The Software
Architectural and Engineering Specifications

Version 1.0

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PART 2 - PRODCUTS

Division 28 – Electric Safety and Security

Section 28.23.13 – Video Surveillance Control and Management Systems

Section 28.23.16 – Video Surveillance Monitoring and Supervisory Interfaces

Section 28.23.23 – Video Surveillance Systems Infrastructure

2.1.0   Manufacturer

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2.2.0   General

2.2.1   Product Description

IDIS Center is a client software application so that manage surveillance devices and monitor.

Not only NVR, TVI Recorder, IP Camera and Encoder from IDIS, But it's able to add 3rd party IP Cameras.

The Software is able to notice various events of devices to manager

The Software supports features as below.

Live monitoring

Record playback

Management devices

Event monitoring

2.2.2   Hardware and Software requirement

This Section specifies the minimum requirements for The Software.

Recommended specification :

OS : Microsoft Windows 7 x86 or x64 (Home Premium, Professional, Ultimate)

CPU : Intel Core i7-3770 3.40GHz or better

RAM : 8GB

VGA : AMD Radeon HD 7700 or NVIDIA GTX650 or better (1920x1080, 32bpp), multiple monitors

HDD : 6GB or more of available space

LAN : Gigabit Ethernet or better

2.3.0   Technical Specification

2.3.1   Overview

The Software is an application based on Windows OS.

The Software supports standard TCP/IP , RTSP Protocol.

The Software supports various Scan mode such as auto scan / manual scan / Fen scan / Domain name scan.

The Software supports Onvif Profile S and specific protocol for 3rd party IP Camera.

The Software supports dynamic video stream management architecture.

2.3.2   Structure of system

1. Overview
    A. The Software shall allow the administrator or users with appropriate privileges to change the system configuration.
        The Software shall include a variety of tools such as problem report utility, import/export configuration and amongst many more.
        The Software shall display recorded footage of recorder.
2. Language :
    A. ENGLISH
    B. FRENCH
    C. GERMAN
    D. ITALIAN
    E. SPANISH
    F. CROATIAN
    G. PORTUGUESE (PORTUGAL)
    H. SWEDISH
    I. FINNISH
    J. RUSSIAN
    K. CHINESE (SIMPLIFIED)
    L. CHINESE (TRADITIONAL)
    M. JAPANESE
    N. KOREAN
    O. TURKISH
    P. DUTCH
    Q. CZECH
    R. POLISH
    S. HUNGARIAN

2.3.3   Compatibility of system

1. The Software supports all recorders and IP camera made by IDIS and specific 3rd party IP Camera.
    A. IDIS Products
        i.   DirectIP NVRs
        ii.   DirectCX TVRs
        iii. IDIS Encoders
        iv.   IDIS IP Cameras

   v. IDIS Network Keyboard
  B. 3rd party cameras
2. The Software shall add up to 1024 devices.

2.3.4 Features

1. The Software supports management of video and audio sources including but not limited to:
  A. IDIS IP Cameras and Encoders
  B. Axis Cameras
   i. Axis Encoders are not supported.
  C. IQInvision Cameras
  D. Mobotix Cameras
  E. Panasonic BB Cameras
  F. Panasonic WV (DG) Cameras
  G. Pelco Cameras
  H. Basler Cameras
  I. Sony Cameras
  J. 360 Vision Cameras
  K. ONVIF Cameras
  L. RTSP / RTP Video Streams
2. The Software supports dewarping of live and recorded video.
3. The Software supports the decompression of H.264 and H.265 video through the quick sync video technology of Intel based client graphics card/graphical processing unit (GPU) instead of using the client processing power.
4. The Software shall have an easy process for upgrading versions:
  A. Are capable of being upgraded from one version to another without having to uninstall the previous version.
5. The Software shall provide an automatic discovery solution that will easily find devices and systems by:
  A. Automatically discovering client instances that run on computers connected to the same network.
  B. A search functionality to discover client instances running on computers connected on a different network segment than the client by using IP addresses or hostnames.
  C. Automatically discovering video and audio sources that are connected to the same network.
6. The Software shall provide the capability to rename all video and audio sources and NVRs.
7. The Software shall authenticate users before granting access to the system. Access rights for each user can be defined individually for each user, and shall include but not be limited to:
   i. Device Setup
   ii. Live Watch
   iii. Use PTZ controls
   iv. Use audio in/out controls
   v. Use image processing
   vi. Export live images
   vii. Panic Recording
   viii. Panic Recording Storage Setup
   ix. Live Color Control
  B. Search and Play
   i. Save AVI or ClipCopy images
   ii. Export images
   iii. Use image processing
   iv. Search the recorded data by motion, object or other events

        v.   Play manually recorded data (panic record play)
       vi.   Device Health Monitoring
     vii.   Use alarm out controls

   C. Log Search
   D. Device Status Monitoring
   E. Show device and device group
   F. Create user layout
   G. Show POS transaction (text-in) messages

8. The Software shall provide a maintenance log of errors and events.
9. The Software supports the use of uni-directional and bi-directional audio.
   A. The Software supports full-duplex two-way audio communication.
      i.   Able to link multiple audio sources to a single video source. But, multiple audio signal output is not supported.
10. Ability to control the system using a PC keyboard, mouse or joystick.
11. Ability to import and export system settings such as maps, views, web pages, users and groups.
12. The Software supports live or recorded video monitoring of 1 to 64 video streams simultaneously on a single monitor with the following standard layouts:
   A. Normal Screen
      i.   Full Screen, 2x2, 3x3, 4x4, 5x5, 6x6, 8x8, 1+5, 1+7, 1+11, 1+12, 1+27, 1+32, 2+8, 2+18, 3+4, 4+28, 12+16
      ii.   Corridor Format: 1x2, 1x3
   B. Wide Screen
      i.   3x2, 4x3, 5x4, 6x5, 7x6, 8x7, 1+2, 1+3, 1+4, 1+5, 1+6, 1+8, 1+10, 2+1, 2+4, 2+12, 4+12, 12+24
13. The Software supports live or recorded video monitoring in a customizable video display beyond the standard layouts.
14. The Software shall be able to simultaneously display video streams from maximum 64 client sites.
15. The Software client software shall:
   A. Maximum four monitors used for monitoring video and audio streams connected to a single workstation.
   B. Support monitoring live and recorded video and audio streams simultaneously on the same monitor.
   C. Support viewing the same live or recorded video stream at different zoom levels and areas of interest.
   D. Support the ability to switch from live to recorded video on demand for an instant playback of recently recorded video.
   E. Support the ability to toggle between tiled and full-screen view.
   F. Support the ability to save views.
   G. Display all video sources connected to the system.
   H. Support the ability to drag and drop sources from a system tree. Sources include but are not limited to:
      i.   A video/audio source for live and recorded display.
      ii.   A predefined layout view of video/audio sources.
     iii.   Third party or integrated devices
     iv.   Web pages
      v.   Graphical maps
16. The Software supports the ability to configure how the system tree is displayed.
   A. The system tree of video sources, maps, saved views and web pages can be organized into virtual folders that are represented as branches within the Site.
   B. Users can be granted access to individual items or entire folders within the tree.
   C. New items added to a folder automatically inherit the permissions of that folder.
17. The Software supports creating bookmarks for recorded video and audio. Bookmarks can be:

  A. Viewed from multiple sources

  B. Displayed on the timeline during playback

  C. Used as a search criteria for recorded video and audio. Search criteria can include but are not limited to:

    i. Name

    ii. Description

    iii. Bookmark Creator

18. The Software supports the ability to create a map that represents the physical location of cameras and other devices throughout the surveillance system.

  A. Maps shall be created from images stored in standard image formats. Including but not limited to the following:

    i. JPEG

    ii. BMP

    iii. PNG

    iv. GIF

  B. Maps shall have the ability to contain links so as to create a hierarchy of interlinked maps.

  C. Maps supports the ability to drag and drop a video source from the map into a window for live or recorded video and audio monitoring.

  D. Cameras in a map are highlighted when an alarm linked to the camera is triggered.

19. The Software supports physical and digital zooming and panning on live and recorded video streams.

  A. The Software supports controlling pan-tilt-zoom, iris, and focus as well as setting presets and patterns.

  B. The Software shall provide the ability to name pan-tilt-zoom presets.

  C. The Software supports the ability to center a PTZ camera's field of view by clicking anywhere on the video image where the PTZ supports this function.

  D. The Software supports the ability to click and drag to define an area for the PTZ camera to optically zoom and center on, where the PTZ supports this function.

  E. The Software supports controlling pan-tilt-zoom camera on-screen display and auxiliary controls.

  F. The Software supports locking PTZ controls.

  G. The Software supports control of a pan-tilt-zoom camera with a network keyboard with joystick.

  H. The Software supports enhanced PTZ controls called "SmartUX Control"

    i. Slingshot Control :

      1. Aim and click any part of the image to quickly view a specific object, person, or erea.

    ii. Rubberband Control :

      1. Simply draw a rubber band anywhere for easy and smooth PTZ control.

20. The Software supports the ability to create PTZ guard tours by combining a set number of presets that are run in sequence or random.

21. The Software supports playback of recorded video and audio.

  A. Forward and reverse playback of recorded video and audio at variable speeds.

  B. Audio and Video shall synchronously playback when:

    i. Audio and video sources are linked

22. The Software supports the navigation of recorded video and audio. Including but not limited to the following methods:

  A. Calendar

  B. Timeline

    i. The Software supports a timeline that displays all connected video sources and the corresponding motion and recording events.

    ii. The Software supports a timeline that can display the entire time range down to one second of recorded video and audio.

    iii. The Software supports a timeline that can synchronize video displayed on multiple tabs to the same point in time.

23. Events.

24. The Software supports searching through recorded video of recorder and audio based on various search criteria. Including but not limited to the following parameters:
    A. Bookmarks
    B. Calendar
    C. Timeline (Date & Time)
    D. Event search
        i. Alarm-In
        ii. Motion Detection
        iii. Video Loss
        iv. Video Blind
        v. TripZone
        vi. Tampering
        vii. Video Analytics
        viii. Face Detection
        ix. POS transaction (Text-In)
        x. Audio Detection
        xi. Device Connection & Disconnection
25. The Software supports the ability to take a snapshot of a live or recorded image and export it from the system.
26. The Software supports the ability to export recorded video in the following formats including but not limited to:
    A. Video
        i. Self-executable (EXE)
        ii. AVI
    B. Still Image
        i. JPEG
        ii. PNG
        iii. BMP
        iv. PDF
27. The Software supports the ability to export recorded audio in WAV format.
28. The Software supports the ability to export video in Native format. Native format exported video shall:
    A. Digitally sign recorded video and audio using chained finger print technology so video can be authenticated for evidentiary purposes.
    B. Include camera properties. Including but not limited to:
        i. Site name
        ii. Recorded video time, resolution, frame type and size
        iii. POS transactional (Text-In) data
    C. Support additional exporting into Native or open formats.
29. Health monitoring : IDIS Cener shall check status of added devices.
30. Reporting :The Software supports system logs of itself and devices.

Version History

Version	Writer	Revision Date	Remarks
1.0	Roy Lee	Oct.6.2016	Initial Release