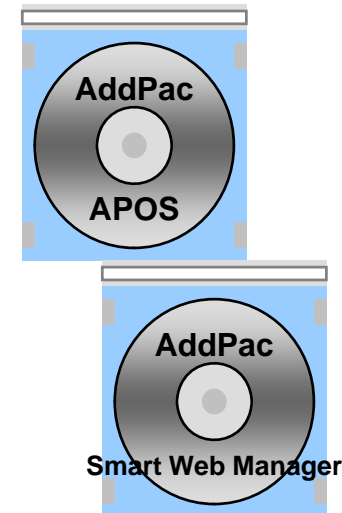
AV3000 Video Codec (After QoS enable mode)



Software Service

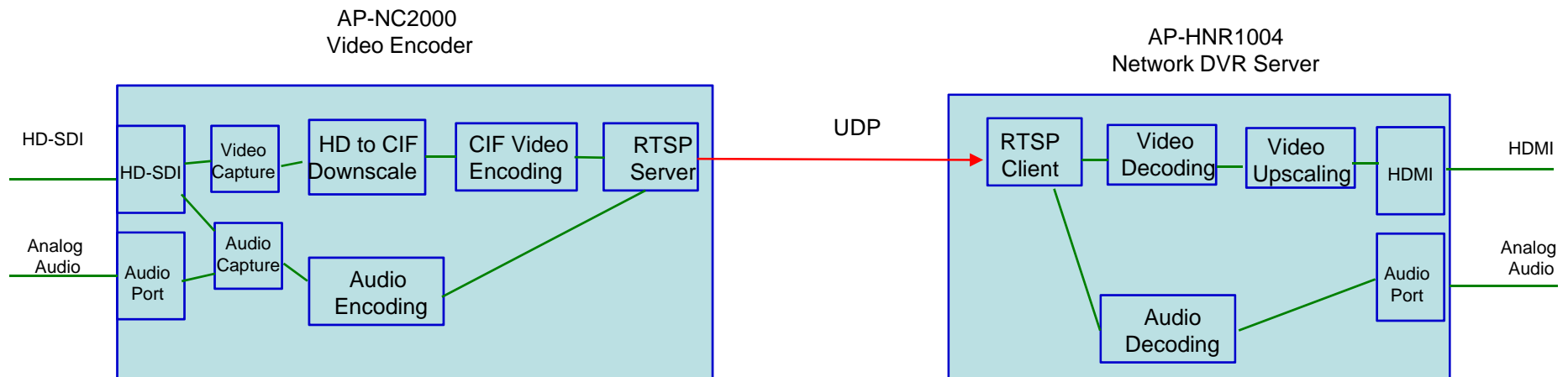
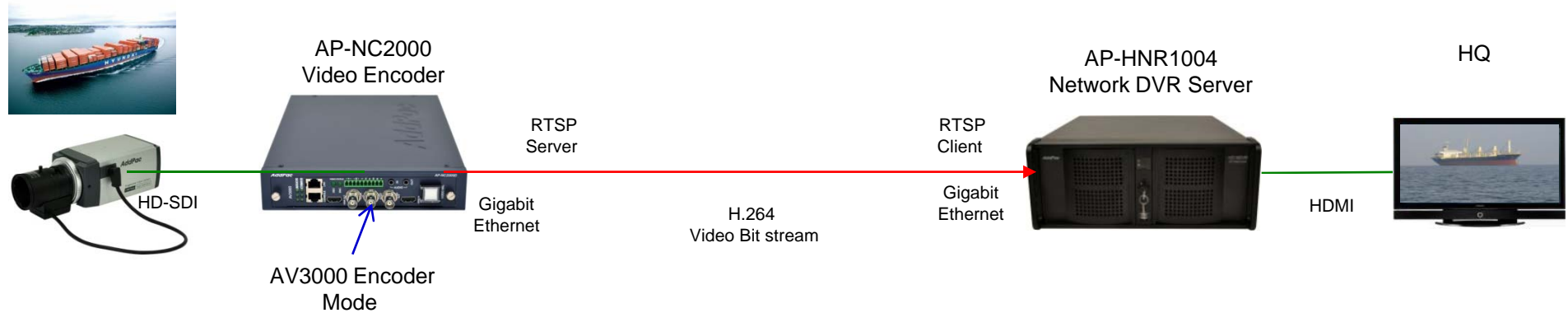
AV3000 Video Codec Module

- **Built-in AddPac APOS Internetworking Software**
 - Scalability, Functionality, and Stability Features
 - Full HD Video Encoding/Decoding Service Features
 - Video Upscale and Downscaling Service
- **Firmware Upgradeable Architecture**
- **Industry Standard Network Protocol Features**
- **Highly User Friendly Management Features**
 - Smart Web Management
 - Telnet or RS-232C based Command Line Interface



RTSP Service Network Diagram

AV3000 Video Codec Module



RTSP Service Features

AV3000 Video Codec Module

- AV3000 Video Encoder Mode
 - RTSP Server Mode
 - Multi-Channel RTSP Server Mode
 - RTSP, TCP Protocol Support for Error Robust Service
- AV3000 Video Decoder Mode
 - RTSP Client Mode
 - RTSP/TCP or RTSP/UDP Mode Support

Network Service and Features

AV3000 Video Codec Module

Basic Network Protocols

- ARP, IPv4, TCP, UDP, ICMP, SCTP, IGMP, MLD

Routing Protocol

- IPv4 : Static

Service Protocol

- FTP, Telnet, TFTP, DHCP Server/Relay, SNMP Server
- CDP (Cisco Discovery Protocol)
- DNS Resolver , DDNS(nsupdate)
- Bridge
- Syslog

IPv4 Address Configuration

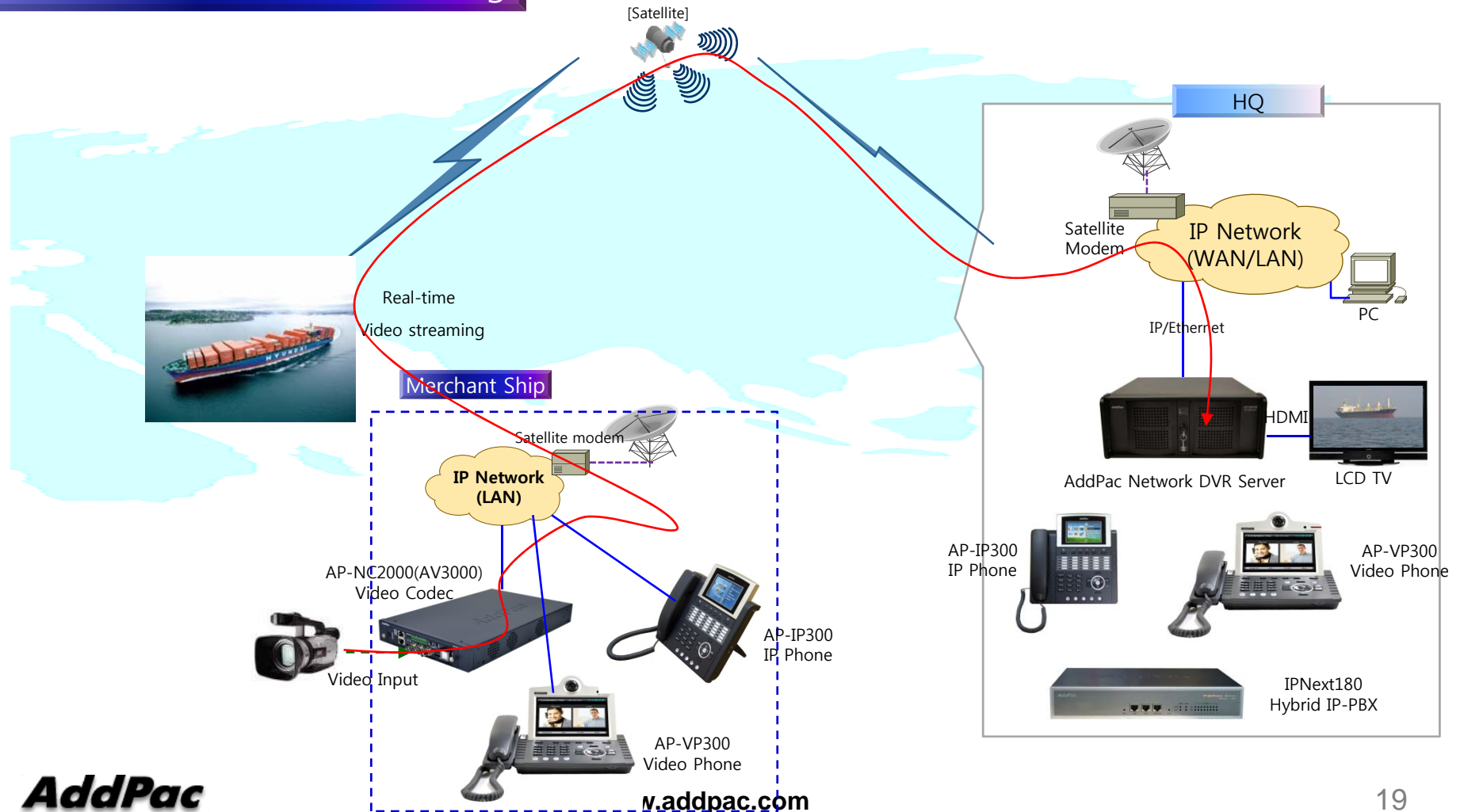
- Fixed (Static)
- DHCP
- PPPoE

Miscellaneous

- Standard & Extended IPv4 Access List
- Multi-level User Account Management
- IP accounting

Application

Satellite based Video Monitoring



Ordering Information

- AV3000 Video Codec Module
 - Main Chassis (Option) : AP-NC2000, AP-NC3000, AP-NC3500, AP-NC5000
 - AP3000 Video Codec Module
 - Including Network Cable Set & Power Supply Cable, etc
- Built-in APOS Internetworking Software for AV3000 Module
- 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!

AddPac Technology Co., Ltd.
Sales and Marketing

Phone +82.2.568.3848 (KOREA)

FAX +82.2.568.3847 (KOREA)

E-mail sales@addpac.com