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# New Applications for Efficient Digital Signage Management

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**iBASE**

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Although estimates vary, it's clear that the reach of digital signage continues to grow. Research firm Markets and Markets estimates the digital signage market will reach $27.34 billion by 2022, growing by an average 6.7 percent a year from $16.88 billion in 2016.

Rising demand for emerging technologies including LED, ultra-high-definition (Ultra HD), interactive touch screens and the Internet of Things are expected to drive much of that growth.

Other projections are more modest, with Global Market Insights projecting the market to reach $23.02 billion by 2023, up from $15 billion in 2015. No matter who is correct, though, it's clear that deployers are spending cast sums of money on digital signage networks. And as that spending grows, protecting that investment becomes increasingly important.
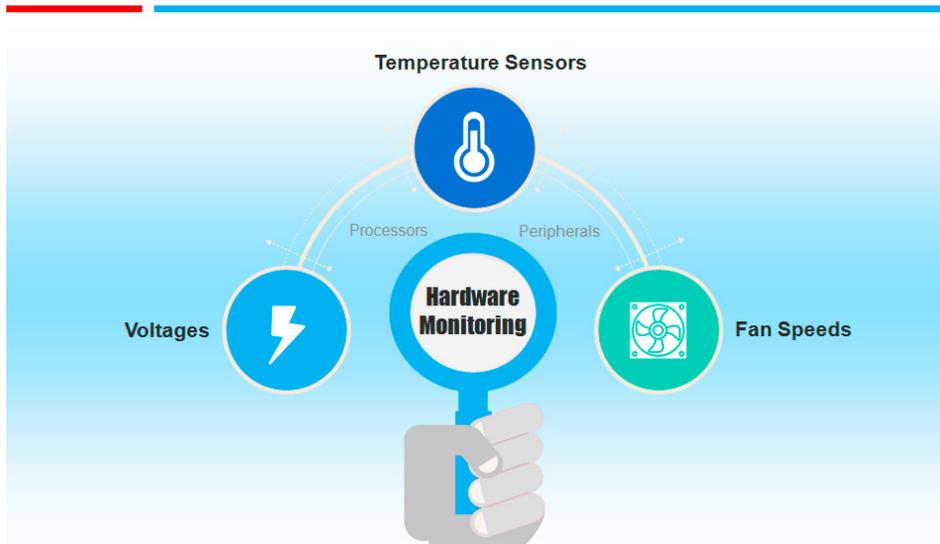
Of course, every digital signage network requires electricity to operate. One of the largest ongoing costs associated with operating a digital signage network is the electricity required to drive that network. And while electricity costs have remained fairly stable over the past few years, that's not going to last. The Energy Information Administration expects electricity prices to increase by about 3 percent in 2017 after holding steady in 2015 and 2016.

The ability to manage the cost of powering a digital signage network can spell the difference between an effective communication tool and one that eats into the bottom line.

## IBASE Observer

One of the tools available today to help manage the cost of operating a digital signage network is IBASE Observer, a unique technology developed by IBASE Technology Inc. IBASE Observer supports the network version of Windows/Linux based utility "Observer", Observer Utility is a hardware monitoring utility capable of monitoring the temperature sensors, voltages, fan speeds, monitoring the list of dependents subject to a hardware system. Once there is a change in any state of the hardware system, for example the actual temperature of the processor exceeding the limit you set, the utility keeps a log of the change. This utility is implemented in all IBASE products so as to keep control of the stability and efficiency of performance.
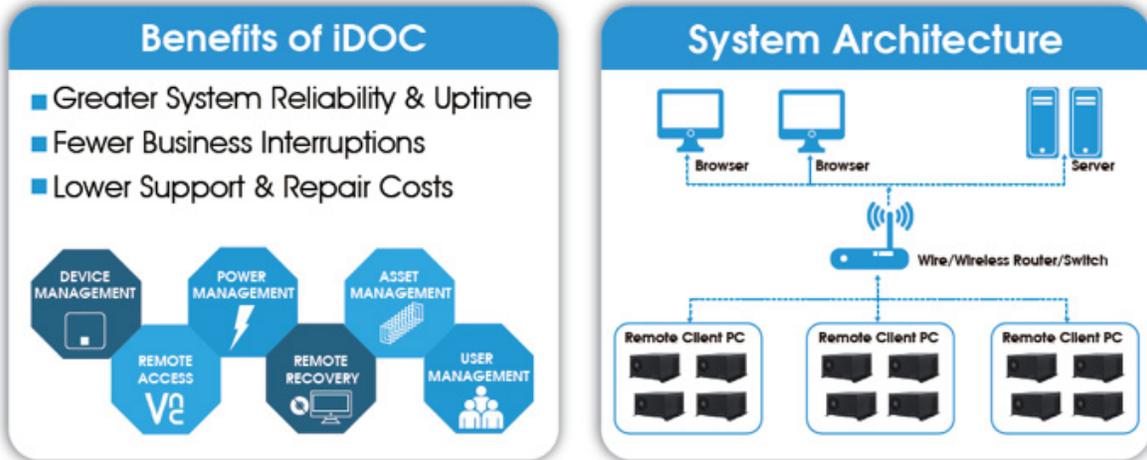
### Observer Utility



## IBASE iDOC

Once the administrators are notified of a problem, the challenge then becomes finding a way to deal with that problem.

IBASE has also developed a solution for that challenge dubbed iDOC (discover, observe connect), incorporated into several of its digital signage players. The iDOC utility, based on iSMART, Observer and Intel iAMT, allow users to remotely manage, monitor and repair remote PCs from a central location even if the system is powered off or the OS is corrupted.

The remote PC – the IBASE signage player – works as a client and actively connects to a specific TCP port of the central server. The TCP port of the remote side will be assigned dynamically by the operating system to avoid conflicts with other applications. The communication channel will be shared by iSMART and Observer instead of using different channels.

Administrators can create/view/update/delete the account they use to access the management system and define remote PCs and/or groups of remote PCs.
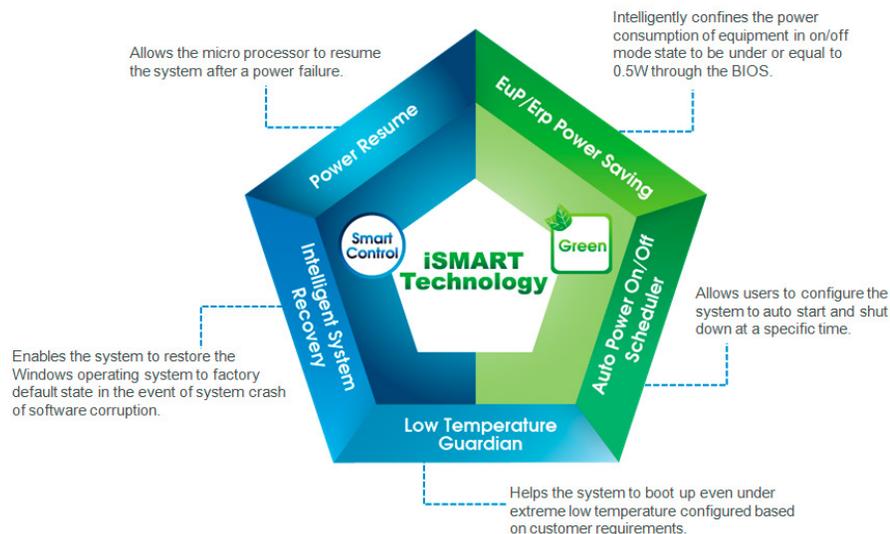
# iDOC Technology

iDOC is an application software system developed by IBASE based on Intel® AMT, IBASE iSMART and Observer that allow users to remotely discover, manage and repair the remote PCs regardless of its power and OS state.

## Benefits of iDOC
- Greater System Reliability & Uptime
- Fewer Business Interruptions
- Lower Support & Repair Costs

DEVICE MANAGEMENT
POWER MANAGEMENT
ASSET MANAGEMENT
REMOTE ACCESS V2
REMOTE RECOVERY
USER MANAGEMENT

## System Architecture

Browser    Browser    Server

Wire/Wireless Router/Switch

Remote Client PC    Remote Client PC    Remote Client PC

## What is IBASE iSMART function?

IBASE iSMART is created for the purpose of protecting systems and enabling them to use power efficiently. iSMART provides functionalities for various applications, such as automatic power on/off scheduling for power saving, power resume, low temperature guardian and intelligent system recovery allowing the system to restore the factory default state in the event of a system software crash of software, reducing maintenance costs.

## iSMART Technology

Allows the micro processor to resume the system after a power failure.

Intelligently confines the power consumption of equipment in on/off mode state to be under or equal to 0.5W through the BIOS.

Power Resume

EuP/Erp Power Saving

Smart Control

Green

iSMART Technology

Intelligent System Recovery

Auto Power On/Off Scheduler

Allows users to configure the system to auto start and shut down at a specific time.

Enables the system to restore the Windows operating system to factory default state in the event of system crash of software corruption.

Low Temperature Guardian

Helps the system to boot up even under extreme low temperature configured based on customer requirements.

## Putting it together

IBASE has incorporated Observer, iDOC and iSMART into its new SI-613 digital signage player, a 3x4K@60hz UHD digital signage system designed for digital menu boards and multi-screen video wall applications. The system is built with segregated flow ventilation and supports the latest 6th Generation Intel® Core™ desktop processors with three HDMI (4K @60hz) outputs. With four times the resolution of traditional full-HD displays, ultra HD 4K offers a massive improvement in image clarity that helps boost shoppers' attention and engagement. The SI-613's Ultra HD 4K@60Hz-resolution outputs enables deplorers to feature that output on three displays, allowing for content that is more detailed and eye-catching than ever.

The SI-613 features three independent Ultra HD 4K@60Hz-resolution outputs and comes with hardware EDID (extended display identification data) simulation to prevent screen convergence problems and issues due to cable disconnection or failure to identify EDID, erroneous settings in hardware or digital playback software settings. The player is built with segregated flow ventilation to ensure that the circuit board is free from dust and contaminants.

The SI-613 garnered the 2016 Computex design & innovation award in the Computers + Systems category at the Computex trade fair, held in May in Taipei, Taiwan. This year, 107 participants from 12 countries submitted 253 entries to be evaluated by a jury. IBASE also received the d&i award in 2015 for its SE-92 outdoor digital signage player.

"This is one of the first units on the market that has 3x HDMI 2.0 (4K@60hz) support," said Archer Chien, Senior Manager of Digital signage product line at IBASE. "And like most of IBASE' players, you can add a TV tuner, WiFi and 3G/LTE options."

## About the sponsor:

*Focused on the production of original equipment manufacturing, IBASE Technology Inc. was created by engineers with experience in industrial PCs. The company produces single-board computers, industrial motherboards, CPU modules, embedded systems, network appliances and digital surveillance systems for different applications in the gaming, entertainment, automation, medical, military, networking and security markets.*