

Documentation
for
DM365 IPNC Web UI Code
Version 1.1

1 Document History

Version	Author	Date	Verified By	Comments
1.0	Vimala S	11-May-10	Rajan D	Covers web modules except DMVA
1.1	Sivaram. G	08-Oct-10	Rajan D	Added Modules related to Smart Analytics

2 The Legal

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The information provided in this document are based on the code that is available at the time of writing of this document. New functions, function parameters, new functionality are subject to be added to the application based on the future requirements. Existing functions/ function parameters and existing functionality are also subject to be removed or altered based on the requirements. These changes done may not be included to be a part of this documentation.

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3 Application

DM365 IPNC Web based System

4 Using the Project

4.1 Development Environment

IDE	GStudio. This is available as a 30 days evaluation package.
Programming Language	GBasic – A proprietary language of GoDB Tech Private Ltd.

4.1.1 Acquiring the GStudio IDE License

The Any customer of TI who wishes to acquire a license of gStudio can contact TI. TI in turn can contact support@godbtech.com on behalf of their client and get them the installer and the relevant license.

4.2 Loading the project in the IDE

- Unzip the contents of the file gIPNC.zip
- Double click on file gIPNC.gws to load the project in the GoDB editor gStudio.

4.3 File classifications

File Extension	Description
.frm	Contains the UI controls used in each module
.bas	Contains the logic implemented for the corresponding .frm file
.inc	Included files which may be part of one or more modules.
.fnt	Font files used in the project

4.4 Compiling the project

4.4.1 Development phase

- Ensure that “Debug” is selected from the Debug/ Release dropdown.
- Pressing F7 will compile the project. Pressing F5 will compile and launch the project in debug mode. This will launch the application as a Win32 application.
- Ensure that you have a file by name “ip.txt” in the folder “Win32_Debug” having the IP address of the IPNC as the content. This must be available in the folder for the user to login to the application.

4.4.2 Deployment in IPNC

- Ensure that “Release” is selected in the IDE from the Debug/ Release dropdown.
- From the menu bar of the IDE choose View-> Options. In the tab “Build” ensure that the check box “Make Read-Only BDB” is checked
- Find for a file named “gIPNC-ro.bdb” inside the Win32_Release folder inside the project directory.
- Compress the file “gIPNC-ro.bdb” and create a file named “gIPNC-ro.gz” using the following command. C:\Program Files\GoDB\ged.exe -i gIPNC-ro.bdb gIPNC-ro.gz
 - "<GoDB Installed folder>\ged.exe" -i "<gIPNC Project folder>\Win32_Release\gIPNC-ro.bdb" "<gIPNC Project folder>\Win32_Release\gIPNC-ro.gz"

- For example: "C:\Program Files\GoDB\ged.exe" -i "D:\Project\gIPNC\Win32_Release\gIPNC-ro.bdb" "D:\Project\gIPNC\Win32_Release\gIPNC-ro.gz"
- Copy the file "gIPNC-ro.gz" and create the "cramfs" file

5 Modules Covered

5.1 Login

Following are the files used display login screen,

File name	Purpose	Exclude from Build Flag
auth.frm	Contains UI Controls	No
auth.bas	Contains User name, Password validation logic	No

5.2 Add Users

Following are the files used display users details screen,

File name	Purpose	Exclude from Build Flag
addusers.frm	Contains UI elements used	No
addusers.bas	Contains implementation logic	No
addusers.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the function used to display/add/edit/delete users in camera (addusers.bas)

Type	Function Name	Purpose	File Name
GET	getUserSetting	Get user name, authority, user name and password minimum length from camera	functions.inc
ADD/EDIT	addUser	Add /Edit user to camera	functions.inc
DELETE	deleteUser	Delete selected user from camera	functions.inc

5.3 Live video screen

5.3.1 Live Video

Following are the files used in Live Video screen:

File name	Purpose	Exclude from Build Flag
liveVideo.frm	Contains UI elements used	No
liveVideo.bas	Contains implementation logic	No
liveVideo.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to fetch stream names, RTSP URLs from the camera and set click snap values in the camera (liveVideo.bas)

Type	Function Name	Purpose	File Name
GET	getLoadingTime	Get camera reload time from camera	functions.inc
GET	getSDCardValue	Get SD insert status values from camera	functions.inc
GET	getLiveVideoOptions	Get click snap,example values from camera	functions.inc
GET	loadStreamDetails	Get stream name and its corresponding RTSP url from camera	common.inc
SET	setAudioStatus	Set audio status and audio mode value to camera	functions.inc
SET	setLiveVideoOptions	Set click snap, file name and storage location option values to camera	functions.inc
SET	setExampleValue	Set selected example value to camera	functions.inc

5.3.2 Display All Stream

Following are the files used to display all the available stream video screens,

File name	Purpose	Exclude from Build Flag
allStreamsVideo.frm	Contains UI elements used	No
allStreamsVideo.bas	Contains implementation logic	No
allStreamsVideo.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Function used to get and set values in display all streams screen are same as live video function.

5.3.3 Display 1x mode

Following are the files used to display 1x mode screens,

File name	Purpose	Exclude from Build Flag
display1xMode.frm	Contains UI elements used	No
display1xMode.bas	Contains implementation logic	No

Below are the functions used to display selected stream video in 1x display (display1xMode.bas)

Type	Function Name	Purpose	File Name
GET	loadStreamDetails	Get stream name and its corresponding RTSP url from camera	common.inc

5.3.4 SD Card Explorer

Following are the file to display SD Card screens,

File name	Purpose	Exclude from Build Flag
SDExplorer.frm	Contains UI elements used	No
SDExplorer.bas	Contains implementation logic	No

Below are the function used to display selected stream video in 1x display (SDExplorer.bas)

Type	Function Name	Purpose	File Name
GET	getSDCardValue	Get SD insert status values from camera	functions.inc
SET	cmdFormat_Click	Set SD Format value to camera to format the SD card	SDExplorer.bas
SET	cmdMount_Click	Mount and Un-mount SD card by setting corresponding value to camera	SDExplorer.bas

Note: The list of files in the SD Card is generated as an html file (sdget.htm) by the IPNC on request.

5.4 Settings

5.4.1 Video

Following are the files used to display video setting screen:

File name	Purpose	Exclude from Build Flag
videolmageSettings.frm	Contains UI elements used	No
videolmageSettings.bas	Contains implementation logic	No
videolmageSettings.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to get and set video setting screen values (videolmageSettings.bas)

Type	Function Name	Purpose	File Name
GET	getVideolmageSetting	Get stream type,codec and resolution from camera	functions.inc
GET	getVideoStream1	Get frame rate,bit rate,rate control, quality factor and overlay setting values for stream 1	functions.inc
GET	getVideoStream2	Get frame rate,bit rate,rate control,quality factor and overlay setting values for stream 2	functions.inc
GET	getVideoStream3	Get frame rate,bit rate,rate control, quality factor and overlay setting values for stream 3	functions.inc
GET	getVideoFile	Get video files ,stream and video stream values from camera	functions.inc
SET	setVideolmageSetting	Set selected stream type, codec, resolution and mirror value to camera	functions.inc
SET	setVideoStream1	Set frame rate,bit rate,rate control, quality factor and overlay setting values for stream 1	functions.inc
SET	setVideoStream2	Set frame rate,bit rate,rate control, quality factor and overlay setting values for stream 2	functions.inc
SET	setVideoStream3	Set frame rate,bit rate,rate control, quality factor and overlay setting values for stream 3	functions.inc
SET	setVideoFile	Set selected stream and video stream values of video file to camera	functions.inc

5.4.2 Video – Advanced

Following are the files used to display Video Advanced Settings screen:

File name	Purpose	Exclude from Build Flag
videolmageAdvanced.frm	Contains UI elements used	No
videolmageAdvanced.bas	Contains implementation logic	No
videolmageAdvanced.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the function used to get and set Video - Advanced setting screen values. (videolmageAdvanced.bas)

Type	Function Name	Purpose	File Name
GET	getVideolmageAdvanced1	Get video advanced screen setting values with region of interest values for stream 1	functions.inc
GET	getVideolmageAdvanced2	Get video advanced screen setting values with region of interest values for stream 2	functions.inc
GET	getVideolmageAdvanced3	Get video advanced screen setting values with region of interest values for stream 3	functions.inc
SET	setVideolmageAdvanced1	Set video advanced setting screen stream 1 values to camera	functions.inc
SET	setVideolmageAdvanced2	Set video advanced setting screen stream 2 values to camera	functions.inc
SET	setVideolmageAdvanced3	Set video advanced setting screen stream 3 values to camera	functions.inc

5.4.3 Advanced Features

Following are the files used to display Video Advanced settings screen,

File name	Purpose	Exclude from Build Flag
videoAnalyticsSetting.frm	Contains UI elements used	No
videoAnalyticsSetting.bas	Contains implementation logic	No
videoAnalyticsSetting.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
motiondetection_bas.inc	Contains implementation logic of motion detection screen	Yes

Below are the functions used to get and set Video - Advanced setting screen values. Video – Advanced setting screen (videoAnalyticsSetting.bas)

Type	Function Name	Purpose	File Name
GET	getVideoAnalyticsSettings	Get face detect,region of interest,face recognition values from camera	functions.inc
GET	getVideoAnalyticsOptions	Get drop down values from camera	functions.inc
GET	getMotionDetectSettings	Get motion detection values from camera	functions.inc
SET	setVideoAnalyticsSettings	Set motion detection,face detect,region of interest,face recognition values to camera	functions.inc
SET	setMotionDetectSettings	Set motion detection values from camera	functions.inc

5.4.4 Smart Analytics → Event Monitoring

Following are the files used to display Smart Analytics Event Monitoring screen,

File name	Purpose	Exclude from Build Flag
DMVAeventMonitor.frm	Contains UI elements used	No
bodybg.frm	Contains Header UI elements used. Included in DMVAeventMonitor.frm	Yes
DMVAeventMonitor.bas	Contains Implementation Logic	No
DMVAeventMonitor.inc	Contains Label, X, Y, Width and Height of all elements in the .frm file	Yes
DMVAfunctions.inc	Contains common function used throughout application	Yes

Below are the functions used to get and set Camera setting screen values (DMVAeventMonitor.bas)

Type	Function Name	Purpose	File Name
GET	GetEventList	Get values from INI file for the specified events.	DMVAfunctions.inc
SET	SetEventNum	Set Event values	DMVAfunctions.inc
GET	loadIniValues	Get values from INI File and display the corresponding status in form	DMVAfunctions.inc
GET	getEventMonitorValues	Get Event Monitor Values from the INI file	DMVAfunctions.inc
GET	getOverlayValues	Get Overlay values from the INI file	DMVAfunctions.inc
SET	SetDMVAdetectMode	Set DMVA Mode	DMVAfunctions.inc
SET	SetRecordingProperties	Set recording properties	DMVAfunctions.inc
SET	SetDisplayProperties	Set display properties	DMVAfunctions.inc
SET	SetROIProperty	Set Region of Interest property	DMVAfunctions.inc
GET	getDisplayStreamName	Get and displays the Stream Name	DMVAfunctions.inc
GET	getDMVAConfigValues	Get DMVA Configuration values and load in application	DMVAfunctions.inc
SET	SetSearchDateTime	Set Date Time information to Search criteria	DMVAfunctions.inc
SET	SetSendsearchtrash	Set search and trash flag	DMVAfunctions.inc
SET	SetValTodeleteEventList	Set values to be deleted	DMVAfunctions.inc
GET	GetSDCardValue	Get SD Card information	DMVAfunctions.inc
GET	SchedulerOnOff	Get Scheduler status	DMVAfunctions.inc

5.4.5 Smart Analytics → Event Monitoring → Advanced Settings

Following are the files used to display Video Advanced settings screen,

File name	Purpose	Exclude from Build Flag
DMVAAdvancedSetting.frm	Contains UI elements used	No
bodybg.frm	Contains Header UI elements used. Included in DMVAAdvancedSetting.frm	Yes
DMVAAdvancedSetting.bas	Contains implementation logic.	No
DMVAAdvancedSetting.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
DMVAfunctions.inc	Contains common function used throughout application	Yes

Below are the functions used to get and set Camera setting screen values (DMVAAdvancedSetting.bas)

Type	Function Name	Purpose	File Name
GET	loadIniValues	Get values from INI File and display the corresponding status in form	DMVAfunctions.inc
GET	getDisplayStreamName	Get and displays the Stream Name	DMVAfunctions.inc
GET	getDMVAAdvancedValues	Get and display the DMVA Advance setting values like Font Type, Color, Box color, Centriod color, velocity color etc	DMVAfunctions.inc
SET	SetDMVAAdvancedValues	Set the DMVA Advance setting values like Metadata, Overlay properties etc.,	DMVAfunctions.inc
GET	getctrlNo	Gets the Position or No of the selected control	DMVAfunctions.inc

5.4.6 Smart Analytics → Intelligent Motion Detection

Following are the files used to display Intelligent Motion Detection Event Setting screen,

File name	Purpose	Exclude from Build Flag
intelligentMotionDetection.frm	Contains UI elements used	No
intelligentMotionDetection.bas	Contains implementation logic.	No
intelligentMotionDetection.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
intelligentMotionDetection.css	Contains Style Sheet for Form Controls	Yes
DMVAfunctions.inc	Contains common function used throughout application	Yes
messagebox.inc	Contains functions to display custom message box	Yes

Below are the functions used to get and set Camera setting screen values (intelligentMotionDetection.bas)

Type	Function Name	Purpose	File Name
SET	setIMDObjSize	SET Intelligent Motion Detection Object size	DMVAfunctions.inc
SET	SetZoneValues	SET Zone Values based on the zone name	DMVAfunctions.inc
GET	getDisplayStreamName	Get and displays the Stream Name	DMVAfunctions.inc
GET	GetIMDValues	Get Intelligent Motion Detection values like Vehicle, Person Max / Min Width / Height	DMVAfunctions.inc
GET	GetZoneValues	Get Zone values	DMVAfunctions.inc
SET	SetIMDValues	SET Intelligent Motion Detection values like Vehicle, Person Max / Min Width / Height	DMVAfunctions.inc
SET	SetPolysides	Set Polygon sides for the Intelligent Motion Detection Zone	DMVAfunctions.inc
SET	SetLoadNameIndex	SET the current Index of the Load name to download the IMD values related to the selected load name from the IPNC	DMVAfunctions.inc
SET	SetFilename	SET Save settings File Name	DMVAfunctions.inc
GET	GetTripZoneFileNames	GET Intelligent Motion Detection File Name and Load the settings	DMVAfunctions.inc

5.4.7 Smart Analytics → Streaming Meta

Following are the files used to display Streaming Meta Event Setting screen,

File name	Purpose	Exclude from Build Flag
streamingMOS.frm	Contains UI elements used	No
bodybg.frm	Contains Header UI elements used. Included in StreamingMOS.frm	Yes
streamingMOS.bas	Contains implementation logic.	No
streamingMOS.css	Contains Style Sheet for Form Controls	Yes
streamingMOS.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
DMVAfunctions.inc	Contains common function used throughout application	Yes
messagebox.inc	Contains functions to display custom message box	Yes

Below are the functions used to get and set Camera setting screen values (streamingMOS.bas)

Type	Function Name	Purpose	File Name
GET	loadIniValues	Get values from INI File and display the corresponding status in form	DMVAfunctions.inc
GET	getDisplayStreamName	Get and displays the Stream Name	DMVAfunctions.inc
GET	GetStreamingMOSValues	GET Streaming Metadata values	DMVAfunctions.inc
SET	SetStreamingMOSValues	SET Streaming Metadata values	DMVAfunctions.inc
SET	SetLoadNameIndex	SET the current Index of the Load name to download the IMD values related to the	DMVAfunctions.inc

		selected load name from the IPNC	
SET	SetFilename	SET Save settings File Name	DMVAfunctions.inc
GET	GetTripZoneFileNames	GET Streaming Metadata File Name and Load the settings	DMVAfunctions.inc
GET	GetSMetaZoneValues	GET Streaming Metadata Zone information	DMVAfunctions.inc

5.4.8 Smart Analytics → Object Counting

Following are the files used to display Object Counting Event Setting screen,

File name	Purpose	Exclude from Build Flag
objectCounting.frm	Contains UI elements used	No
bodybg.frm	Contains Header UI elements used. Included in objectCounting.frm	Yes
objectCounting.bas	Contains implementation logic.	No
objectCounting.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
DMVAfunctions.inc	Contains common function used throughout application	Yes
messagebox.inc	Contains functions to display custom message box	Yes

Below are the functions used to get and set Camera setting screen values (objectCounting.bas)

Type	Function Name	Purpose	File Name
GET	loadIniValues	Get values from INI File and display the corresponding status in form	DMVAfunctions.inc
GET	getDisplayStreamName	Get and displays the Stream Name	DMVAfunctions.inc
GET	getObjectCountingValues	GET Object counting values from INI File	DMVAfunctions.inc
SET	SetObjectCountingValues	SET Object counting values to IPNC Camera	DMVAfunctions.inc
SET	SetLoadNameIndex	SET the current Index of the Load name to download the IMD values related to the selected load name from the IPNC	DMVAfunctions.inc
SET	SetFilename	SET Save settings File Name	DMVAfunctions.inc
GET	GetTripZoneFileNames	GET Object counting File Name and Load the settings	DMVAfunctions.inc

5.4.9 Smart Analytics → Trip Zone

Following are the files used to display Trip Zone Event Setting screen,

File name	Purpose	Exclude from Build Flag
tripZone.frm	Contains UI elements used	No
bodybg.frm	Contains Header UI elements used. Included in tripZone.frm	Yes
tripZone.bas	Contains implementation logic.	No
tripZone.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
DMVAfunctions.inc	Contains common function used throughout application	Yes
messagebox.inc	Contains functions to display custom message box	Yes

Below are the functions used to get and set Camera setting screen values (tripZone.bas)

Type	Function Name	Purpose	File Name
GET	loadIniValues	Get values from INI File and display the corresponding status in form	DMVAFunctions.inc
GET	GetTripZoneValues	Get Trip Zone values from INI File	DMVAFunctions.inc
SET	SetTripZoneValues	Set Trip Zone values into IPNC	DMVAFunctions.inc
SET	SetZoneValues	SET Zone Values based on the zone name	DMVAFunctions.inc
GET	getDisplayStreamName	Get and displays the Stream Name	DMVAFunctions.inc
SET	SetLoadNameIndex	SET the current Index of the Load name to download the IMD values related to the selected load name from the IPNC	DMVAFunctions.inc
SET	SetFilename	SET Save settings File Name	DMVAFunctions.inc
GET	GetTripZoneFileNames	GET Trip zone stored File Name and Load the settings	DMVAFunctions.inc

5.4.10 Smart Analytics → Scheduler

Following are the files used to display Scheduler Setting screen,

File name	Purpose	Exclude from Build Flag
schedule.frm	Contains UI elements used	No
bodybg.frm	Contains Header UI elements used. Included in tripZone.frm	Yes
schedule.bas	Contains implementation logic.	No
schedule.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
DMVAFunctions.inc	Contains common function used throughout application	Yes

Below are the functions used to get and set Camera setting screen values (Scheduler.bas)

Type	Function Name	Purpose	File Name
GET	loadIniValues	Get values from INI File and display the corresponding status in form	DMVAFunctions.inc
GET	GetScheduleValues	Get Schedule value from IPNC like rule type, setting name and schedule day name.	DMVAFunctions.inc
GET	GetSchedules	Get Schedule Information from IPNC	DMVAFunctions.inc
SET	SetScheduleValues	Set Schedule information to IPNC	DMVAFunctions.inc
SET	DelScheduleValues	Delete Schedule information from IPNC	DMVAFunctions.inc

5.4.11 Camera

Following are the files used to display Camera settings screen,

File name	Purpose	Exclude from Build Flag
cameraSettings.frm	Contains UI elements used	No
cameraSettings.bas	Contains implementation logic	No
cameraSettings.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to get and set Camera setting screen values (cameraSettings.bas)

Type	Function Name	Purpose	File Name
GET	getCameraSettings	Get Lighting condition, 2A setting, Low light behavior, Noise filter values from camera	functions.inc
GET	getcameraSettingOptions	Get drop down values from camera	functions.inc
SET	setCameraSettings	Set Lighting condition, 2A setting, Low light behavior, Noise filter values to camera	functions.inc

5.4.12 Audio

Following are the files used to display Audio setting screen

File name	Purpose	Exclude from Build Flag
audiosetting.frm	Contains UI elements used	No
audiosetting.bas	Contains implementation logic	No
audiosetting.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to get and set Audio setting screen values (audiosetting.bas)

Type	Function Name	Purpose	File Name
GET	getAudioSetting	Get audio enable, audio mode, audio input and audio output values from camera.	functions.inc
GET	getAudioOptions	Get drop down options from camera.	functions.inc
SET	setAudioSetting	Set audio enable, audio mode, audio input and audio output values to camera.	functions.inc

5.4.13 Date/Time

Following are the files used to display Date and Time setting screen,

File name	Purpose	Exclude from Build Flag
setDateTime.frm	Contains UI elements used	No
setDateTime.bas	Contains implementation logic	No
setDateTime.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to get and set Date and Time setting screen values (setDateTime.bas)

Type	Function Name	Purpose	File Name
GET	getDateTime	Get camera current date and time. Get date and time format selected values from camera.	functions.inc
GET	getDateFormatOptions	Get date,time and position drop down options from camera	functions.inc
GET	getTimezones	Download time zone text file from came to get time zone options	functions.inc
SET	SetDatetime	Set new date, time, format and position to camera	functions.inc

5.4.14 Network and Port

Following are the files used to display date and time setting screen,

File name	Purpose	Exclude from Build Flag
networkSettings.frm	Contains UI elements used	No
networkSettings.bas	Contains implementation logic	No
networkSettings.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to get and set network setting screen values (networkSettings.bas)

Type	Function Name	Purpose	File Name
GET	getNetworkDetails	Get network values from camera	functions.inc
GET	getFTPDetails	Get FTP server values from camera	functions.inc
GET	getSMTPDetails	Get SMTP server values from camera	functions.inc
GET	getSNTPRTSPDetails	Get RTSP,SNTP values from camera	functions.inc
GET	getPORTDetails	Get Port setting values from camera	functions.inc
SET	setNetworkDetails	Set network setting values to camera if DHCP is not enable	functions.inc
SET	setFTPDetails	Set FTP server configuration values to camera	functions.inc
SET	setSMTPDetails	Set SMTP server configuration values to camera	functions.inc
SET	setPORTDetails	Set port setting values to camera	functions.inc
SET	setSNTPRTSPDetails	Set RTSP, SNTP values to camera	functions.inc

5.4.15 Alarm

Following are the files used to display alarm setting screen,

File name	Purpose	Exclude from Build Flag
alarmSettings.frm	Contains UI elements used	No
alarmSettings.bas	Contains implementation logic	No
alarmSettings.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the function used to get and set alarm setting screen values (alarmSettings.bas)

Type	Function Name	Purpose	File Name
GET	getAlarmSetting	Get enable alarm, alarm duration, Alarm Trigger, on alarm values from camera	functions.inc
GET	getAlarmSettingOptions	Get drop down option values from camera	functions.inc
SET	setAlarmSetting	Set enable alarm, alarm duration, Alarm Trigger, on alarm values to camera	functions.inc

5.4.16 Storage

Following are the files used to display storage setting screen,

File name	Purpose	Exclude from Build Flag
storageSetting.frm	Contains UI elements used	No
storageSetting.bas	Contains implementation logic	No
storageSetting.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the functions used to get and set alarm setting screen values (alarmSettings.bas)

Type	Function Name	Purpose	File Name
GET	getStorageSetting	Get storage setting and its schedule values from camera	functions.inc
SET	setStorageSetting	Set schedule details to camera	functions.inc

5.4.17 Maintenance

Following are the files used to display maintenance screen,

File name	Purpose	Exclude from Build Flag
maintenance.frm	Contains UI elements used	No
maintenance.bas	Contains implementation logic	No
maintenance.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes
Maintenance.htm	Display the UI required for accessing Logs and Upgrading	Will be a part

	firmware. Will be displayed inside a web browser control inside the GoDB application.	of the cramps.
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5.4.18 Support

Following are the files used to display support screen,

File name	Purpose	Exclude from Build Flag
supportScreen.frm	Contains UI elements used	No
supportScreen.bas	Contains implementation logic	No
supportScreen.inc	Contains Label, X, Y, width and Height of all elements in the .frm file	Yes

Below are the function used to get support screen values (supportScreen.bas)

Type	Function Name	Purpose	File Name
GET	getSupportData	Get kernel, Uboot and software version from camera	functions.inc
GET	dwnldFile	Download file from to display license, support info, credits, copyrights from camera	functions.inc

5.5 Common files

Following are included files used throughout the application.

File name	Purpose	Exclude from Build Flag
common.inc	Function which are used in more than one page are defined in this page	Yes
Function.inc	All GET from camera and SET to camera definitions are defined in function.inc	Yes
defines.inc	Common #defines are available in this page	Yes
keywords.inc	All GUI keyword with corresponding screen control display name to display failure keywords GUI field names	Yes
menuCaptions.lan	Left menu display captions	Yes
leftMenu.frm	Contains Left menu UI controls	Yes
leftMenu.bas	Contains left menu implementation logic	Yes

Below are the function used to display UI controls,

Type	Function Name	Purpose	File Name
General	displayControls	Align UI controls based on screen resolution	common.inc
General	createGDOControl	Creates GDO(ActiveX control) control to play RTSP stream	common.inc
General	calVideoDisplayRatio	Calculate aspect ratio for the selected stream to display video in calculated aspect ratio	
General	showSubMenu	To show/Hide setting sub menu	leftMenu.bas

General	selectSubMenu	Change FG color for selected setting	leftMenu.bas
General	assignSelectedImage	Assign selected image for selected main menu element	leftMenu.bas

6 Steps for making simple changes

6.1 Adding a new keyword

Below are the functions to be modified to add new keyword.

Function Name: loadIniValues()
File Name : functions.inc

Add new keyword to keywords\$ string separated by commas.

File Name : keywords.inc

Add new keyword to cameraKeywords\$ string with corresponding UI control display name .

Use the keyword prefixed with 'g' in the GET functions.

6.2 Modifying a keyword

Find the old keyword in “functions.inc” and replace the old keyword with the new keyword.

6.3 Adding UI elements/ Aligning UI elements

1. New UI elements can be added to the application by adding the required controls in the respective .frm file. The position of the controls can also be changed by adjusting the position of the same in the respective .frm file.

2. To make the alignment changes visible in the UI modify the related .inc file following the steps in the section below (**Generating .inc for .frm files**)

3. If any new control is added to the left menu of the application, please add the number of the controls added to the number displayed in the #define LEFTMENUCTRLS available in the page “**defines.inc**”.

6.3.1 Generating .inc for .frm files

.Inc file has all the form control attributes like control name, X, Y, Width, Height values. Application uses these values to realign controls to fit all the screen resolution.

If .frm file(s) are modified (add new control, modify X, Y, etc...) then .inc files must be generated by following below steps,

1. Download the Generate_INC.zip file and unzip the same.



Generate_INC.zip

2. Copy all the modified .frm from source code folder and paste to the “Generate_INC” folder.
3. Double-click on “Run.bat”.
4. Click on “Create .inc file” button on launched application.
5. <frm filename>.inc file will be generated in Generate_INC folder.
6. Copy all the .inc files from Generate_INC folder and replace the files in source code folder.

Note: Frame and Image controls realign code will be available in corresponding .bas file.

6.4 To Change the background image for login page

Modify the image “**login_bg.jpg**” that will be available in the images folder. The reference to this image can be found in the page “auth.bas”

6.5 To change the logo of Texas Instruments found in the left menu

Modify the image “**logo.jpg**” that will be available in the images folder. The reference to this image can be found in the page “leftmenu.frm”