ET350 Software Manual

Communication

All communication to and from the ET350 will go through the OseComm protocol. Most functions of the ET350 can be utilized by uploading specifically formatted files. The following OseComm tasks are supported by the ET350:

- File transfer PC -> ET350
- File transfer ET350 -> PC
- Time transfer PC -> ET350
- Time transfer ET350 -> PC
- Get ET350 OS version
- Get ET350 Application version (actually returns the serial number)
- Get list of files on ET350
- Delete file(s) from ET350
- Set variable on ET350
- Get variables from ET350

With OseComm, several tasks can be combined in one session, after which the ET350 processes the received files.

Load slideshow

A slideshow consists of the combination of a configuration file and some JPG images. These files should all be uploaded to the ET350 in one OseComm session. It is considered best practice to first delete all files from the ET350. Each line represents a single image.

The configuration file shall be called **"slshow.txt"** and shall have the following format:

```
[image index],[image show time],[image file name]
[image index],[image show time],[image file name]
```

An example configuration file:

```
001,001000,image001.jpg
021,012345,  img21.jpg      ←short file names are filled with spaces
123,000001,PICTUR~1.JPG
```

Parameter	Fixed length	Unit	Range
Image index	Yes (3 digits)	Decimal	000-999
Image show time	Yes (6 digits)	Milliseconds	000000-999999
Image file name*	Yes (8+3 chars)	DOS8.3 convention	Example '___000001.jpg'

* The *image file name* shall use DOS8.3 convention: 8 characters for the name, followed by a dot, followed by 3 characters for the extension. Shorter filenames must be prepended with spaces.

Each line represents a single image. The configuration file can use either DOS/Windows or UNIX style line endings.

The *image index* determines the order in which the images are shown (they are shown in increasing order). After the last image is shown, the first image is shown again, etc. Note: the order of the lines in the configuration file does not make any difference.

The *image show time* determines how long that particular image will be shown. This value shall be entered in milliseconds.

The *image file name* references a file that is either on the ET350 or uploaded in the same session. This file shall use **JPEG compression** and have dimensions **320x240 pixels**. The ET350 does not support progressive JPEG images.

The corresponding OseComm session would contain the following tasks:

- Delete file(s) from ET350 (*.*)
- File transfer PC -> ET350 (image001.jpg)
- File transfer PC -> ET350 (img21.jpg)
- File transfer PC -> ET350 (PICTUR~1.JPG)
- File transfer PC -> ET350 (slshow.txt)

Adjust backlight level

The backlight level on the ET350 can be adjusted in 256 steps. To adjust the backlight, upload a single file called "backlite.txt" which contains the desired level (0-255). After the OseComm session has finished, the new backlight level will be applied. The backlight can also be set using a special key in a 'Set variable' task, see Setting and getting variables.

Show single image

To show a single image instead of a slideshow, upload a file called "showimg.txt" containing the filename of the image to show. The file name shall use DOS8.3 convention: up to 8 characters for the name, followed by a dot, followed by 3 characters for the extension. The image shall be a file that is either on the ET350 or uploaded in the same session. This can also be accomplished by using a special key in a 'Set variable' task, see Setting and getting variables.

Upgrade software

To upgrade the software on the ET350, upload an ET350 software file (IBSVxxxx.hex). After the OseComm session has finished, the new software will be installed, after which the ET350 will restart.

Setting and getting variables

It is also possible to store variables in the ET350 using key-value pairs. These can then be read out at a later time. Refer to the OseComm manual for info on how to use the get and set variable commands.

There are some special keys that can be used to perform tasks on the ET350, see the following table:

Command	Key	Value
Set backlight level	-+CFG_SET_BACKLIGHT+-	0-255
Show a single image	-+CFG_SHOW_IMAGE+-	Image file name (DOS8.3 format)
Format the flash storage	-+CFG_FORMAT_DISK+-	None
Set splash image to be shown on startup	-+CFG_SET_SPLASH+-	Image file name (DOS8.3 format)
Pause the slideshow	-+CFG_SLS_PAUSE+-	None
Resume the slideshow	-+CFG_SLS_RESUME+-	None

Synchronizing slideshow

It is possible to synchronize the slideshows on a number of ET350's by using the synchronize command. To initiate the synchronization process, send the following command on the COM ports of all ET350's you want to synchronize: <ESC>XLT<SYN><CR> (1B 58 4C 54 16 0Dh). This will put the ET350's into synchronization mode, in which it waits for a synchronization pulse. To finish the synchronization process, send a pulse (high > low > high) on the DTR line of the COM ports of the ET350's in quick succession.

The ET350's will now store a time offset to its own time. This offset is used to calculate the time offset for a slideshow, so if the ET350's have the same slideshow, the images will change at the same time. The synchronization is lost if an ET350 is rebooted.