MSNSwitch
UIS Auto Reset Algorithm

Tech Note MSNTN002





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Document Revision History:

Date	Comments
Dec 22. 2025	Added modem UIS801bc (MSN*switch MAX)*
Jan. 11, 2024	Added model UIS722b
Aug. 1, 2023	First release

This TechNote Applies Only to MSNSwitch Models:

UIS-722b, UIS-722t, UIS-622b
UIS-801bc

Introduction

The MSNSwitch from Mega System Technologies, Inc ("MegaTec") is designed to automatically power-cycle any AC powered device when Internet connectivity is lost. Either of its AC power outlets can also be reset manually or via scheduled actions.

The MSNSwitch's Uninterrupted Internet Service (UIS) feature uses several system parameters to monitor Internet connectivity and power cycle one or both power outlets based on these settings.

The following describes how the MSNSwitch determines when a reset is required.

IMPORTANT NOTE

The UIS function is DISABLED by default and must be enabled either by pressing the UIS ON/OFF button on the MSNSwitch (button not available on the UIS-801bc) or via the UIS function in the MSNSwitch's internal web server, or through the ezDevice smartphone app or the Cloud4UIS.com web service.

How quickly will the MSNSwitch detect Internet loss?

The MSNSwitch uses the following patented (US8212396B2) algorithm for each outlet to determine when and how often to perform a reset of the power outlet when the MSNSwitch is in UIS mode:

STEP 1: The MSNSwitch checks for Internet service by sending a ping to all of the sites assigned to this outlet.

- The MSNSwitch waits for up to the ***Timeout for Each Website / IP Address*** number of seconds (default=5) for a response from each of the sites.
- If no response is received from any site, then go to Step 2
- If a response if received from at least one site, then begin the Internet monitoring function (step 3)

STEP 2: Wait ***Ping Frequency*** time (default=10 sec) then send another set of pings and check for response to the pings.

- If response received, go to Step 3
- If no response received, increment ping loss counter, wait ***Ping Frequency*** time, then send another ping.

STEP 3: Check for response to the ping.

- If response received, clear ping loss counter and go to Step 2
- If no response received, increment ping loss counter, wait ***Ping Frequency*** time then send another ping.
- Repeat this until either a response is received or the ping loss counter reaches ***Number of Continuous Timeout Cycles*** (default=3).

STEP 4: If ping loss counter = (***Number of Continuous Timeout Cycles)***, then power cycle the outlet, increment reset counter ***Number of UIS Resets*** (default=3), clear the ping loss counter. Wait the ***Ping Delay After Outlet Reset*** time (default=4 min) before restarting Internet monitoring in Step 2.

STEP 5: If the reset counter < (***Number of UIS Resets***), then go to Step 2, else stop all Internet monitoring and clear the reset counter.

Note that the MSNSwitch detects the "loss of Internet connectivity" not the absence of it. The Internet must be connected no later than the ***Ping Delay After Outlet Reset*** time mark for the monitoring function to begin. The default is 4 minutes.

The default settings work well for most situations. With these settings, the MNSwitch will detect the loss of Internet in about 35-50 seconds, power off both outlets, then power on outlet#1 after the ***Power On Delay for Outlet1*** (default=3 sec) and power on outlet#2 after ***Power On Delay for Outlet2*** (default=13 sec).

Please note that the default is for the MSNSwitch to perform only 3 power cycles upon the loss of Internet connectivity. If the Internet connection is not restored by the third power cycle, no further power cycles will occur unless you increase the ***Number of UIS Resets*** value (maximum=unlimited).

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