SDK Manual – Variable Message Sign
Full Color V2.0

SDK Document_VMS_V2.0

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Table of Contents

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1. Introduction

This SDK (Software Development Kit) Document is dedicated to the Integration of Full Color VMS of any size with any proprietary software.

The document contains the details for integrating the VMS SDK to the Client's Software with the help of the provided Commands and Library details which need to be applied using given syntax as below and also contains the details about Fault Diagnostic Card .

2. SDK Commands - VMS

1. Step-1

Use following Class to consume VMS services.

Command:

```
MercuryClass mercuryCls = new MercuryClass();
```

The Step-2 is defined by considered this given class for controlling the brightness of the VMS via software.

2. Step-2

This method is used to set brightness of VMS Display.

The parameters are string value of IP address, integer value of Port , integer value of brightness i.e. 1-255 (1 for minimum and 255 for maximum)

Command:

```
mercuryCls.BrightnessSetting(IPaddress,Port, 255);
```

3. Step-3

The following Command will be used to set Auto Brightness

OtherFunctions.set_screen_auto_brightness(Encoding.ASCII.GetBytes(txtIPAddress.Text.Trim()));

4. **Step-4**

The following commands can be used to get parameters like

- *IPAddress,*
- *Width,*
- *Height,*
- *Brightness,*
- *Screen Type,*
- *Screen Brightness* ***Command:***

mercuryCls.GetParameters();

5. **Step-5**

The below given settings and commands will be used to send messages to the VMS Instantly.

Please pass the generic class with following parameters:

Title = Path with File name in case of Images and videos

PrimaryMessageID = Serial Number

Type = 3 in case of videos, 0 in case of images or gif, 8 for text messages;

Timer = To set timer between two or more images.

Command:

For text,image and video simultaneously send :

MsgType = 11;

mercuryCls.SendMessage(MainWindow.genericClasses, MsgType, ip, Convert.ToUInt16(ConfigurationManager.AppSettings["Port"]), Timer);

Note:- here we used Msg Type 11 for sending all program text , image & video **sendMessage = Send_ProgramAll.Program_All(genericClasses);**

6. **Step-6**

This command is used to take a screenshot of VMS

The following commands can be used to live display parameters like

- *IPAddress,*
- *Width,*
- *Height,*
- *Port*
- fi1
- Str

Note:- err (int): An integer indicating the result of the screenshot capture process. A value of **0** typically indicates success, while non-zero values represent various error conditions. You can use the Error.GetError method to retrieve an error message based on the returned error code.

Command:

int err = LedYNetSdk.get_screen_capture(Program.ip, Program.port, Program.str, Program.str, fi1, Program.width, Program.height);

7. **Step-7**

It is used to enable or disable automatic screen brightness adjustment based on ambient light conditions.

Command:

OtherFunctions.set_screen_auto_brightness();

8. **Step-8**

It allows you to set the device's IP address, subnet mask, gateway IP address, and DNS server address.

The following commands can be used these parameters like:-

- *IPAddress*
- *SubnetMask*
- *GatewayIp*
- *DnsServer*

Command:

OtherFunctions.set_screen_ip(IPAddress, Submask, gatewayIP, dnsServer);

9. **Step-9** when you add a queue message on VMS then you need to create a object of generic class and use this properties

Command:

GenericClass Gclass = new GenericClass();

Properties:-

int Type

string TitleIst

string Title

string Text

int PrimaryMessageID

int TextImage

int BrowseImage

int ScheduleImage

int display_effects

int display_speed

string FontSize

string FontFamily

int Timmer

string m_aging_start_time (YYYY-MM-DD)

string m_aging_stop_time (YYYY-MM-DD)

string m_period_ontime (HH:MM:SS)

string m_period_offtime (HH:MM:SS)

Title = Path with File name in case of Images and videos

PrimaryMessageID = Serial Number

Type = 3 in case of videos, 0 in case of images or gif, 8 for text messages; Timer = To set timer between two or more images.

display_effects= to set the animation of text & images. display_speed= To set the animation speed of text & images.

TextImage= used for when we send text message .

BrowseImage= used for when we send image message .

ScheduleImage= used for when we set message scheduling .

3.Fault Diagnostic Card – VMS

Fault Diagnostic card also Knows as Octopus card. Octopus card is used to diagnosis the status of VMS. Through Octopus card We can Check the status of the following.

VMS Raw Status
Power Failure
Power Reset
Shock sensor status
Door sensor status
Temperature & humidity status

Step-1

Communication Protocols of Octopus card
Octopus card can communicate Via LAN Port, RS232 communication mode or UDP (User datagram protocol) mode. By default, Octopus card communication protocols is given blow.

IP Address	**- 192.168.1.200**
Subnet	**- 255.255.255.0**
Gateway	**- 192.168.1.1**
Local port	**- 5005**
Ethernet server -	**80**
Baud rate used -	**9600**

3.1. Enter Octopus IP in VMS utility:

1. Open the Multi Color utility program
2. In the utility interface, locate the input field for IP Address.
3. Enter "192.168.1.200" as the IP address of the Octopus device for communication
4. This step establishes a connection between Multi Color and the Octopus VMS
5. When clicking on the "Fault Diagnosis" button in the Multi Color VMS utility, a popup box will appear, providing diagnostic information and troubleshooting

6. **6**When clicking on the "Diagnose" button again a popup will appear displaying the message "Record updated." Clicking "OK" will update the page on the Multi Color VMS utility with the latest diagnostic information
7. When clicking on the “Status” button then live Graph will be updated according to Row Status , if Row status show 0 ,it means Row faulty . When Row status 1 , it means Row ok .

3.2. Record update:

If a row is faulty, the Multi Color VMS utility will display the status as “ 0.“ If a row is working properly, it will show “1" on the utility.

Additionally, the utility will show the door status as "Open" or "Close" to indicate whether the door of the VMS is open or closed.

The shock status will be indicated as "Yes" or "No" to signify whether a shock or impact has been detected.

If the temperature and humidity sensors are connected and functioning properly, the utility will display the temperature as "32.2°C and the humidity as "65% RH.“

if the temperature and humidity sensors are not working or disconnected, the utility will show "Temp: NaN" and "Humidity: NaN to indicate that the values are not available.

The Fan Temp will be indicated as “10” by default setting and VMS Fan Status will be indicate “Yes”

Last Power Failure (LPF): The date and time of the last power failure will be shown in the format date-YY-

MM-DD time-HH:MM.SS**.**
Last Power Restore (LPR): The date and time of the last power Restore will beshown in the

format dateYY-MM-DD time-HH:MM.SS**.**

3.3. Live Graph update :

1. When clicking on the “Status” button then live Graph will be updated according to Row Status , if Row status show 0 ,it means Row faulty . When Row status 1 , it means Row ok.

2. we used two color in Graph – Green and Red .

3. Green color represent – Ok Row (how many Ok row with percentage).
4. Red color represent – Faulty (how many Ok row with percentage).

3.4 Web page access via Ethernet port

Step-1
Now you have to search your default IP of octopus in search bar.

Step2
You will get this interface on your screen. You can see the real date and time and also the status of all rows, door sensors, shock sensors, temperature and humidity, power failure & power restore

Step3
You can see there is a TCP/IP button in bottom. By clicking TCP/IP button you will get a new TCP/IP Configuration page. Where we can change IP Address, Gateway & Subnet

Example:-
After fill IP & all parameters click submit button and you can see IP address has been changed

Step 4
Now you need to press the reset button of controller card of fault diagnostic card. After that you can go with your IP to search webpage.

HYPER TERMINAL DATA VIA RS232

We are use RS232 Port to get data on HyperTerminal it will give status of all given aspects above.

Step 1
Open Hyper terminal and fill name then click ok.

Step 2
Select your comport and click ok

Step 3

Now you have to click Restore Default button and press OK button.

Step 4

Now you will get status of all given aspects.

NOTE: - Data Received on Web Page & Hyper terminal (RS232)

We are Receiving Row data in 0 or 1 form. If We received Row data 0 that means Row is not working & there is a fault. If we received Row data in 1 form that means its working properly.
Shock Sensor data will be received in Yes or No form Door
Data received in Open or Close form.

thank you