# cyberclaz™

Building smarter GEN.

## SOFTWARE REQUIREMENTS

### PRODUCT OVERVIEW

Senzit has revolutionized the educational environment with the concept of CyberClaz. CyberClaz can be utilized to meet the requirements of a classroom, which will be recorded, stored & replayed. It is the next generation advanced digitized recording solution that allows you to captures, archives and retrieves the highest quality of live classroom sessions when needed. We have visualized a concept where the parent can sit at home to monitor their kid's activities at classes.

## MOBILE UI DEVELOPMENT

### Software Specification

HTML 5
CSS
JavaScript
jQuery
jQuery Mobile.

### API's Used

IBM Worklight API
Cordova API

### IDE-Integrated development environment

IBM Worklight 6.2.0

### Local Data Storage

Textual Information :JSON Storage

### File Format

Video : RTSP
File Compression :H264 (MPEG4)

### Data Interchange Format

JSON

### Alternative Hybrid Mobile Application Environment

#### Titanium Appcelerator

Appcelerator Titanium is a platform for developing mobile, tablet and desktop applications using web technologies. Support for standards-based web technologies: HTML, CSS and JavaScript on all platforms along with PHP, Python and Ruby for desktop platforms. Integrated support for popular JavaScript and Ajax Frameworks including jQuery, YUI, MooTools, Scriptaculous and others. A platform-independent API to access native UI components including navigation bars, menus, dialog boxes and alerts, and native device functionality including the file system, sound, network and local database. It provides extensibility through open interfaces and licensing, allowing developers to introduce support for additional scripting languages, media codecs and device-specific functionality.

#### PhoneGap/Cordova

It enables software programmers to build applications for mobile devices using JavaScript, HTML5 and CSS3, instead of device-specific languages. The resulting applications are hybrid, meaning that they are neither truly native (because all layout rendering is done via web views instead of the platform's native UI framework) nor purely web-based (because they are not just web apps, but are packaged as apps for distribution and have access to native device APIs). Combined with a UI framework such as jQuery Mobile or Dojo Mobile or Sencha Touch, this allows a smartphone app to be developed with just HTML, CSS, and JavaScript.

## SERVER DEVELOPMENT

### Software Specification

IBM WebSphere 8.5.5.2
JSP
J2EE
Servlets

### IDE

Eclipse Juno

## HARDWARE REQUIREMENTS

### Tablet Devices

Apple iPad
Android Device

### IP Cameras

Any H.264 RTSP Protocol IP Cameras can be used for CyberClaz; The Minimum Required Specification is detailed below, taking D-LINK DCS-5222L as preferred model

### Features
Versatile, High-quality Video

* 1/4" Megapixel CMOS sensor captures every detail
* HD recording up to 720P for crisp, clear video
* Up to 10x digital zoom lets you enlarge areas of interest
* Built-in microphone and speaker for 2-way communication

Fast Wireless for Complete Freedom

* High-speed 802.11n wireless for increased speed, range and reliability
* Wireless technology eliminates the need for network cable installation
* Access video feeds on the go, wherever you have internet access

### Wireless Microphones, Receiver & Wired Microphone

**Shure Microflex® MX150**  is a professional electret condenser microphone ideal for applications requiring low-profile placement.

### Features

· CommShield® Technology guards against interference from cellular RF devices and digital bodypack transmitters.

· Multi-position tie clip allows for a variety of placement options and features an integrated cable management system for convenient cable dress with minimal handling noise

- Matte black, sleek design for inconspicuous placement.

- Kevlar™ reinforced soft-flex cable design further reduces handling noise while providing superior flexibility for routing and placement.

- User-changeable equalization caps for response shaping (omnidirectional only).

- Snap-fit, concise windscreen provides protection from plosives and wind noise with minimal visibility.

**Shure MX 412 ,** Modular gooseneck microphones offer a smart, professional look and accurate sound reproduction.

- Available in 5" (12.7 cm), 10" (25.4 cm), and 15" (38.1 cm) lengths
- Cardioid and supercardioid polar patterns
- Bi-colour status indicator or single colour light ring
- Programmable mute switch (desktop models only)
- Logic input/output for remote LED and mute control
- Surface-mount and wired or wireless desktop base options
- CommShield® Technology for improved RF filtering

**Shure MX690** Microflex Wireless Boundary Microphone

- Sleek, low profile design
- Frequency agile, microprocessor controlled transmitter
- Bi-colour status indicator
- Programmable mute function
- IR link to SLX receiver for automatic frequency synchronization
- Battery level indicator
- Operates on two AA batteries
- Logic output for remote LED and mute control
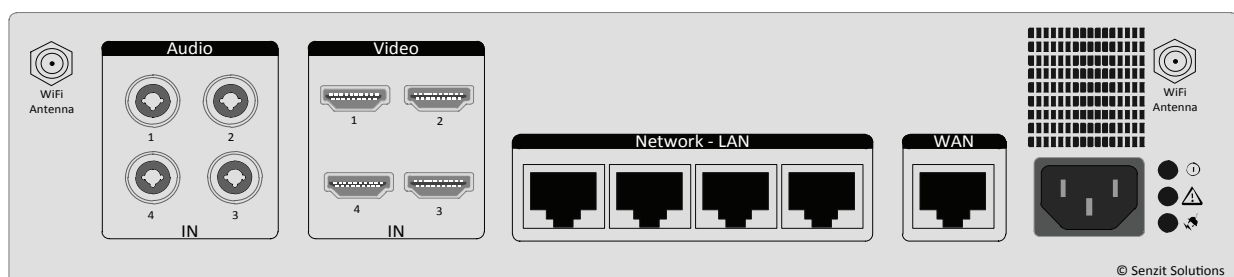- CommShield Technology for improved RF filtering

## Rebbon

4 Channel Rebbon is hardware equipment that can Capture, Process, Record & Stream multimedia. The proprietary Rebbon is reliable and can be used in mission critical solutions.

### Features

1.   Can take  4 XLR Audio Input

2.   Can take 4 Video inputs (Analog is optional)

3.   IP camera feeds can be taken as input (maximum 4)

4.   Individual processing of channels

5.   Individual feeds recording & streaming

6.   H.264 Video compression , User configurable quality (bitrate, profile)

7.   AAC / MP3 Audio compression, User configurable.

8.   Inbuilt RTSP/RTP streaming with lowest latency for real-time applications.

9.   Audio Video muxing can be enabled or disabled for recording and streaming

10.   Individual Audio Video streams available

11.   Inbuilt Webserver for configuring the device

12.   Web based GUI for Configuration

13.   In-built router with high speed dual band Wireless access point.

## NETWORK  REQUIREMENTS

- High-speed Internet (1000 mbps)

- High Security Provision

- Reliable for all 4 Servers

  o       Worklight Server

  o       DB Server

  o       Application Server

  o       File Server

## CLOUD REQUIREMENTS

Two Options can be used for deploying all four servers (Worklight, DB, Application Server and File Server) in Cloud

1.       **SoftLayer Cloud**

Offer cloud-enabled computing, storage and content delivery. They provide cloud-based technology to give optimum performance and reliability with fully integrated environments. Dedicated servers, virtual servers and CloudLayer systems become unified computer environments for customers.

2.       **Private Cloud**

An environment dedicated to a single customer that leverages virtualization tools to deliver a secure computing platform.

**SenzIT** | Sensing
Future IT

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