



Network Security Solutions

1G Backup Operating Manual

7 Port 1 Gigabit Ethernet Air Gap Device



Package Contents

1G Backup 1U 19" rack mounted unit

Mains Cable

1G Backup Operating Manual

Overview

The 1G Backup Product is a self contained 7 port 1 Gigabit per second 1U 19” rack mounted Layer 1 air gapping device. The 1 G Backup product is designed to connect and disconnect backup devices connected to the air gapped Ethernet ports to facilitate the backup and offline protection of end user data against the threats of Virus, Ransomware and Ransomware.

The 1G Backup Product has 1 Ethernet input port and 7 air gapped Ethernet ports.

The 7 air gapped Ethernet ports are individually selectively connected to the input Ethernet port to allow selection of a backup device for back up of user data during a backup process.

The user can replicate the back up process with a single hard disc drive by using just one port of the 1G Backup Product or can replicate the backup process across a number of backup devices to increase resilience against virus, malware or other threats.

Regulatory



Please contact point of purchase for product disposal

UK
CA

Specifications

The 1G Backup Product is a 1GBase-T Ethernet layer 1, 1 input 7 output 19 inch rack mounted AirGap isolation unit with the following features

1 input Ethernet port, 7 air gapped Ethernet ports

1 Ethernet Management port

4 USB ports (Mouse, Keyboard)

1 HDMI port

Configuration and operational state displayed on front and rear of unit

Fanless operation

Operational temperature range 0 to 40 C

1U 19 inch rack mounted with mounting lugs

Size 444 mm (Width), 44 mm (Height), 221 mm (Depth)

100 V to 230 V AC 50 and 60 Hz

Fully CE/UKCA approved

For full specifications see 1G Backup Data Sheet

1G Backup Product Unit

1G Backup Product Front Panel



The Air Gap 1G Backup front panel has:

A green power LED;

2 LEDs for each Ethernet port to show the configured state of each air-gap port and which air-gap ports are connected (non air-gapped) at any moment in time;

2 LEDs, green and red, are provided to display the current running status of the 1 G Backup Product unit, Stopped or Running.

1G Backup Product Rear Panel



The Air Gap 1G Backup rear panel has:

USB Mouse and Keyboard Sockets;

HDMI Socket;

1 Ethernet Input port;

7 Ethernet switch ports;

1 Ethernet Management port;

1 G Backup Operating Manual v1.1

Power Socket.

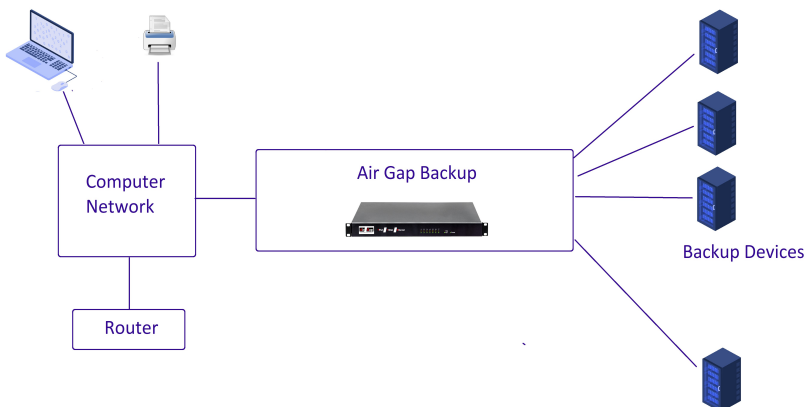
Unpacking Instructions

Remove the 1G Backup Product and manual carefully from the cardboard box. Recycle the cardboard box in a suitable recycling centre.

Place the 1G Backup Product on a stable clear surface and connect an HDMI monitor, capable of operating in 1920x1080 mode, a USB mouse and a USB keyboard to the 1G Backup Product.

Connect the Ethernet input port to the device that would normally connect to you backup device(s).

Connect between 1 and 7 backup devices to the 7 air gapped Ethernet ports shown below.



Powering On Unit

Connect the power supply to the 1G Backup Product unit and

the mains socket to mains power. Turn on the mains power switch at the rear of the unit.



The green power LED will display to signify that the unit has power.

For the initial time of operation of the 1G Backup Product unit the status LEDs will display red to signify the 1G Backup Product unit is in the stopped state.

The 7 Ethernet air-gapped ports status LEDs, orange, will all be unilluminated.

The green LED associated with channel 1 will be illuminated and all other green LEDs associated with channel 2 to 7 will be unilluminated.

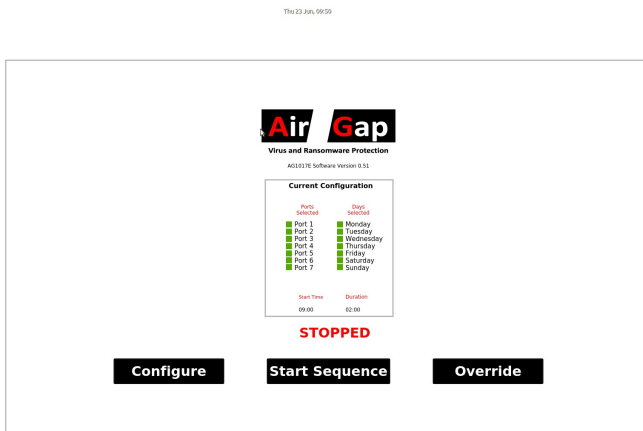
When the unit is powered off the device status and the configuration of the 7 air-gap ports is saved internally to the unit.

The Red device status LED will be illuminated to show that the unit is not running.

On subsequent powering on of the unit the red and green unit status LEDs and the 14 Ethernet air-gapped ports status LEDs will display illuminate to reflect the status of the device prior configuration to it being powered off.

At power on the unit will display the Air Gap logo splash

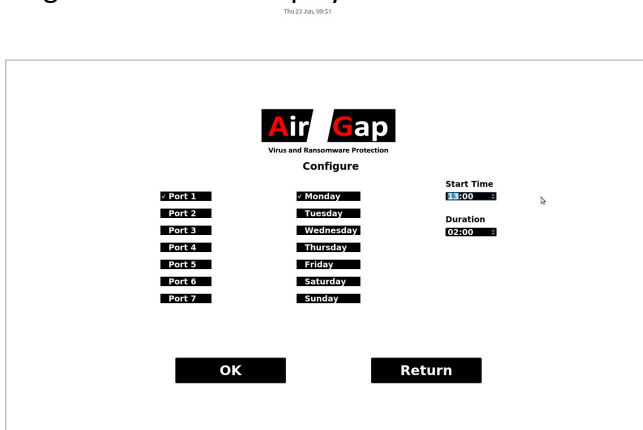
screen and then display the main screen on the HDMI monitor as shown below



Configuring Unit

To configure the unit press the Configure button.

The Configure screen will display as shown below



The configuration screen will be display 7 ports, 7 days, a start time and a duration.

The configure screen allows the user to change the 1G Backup Product unit's current configuration by allowing the user to select which ports are to be connected as part of the backup sequence, the days, start time of the backup process and duration of the backup process.

Select the ports to which there is a backup device connected and to which a backup is to be made.

Select the days on which the backup will occur.

Select the start time and duration of the backup process.

The day and time settings should reflect the settings in your current back up schedule as set in your current backup software configuration.

When the 1G Backup product is set to running mode initially all ports will be air gapped and thus the backup device connected to it will be disconnected creating an air-gap between the input port and all 7 Ethernet air gap ports.

The inbuilt scheduler will check the current day of the week and compare this to the days of the week as set in the configuration settings.

When the current day is the same as one of the days set in the configuration the scheduler will compare the current time and the time set in the configuration settings.

When the time of day is reached the 1G Backup product will connect the first port configured for the duration of time set in the configuration settings after which time the port will be disconnected.

The scheduler continues on each successive day set in the configuration settings moving to the next active port. After all ports selected have been connected in sequence the scheduler goes back to the first configured port selected in the configuration settings and repeats the cycle.

For example, to make the unit to close ports 1 and 3 in sequence every day at 5 pm for 1 hr.

Select Port 1, 3, deselecting port 2, 4, 5, 6 and 7.

Select Mon, Tue, Wed, Thu, Fri, Sat, Sun.

Select the Start Time, 17:00, and the Duration, 1Hr.

In this configuration, when the unit is set running, port 1 will connect for 1 hour on the first day and port 3 will connect on the second day. On the third day port 1 will connect and fourth day port 3 and so on until the unit is stopped running.

Press OK to accept the configuration or Return to return to the main screen without changing the current configuration.

With the example above Ports 1 and 3 should display with green LEDs lit on the front and rear panels indicating that they are selected ports and the main screen should display the set configuration.

The specific configuration will display differently.

Setting unit Running / Stopping the unit

To set the unit Running – select the Start Sequence button.



The front panel green Run LED should display lit and the main screen should display “Running” in green.

This will load the configured sequence as described above into the devices scheduler.

In the example case at 5pm on the first day for 1 hour Port 1 will connect to the input port. This will be signified by the Port 1 orange LED illuminating during this time.

At 5pm on the subsequent day for 1 hour Port 3 will connect to the input port. This will be signified by the Port 3 orange LED illuminating during this time.

The ports will alternate on subsequent days until the unit is set to Stopped by pressing the Stop button. This will set the front panel status LED to red and “Stopped” will be displayed on the main screen.

Override Port Settings

Should the user require to access a disc drive such as in the case of a successful attack to the non air-gapped backup device, the 1G Backup Product allows selective connection of an air gap port to the input port.

The Override screen gives the user the ability to connect one of the back up devices at any given time. This is particularly important if it is known that the successful attack happened a number of days ago, as often happens in these circumstances, this allows disaster recovery to take place with data from a backup prior to the last saved backup if it is known that the last saved backup occurred after the successful attack.

To enter the Override screen press Override button on the

main page. Should the 1G Backup Product be in the Running state then a dialogue box will be displayed asking if the Running sequence should be stopped.

The Override screen shows a log of the last 7 connections made by the 1G Backup Product between the input port and an air gapped port so the user can determine which backup they wish to use for the disaster recovery process.

To connect a port, for example port 3, press Port 3 and this will connect port 3 to the input port.

Press Return to go back to main screen.

Power down

Once a unit is configured the unit will remember the status (Running/Stopped, Time, Days, Ports selected) every time it is unpowered and re-powered.

This enables the unit, for example, to be configured at a desk and then be installed in a rack in a computer room or to recover in the event of a power failure to the unit.

Configuring user hardware

As multiple backup devices are presented to a computer or network sequentially according to the schedule input into the 1G Backup Product they need to appear as the same device. This ensures the computer or network operates correctly with each backup device. As such each backup device is required to be configured with identical parameters.

Since no two backup devices will be presented simultaneously there will be no issue with two backup devices having the

same settings. For example if each backup devices is network mapped to a single drive letter.

This will be required individually for each backup device which will be connected to network. In Windows this is achieved by right clicking on “This PC” in Explorer and selecting “Manage” with each backup devices connected to the computer each time.

Alternatively if backup devices are known by an IP address this will be required to be the same for each backup devices. See user instructions for the backup devices for instructions on how to achieve this.

Errors

Power LED does not display : Check power lead, fuse and switch on rear of unit is On.

The backup process completes without some files being copied: Extend the duration to accommodate the full duration of the back up process.

The unit does not ever show orange LED illuminated : Ensure the unit is Running (Running LED is illuminated).