Technical Developer Information
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Supported Software:

Camfunction Range v6.4 (003) and above
Central Range v6.4 (003) and above
SecureSite Range v6.4 (003) and above

Revision History:

01/05/2003 – Rev1.1.001

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Camfunction – TCP/IP link for 3rd party applications interfacing to Camfunction

The Camfunction product range provides the facility for a 3rd party piece of software, situated on LAN / WAN, to form a TCP/IP network connection and perform control actions on the security system.

To facilitate this feature, Camfunction is configured (by default) to listen for an incoming TCP/IP connection on port number 1012. The feature can be switched off by accessing 'Engineer'¦'Network Device Setup'. The port number may also be adjusted on this screen.

Up to 15 remote users may be connected at any one time. Any further connection requests will be rejected. Camfunction will act on the last command received from any network client.

An example Visual Basic 6 program complete with source code is provided to demonstrate how to form a TCP/IP connection to Camfunction. It also demonstrates how to send command data to Camfunction and how to interpret the response.

Outgoing Command Data Protocol definition.

Commands sent to Camfunction adhere to the following protocol convention (it should be noted that all command data sent is ASCII):

example command data:
<START>CMD=CAMF:DATA=1<END>

As you can see from the example above, the command data is always encapsulated by a <START> and <END> identifier. 'CMD=CAMF' signifies the command type to be performed. Various commands are available but they are always 4 characters in length. 'DATA=1' signifies the parameter that is relevant to the command being sent, in this case '1'. The data parameter is of variable length. The command and data is always separated by ':'

The following commands can be sent:

COMMAND	DATA	MEANING
CAMF	00	Camera Up and Left Start
	01	Camera Up Start
	02	Camera Up and Right Start
	03	Camera Left Start
	04	Camera Stop
	05	Camera Right Start
	06	Camera Down and Right Start
	07	Camera Down Start
	08	Camera Down and Left Start
	09	Zoom In Start
	10	Zoom In Stop
	11	Zoom Out Start
	12	Zoom Out Stop
	13	Focus Near Start
	14	Focus Near Stop
	15	Focus Far Start
	16	Focus Far Stop
	17	Iris Open Start
	18	Iris Open Stop
	19	Iris Close Start
	20	Iris Close Stop
	21	Auto Flip
	22	Auto Iris
	23	Auto Focus
	24	Alarm Clear on matrix equipment

Commands are sent to the *currently selected camera*. Commands are acted upon only if the feature is available on the equipment that is selected in Camfunction.

CSEL   nnnn   Select camera
Select a camera. nnnn be a valid camera number, otherwise the command will be ignored.

MSEL   nnnn   Select monitor
Select a monitor. nnnn be a valid monitor number, otherwise the command will be ignored.

CSPD   nnn   Set camera speed
Sets the camera speed for pan/tilt operation, where nnn is a expressed as a percentage of the range of available speeds for the camera type i.e. from 000 to 100.

PRSL   nnnn   Call Camera Preset
Where nnnn is a preset number from 1 to 9999

PRST   nnnn   Store Camera Preset
Where nnnn is a preset number from 1 to 9999

TOUR   nnnn   Call Camera Tour
Where   nnnn is a valid tour number for the currently selected equipment.

FKEY   nnn   Camfunction function key
Triggers a Camfunction function key and performs any actions that have been programmed into that function key.

LOGI   password   Signs in with password
Signs into Camfunction. 'password' must be for a valid user in the Camfunction 'User Manager'.

LOGO   Signs out
Signs out of Camfunction. No subsequent commands will be acted upon until a valid sign in command is issued.

RALM   nnnn   Raise alarm
Sets an alarm condition in Camfunction where nnnn is the alarm number. Any actions associated with that alarm will be performed by Camfunction.

Incoming (returned) Data Protocol definition.

Any command sent to Camfunction will result in data being returned to the 3rd party application.
If the command sent was recognised Camfunction sends:
<STARTDAT>ACK<ENDDAT>

If the command sent was NOT recognised Camfunction sends:
<STARTDAT>NACK<ENDDAT>

Examples

Select monitor 2
    <START>CMD=MSEL:DATA=2<END>
Select camera 4
    <START>CMD=CSEL:DATA=4<END>
Set camera speed at 30% of maximum:
    <START>CMD=CSPD:DATA=030<END>
Camera move left start:
    <START>CMD=CAMF:DATA=0003<END>
Camera move right start:
    <START>CMD=CAMF:DATA=5<END>
Camera stop:
    <START>CMD=CAMF:DATA=04<END>
Camera focus near start:
    <START>CMD=CAMF:DATA=13<END>
Camera focus near stop:
    <START>CMD=CAMF:DATA=14<END>
Select preset 57:
    <START>CMD=PRSL:DATA=57<END>
Store preset 3:
    <START>CMD=PRST:DATA=003<END>
Select tour 2
    <START>CMD=TOUR:DATA=3<END>
Trigger function key 325
    <START>CMD=FKEY:DATA=0325<END>
Sign in user with password pl5TYx
    <START>CMD=LOGI:DATA= pl5TYx<END>
Sign out of Camfunction (locks system)
    <START>CMD=LOGO:DATA=<END>

Notes
The Sign In command will fail if a user is already signed into Camfunction. Subsequent commands sent will be acted upon if the currently signed in user has the rights to perform those actions.
For force a sign in, you can issue the 'sign out' command to force any current user to be signed out, followed by a 'sign in' command.