

Technical Developer Information
PC Multiplexer Range 3rd party search facility

Supported Software:

PC Multiplexer Ultra Range v1.2 (003) and above
PC Multiplexer IP Range v1.6 (007) and above

Revision History:

30/03/2006 – Rev1.1.001

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PC Multiplexer Range 3rd party search facility

The PC Multiplexer product range provides the facility for a 3rd party piece of software, situated remotely, to search for recordings and display them.

To facilitate this feature, PC Multiplexer is configured (by default) to listen for an incoming TCP/IP connection on port number 1011. The feature can be switched off by accessing 'Engineer'|'Configure Network Options'. The port number may also be adjusted on this screen.

Only one user may be connected at any one time. Any further connection requests will be rejected.

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

Outgoing Command Data Protocol definition.

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

example command data:

```
<START>CMD=SKPF:DATA=1<END>
```

As you can see from the example above, the command data is always encapsulated by a <START> and <END> identifier. 'CMD=SKPF' 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:

<u>COMMAND</u>	<u>DATA</u>
SRCH	YYYYMMDDHHMICN (14 characters of data)
	YYYY = YEAR
	MM = MONTH
	DD = DAY
	HH = HOUR
	MI = MINUTE
	CN = CAMERA NUMBER

A remote search will be performed. For example, consider the following command:

```
<START>CMD=SRCH:DATA=20060315170001<END>
```

A search will be performed for camera 1, at 17:00 hours, on 15th March 2006. Picture data will be returned if located. Returned data is discussed below.

<u>COMMAND</u>	<u>DATA</u>
SKPF or SKPB	nnnn (up to 4 characters of numeric data)

These commands should be used after a remote search has located recordings. 'SKPF' will skip forward 'nnnn' frames. 'SKPB' will skip backwards 'nnnn' frames. For example, consider the following command:

```
<START>CMD=SKPF:DATA=1<END>
```

When PC Multiplexer receives this command it will skip forward 1 frame and return new picture data. Returned data is discussed below.

Incoming (returned) Data Protocol definition.

Any command sent to PC Multiplexer will result in data being returned to the 3rd party application. This data needs to be processed correctly by means of a suitable decode module that processes the data according to the following protocol convention:

```
<STARTDAT>PICDATA=jpeg picture data here<ENDDAT>
```

'PICDATA' signifies that jpeg picture data follows. The example source code provided shows how to extract this picture data and display it onscreen.

General Notes

It is worth noting that it is only possible to search to the nearest minute. This is because PC Multiplexer stores its recordings in one minute chunks. To locate an exact 'second' within a one minute chunk would take too much time to be of use over low bandwidth connections and would cause considerable lag. However, once recordings have been located, it is an easy matter to skip forward and backward through the located recordings using the 'SKPF' and 'SKB' commands and vary the number of frames skipped. This provides fast scanning through the recordings.