



Embedded Digital Signage – be smart !

MSS Series – Security Bulletin

– safety, security and reliability

Nowadays the world is filled with Virus, Malware and hacking; everybody has to consider and take care of the Security level to protect his assets.

"Everyone knows that there's no such thing as 100% security"

But we tend to make it more hard for those and increase the grade of their investment in high tech equipment to hack the security, to enhance your security level, and limit the possibility for such kind of attack to a minimum.

Here we want to show 2 aspects:



A. Security: Protection against somebody's intention to manipulate



B. Safety: Protection for running smooth and reliable in any environment or failure

A. Winmate's MSS / MSO-Series include the following levels of security:

1. Misuse of Content



- All Media files are encrypted when updating the player by LAN/WLAN, so anyone who maybe read the file data, cannot use them as he doesn't have the Key to decrypt the file to its original state.
- All our MSO Software need a password to login and access it to change content or playlists.
- Only MSO is able to communicate with the players, prepare the data and Transfer it.

2. Attack by LAN



- The Player is protected for external access, as we use Active connection to the Server, there is no connection into the player, only out. This mechanism is very safe.
- The write protected boot image adds up, as even if somebody may change something, after a reboot, the player is in its old state, and can get the real content and data from the Server.

3. Attack by WLAN



- We use WEP security encryption with 4 keys, as a high level of security
- Furthermore the player can be setup to connect only to the specified SSID, so only to your access point
- When using the MAC filtering on the access point, it allows only "trusted" MAC addresses to connect to it.

In General: with the embedded uC Linux core on the write protected boot image in the internal flash, is the Player protected against any manipulation, furthermore the Player is not WEB based and is not a PC, which adds up in an even higher security level as most attacks will go against Windows PC based systems.

B. Winmate's MSS / MSO-Series include the following safety features:



On the other hand is the safety and reliability, where Winmate also put great efforts to make the system more reliable and tend to the "zero" Downtime. We developed many mechanism into our system to automate and secure the operation in most scenario and we can provide a failure proof system: Everybody know that Internet sometimes is not stable, due to provider's problems, Wireless distortions or not strong enough Signal in Mobile applications. Winmate has considered all of this matters into a very dedicated System that works for you in the background



AutoReconnect

If a player loses the connection to the server, it will automatically try to reconnect, as soon as the interruption is fixed, the player will be back online with the Server and allow full control.



AutoUpdate

When a player loses connection, and then reconnects, it will check the Update Status and check if data has changed, in case it changed it will update the latest schedule Content and Playlists. But only the changes, it will not download already existing files, to prevent unnecessary traffic.



AutoResume

In case the player is downloading files, and the connection is lost, the player will auto reconnect and continue downloading. This can be repeated times and it is made sure, that at the end the file is not corrupted.

Network Traffic Throttling



Each player or group can individually be scheduled for its MediaSynch time to upload new content. So the network loading at the server can easily be balanced over time. With this up to 2000 players can get their update from only one server.



Power Failure

In case of a power failure, the player will just reboot, from his boot-image within 30 sec. and automatically start playing the programmed Schedule and Playlists.



Automatic Storage Management

The Limited Storage space in the players is handled in the most efficient way. As long as the storage has enough space for the new updated files, it will just store them. If the storage is not enough it will automatically delete not used files and make space for the new files.

Tip: What storage capacity should I choose?

To calculate the most efficient storage capacity we suggest 2 times the average content size you plan to use.

Example: you want to use about 400 MB of content

→so $2 \times 400\text{MB} = 800\text{MB}$ → 1 GB CF card