

# ISG 1000 GPRS ISG Field Upgrade Guide

**June 2006**  
**Part Number:**  
**093-1808-000,**  
**Revision A**

With increased memory, an ISG 1000 security device running ScreenOS 5.4.0 can support the General Packet Radio System (GPRS). To enable GPRS, the device must also have both an Advanced license key and a GPRS license key installed.

With this upgrade kit, you can expand memory capacity in an ISG 1000 device. The kit includes these instructions and the following items:

- 1GB single inline memory module (SIMM) dynamic random access memory (DRAM) modules (2)
- Phillips-head screwdriver (1)
- Antistatic mat (1)
- Antistatic wrist strap (1)

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**NOTE:** You also need the OS loader upgrade and ScreenOS 5.4.0 firmware (or later), both of which are available for download from [www.juniper.net/support](http://www.juniper.net/support).

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Upgrading the ISG 1000 to support GPRS involves the following steps:

1. Registering the ISG 1000
2. Installing License Keys
3. Upgrading to ScreenOS 5.4.0
4. Opening the Chassis
5. Replacing Memory Modules
6. Closing the Chassis

## 1 Registering the ISG 1000

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To be able to access customer support and download new ScreenOS firmware releases, create a customer account and register your ISG 1000 device. If you have already done this, proceed to the next section.

1. Sign up for a customer account by following the online instructions that begin at <http://www.juniper.net/entitlement/>.
2. Log in to the Juniper Networks Technical Assistance Center (JTAC) at <http://www.juniper.net/support/>.
3. Click **Register New Product** in the Contract and Product Management section.
4. Follow the online instructions to register your ISG 1000 device.

## 2 Installing License Keys

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If you have not already done so, purchase and activate an Advanced license key and a GPRS license key.

1. Retrieve your authorization code and device serial number:
  - Authorization code  

The authorization code is a pass key required to generate and activate the license key. It is located in the “End User License Agreement & Certificate” package.
  - Device serial number  

The serial number is a unique 16-character code used to identify your GPRS device when generating license keys. It is located at the bottom or back of the device. You can also find the serial number in the device information section in the GUI or by executing the “get ” command on the CLI.
2. Sign in to the Juniper License Management System (LMS) at [http://www.juniper.net/generate\\_license](http://www.juniper.net/generate_license), and select the Firewall/IPSec VPN and Intrusion Prevention link, then follow the instructions in the system user interface.
3. The Juniper LMS provides the license key in one of two ways:
  - As a download to your computer
  - Via an email

4. Load the license keys on the ISG 1000 device. You can load a license key by copying the alphanumeric license key, entering the following CLI command, and pasting the content you copied in place of the variable *string* shown below:

```
exec license-key string
```

For example, if you receive the following advanced license key, copy everything from “2E1...” to “...g==”

```
advanced_key=2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkiUWs7sLZvXkX
2DxF/Colh76JSnNveIDorA6mY0nUby6InbDXw8JMkxz2ECGA4IT6nSonsag/etk
atpFiz/aPp8AHbIBCh+fmHeEACuxb+YgtmY803H16ZNmGNXLS07kb0KoMOCN
ql79XLM5q7UU6c4p6vP9fDPST7oZE8dWA50MIh0I/2Cz5UbCAvebYYNa3uzD
qnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BjTijVONpw3aQsZ8+k5ACwQ6TwhsiA7
CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb4lg==
```

and paste it after **exec license-key**:

```
exec license-key 2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkiUWs7
sLZvXkX2DxF/Colh76JSnNveIDorA6mY0nUby6InbDXw8JMkxz2ECGA4IT6n
Sonsag/etkatpFiz/aPp8AHbIBCh+fmHeEACuxb+YgtmY803H16ZNmGNXLS
07kb0KoMOCNql79XLM5q7UU6c4p6vP9fDPST7oZE8dWA50MIh0I/2Cz5U
bCAvebYYNa3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BjTijVONpw3aQs
Z8+k5ACwQ6TwhsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb
4lg==
```

5. Restart the ISG 1000 device by entering the **reset** command. When prompted to confirm the command—**System reset, are you sure? y/[n]**—press the **Y** key.
6. After the ISG 1000 restarts, you can confirm that the key or keys are now loaded by entering the **get license-key** command:

```
get license-key
```

```
advanced_key:
```

```
2E1gQaBVzOxBkQTowf0VZ3pw8j/nY/xqCZFkHkiUWs7sLZv
XkX2DxF/Colh76JSnNveIDorA6mY0nUby6InbDXw8JMkxz2ECGA4IT6nSons
ag/etkatpFiz/aPp8AHbIBCh+fmHeEACuxb+YgtmY803H16ZNmGNXLS07kb
0KoMOCNql79XLM5q7UU6c4p6vP9fDPST7oZE8dWA50MIh0I/2Cz5UbCAv
ebYYNa3uzDqnXux3rqyFvLNzclEtXuCndDY6DidZu9+3BjTijVONpw3aQsZ8+k
5ACwQ6TwhsiA7CoQ8lpMT20hakn2sC9ue4Ss2deG9xaZvU3nsBSEjdb4lg==
```

```
idp_sm_key:
```

```
2jPLivNPTB7SIOAXNQQPpqxkeJmi0c47KQ9JhZTC77AJnqTvJDtGxhl3A4pdR
gYq6pnZeS2X69Q0jQ73jROSGo73LvXq/xVJvXKxz3Z3jzfb2NiEPZlJe/oGhAN
zVxyDJnloQTVzFwCmmQ4xmtCHP/dXPhLGcXhrfbRPEeiHHDjNuL0Ymg6TczU
F0jFGdCXiDNJeONwTwlL4hnP8C0nrdEcjoCndCVVXWJgqPW/XJSvBFDBzK+
pH3PvrwgiiA2vYQBjJwTbHkBG9e+d4q2bZGijmBpUjUlvvJEVdleOycFr71VuFup
6F2MfcoJCOoyk3C2/2Di8IK/yQuPIFbBrOSXw==
```

```
Model:          Advanced
```

```
...
```

### 3 Upgrading to ScreenOS 5.4.0

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The ISG 1000 device is now ready to support the ScreenOS 5.4.0 firmware or later. You can copy the ScreenOS firmware to the root directory of a TFTP server, and then save it to the ISG 1000 as follows:

1. Download the latest version of ScreenOS 5.4.0 from the Juniper Networks support site to the root directory of a TFTP server.
  - a. Visit [www.juniper.net/support](http://www.juniper.net/support) and log in.
  - b. In the Download Software section, click **ScreenOS Software**.
  - c. Download the latest version of ScreenOS 5.4.0 and save it to the root directory of the TFTP server.
2. If necessary, start the TFTP server.
3. Make a console, Telnet, or SSH connection to the ISG 1000, and then log in.
4. Enter the following CLI command:

**save software from tftp *ip\_addr filename* to flash**

in which *ip\_addr* is the address of the TFTP server and *filename* is the name of the firmware file.

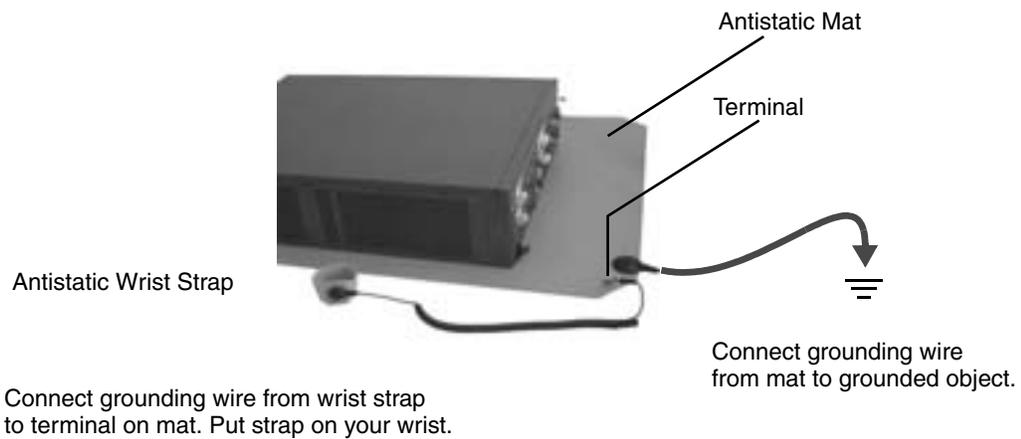
5. Restart the ISG 1000 device by entering the **reset** command.

Next, open the top panel of the chassis, upgrade the memory modules, add then close the top panel. These steps are explained in the following sections.

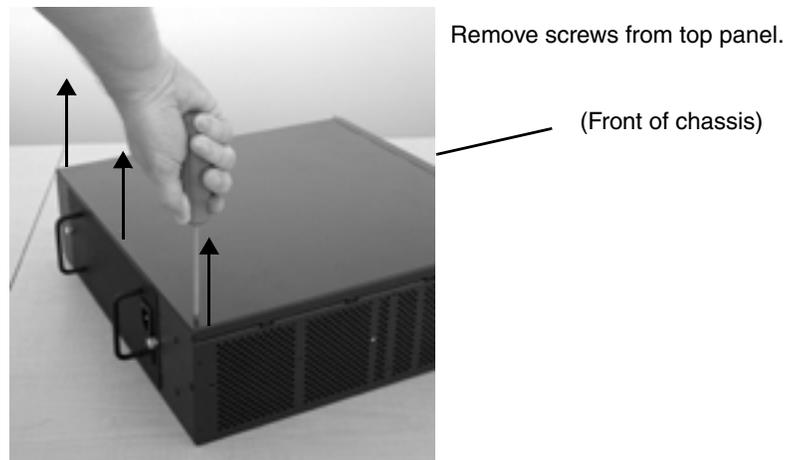
## 4 Opening the Chassis

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1. Turn off the power for the ISG 1000 device and disconnect the power cable. Spread out the antistatic mat and ground it. Set the ISG 1000 on the mat. Then connect the grounding wire from the antistatic wrist strap to the terminal on the antistatic mat, and put the strap on your wrist.



2. Use the Phillips-head screwdriver to remove three screws from the top panel of the chassis. The screws are located near the rear of the panel. (Keep the screws nearby for use when closing the chassis later.)



3. Grip the rear edge of the top panel, lift it slightly (approximately 1 inch), and then pull it towards you to remove it.

Lift top panel and pull it towards you to remove it.



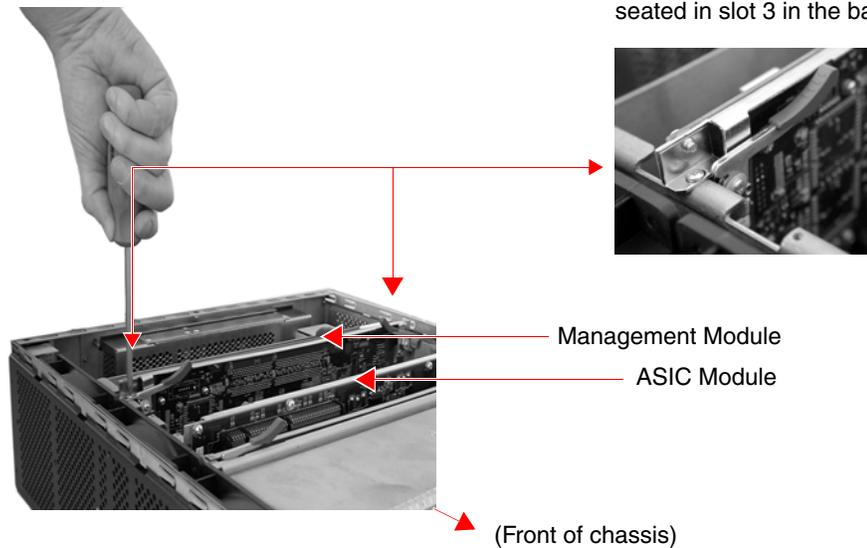
## 5 Replacing Memory Modules

You must first replace the two 512 MB SIMM DRAM modules with two 1GB modules.

1. Use the Phillips-head screwdriver to remove the two retaining screws from the left and right top edges of the management module.

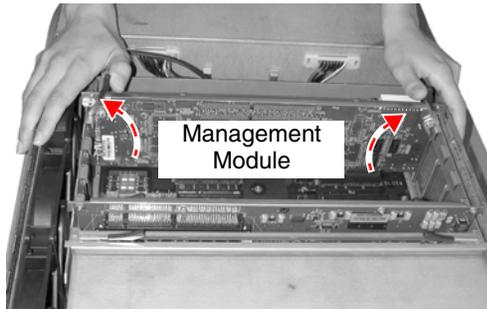
Remove retaining screws.

**Note:** The management module is seated in slot 3 in the backplane.

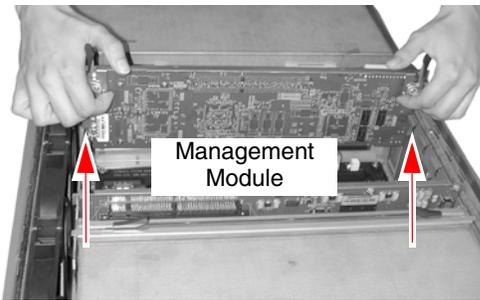


- Swivel the release levers at each end of the management module up and then slide the module up and out of the chassis.

Swivel release levers up.

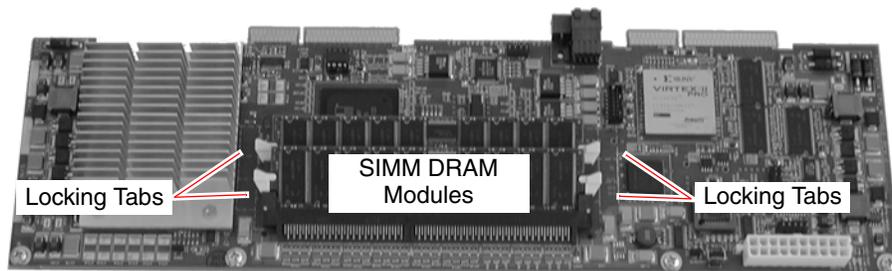


Slide management module up and out of chassis.



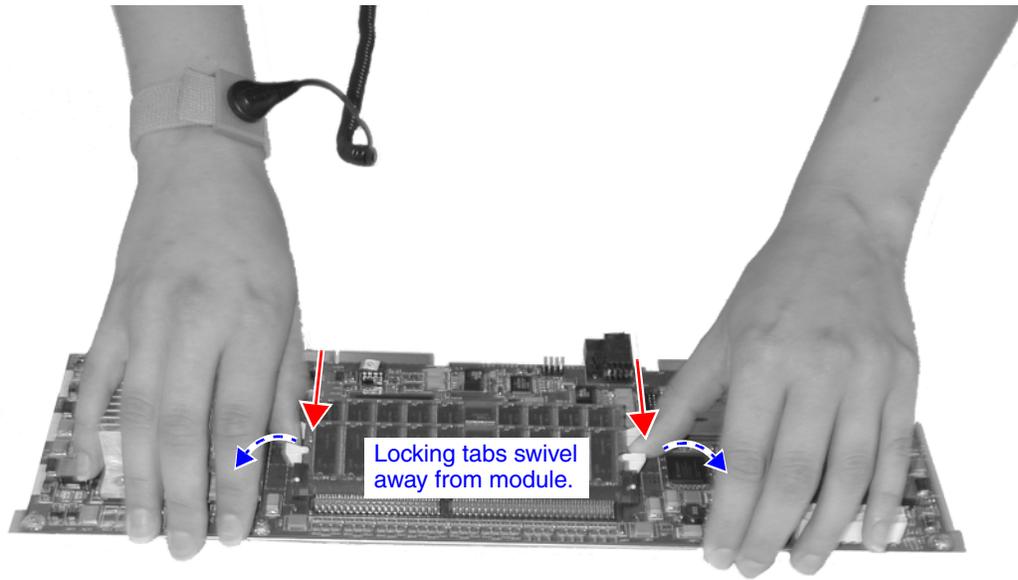
- Set the management module on the antistatic mat. The two 512 MB SIMM DRAM modules are nested in partially overlapping layers.

Management Module

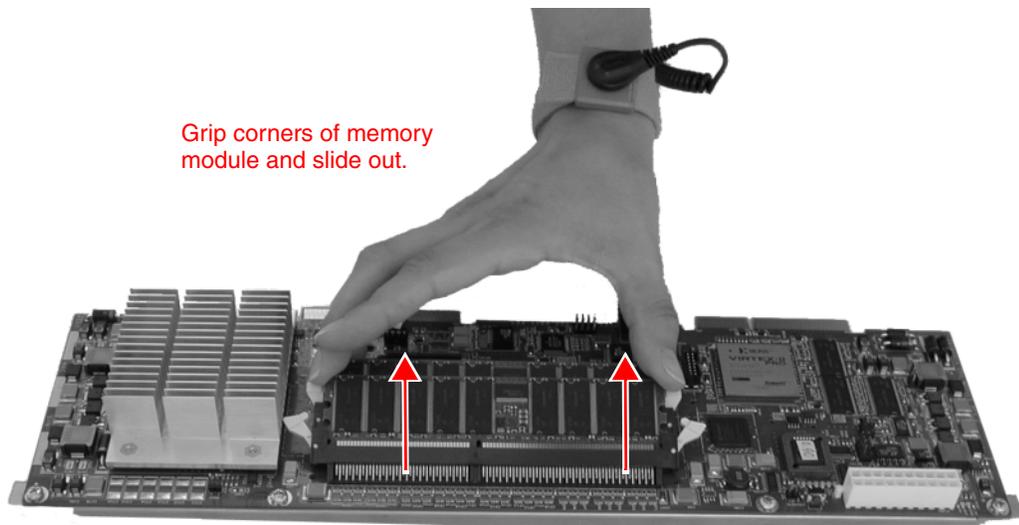


4. Release the uppermost 512 MB SIMM DRAM module by pressing your left and right thumbs downward on the locking tabs on each side of the module so that the tabs swivel away from it.

Press downward with both thumbs on locking tabs.



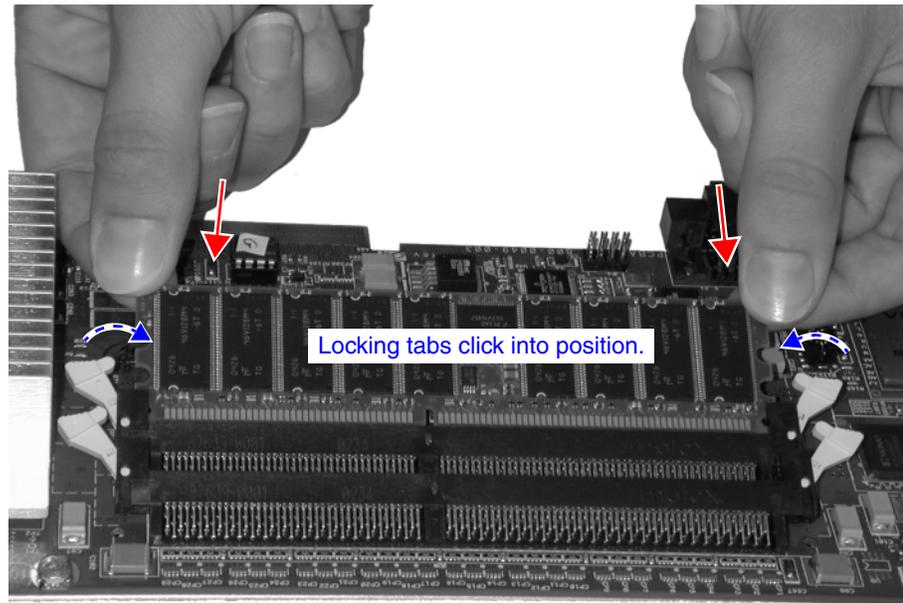
5. Grip the long edge of the uppermost memory module and slide it out. Set it aside.



6. Repeat steps 4 and 5 to remove the lowermost 512 MB SIMM DRAM module.

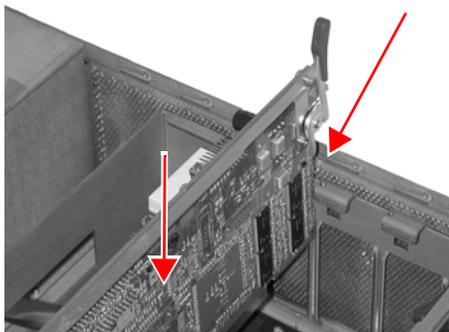
7. Insert a 1GB SIMM DRAM module in the lowermost slot. Exerting even pressure with both thumbs upon the upper edge of the module, press the it downward until the locking tabs click into position.

Press downward with both thumbs on edge of module.

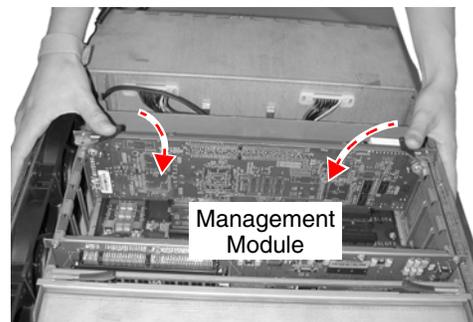


8. Repeat step 7 to insert the uppermost 1GB SIMM DRAM module.
9. Align the management module with the guidance tracks on the inner walls of the chassis next to "Slot 3" on the backplane, and then press it into position. Swivel the release levers downward until the module is fully seated.

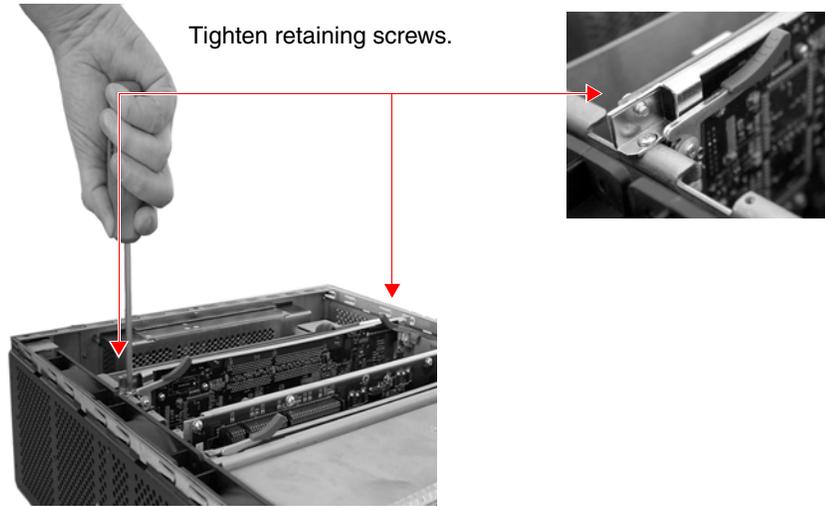
9a. Align management module with guidance track for slot 3 and slide into chassis.



9b. Press release levers down until management module is fully seated.



10. Use the Phillips-head screwdriver to tighten the two retaining screws to the left and right top edges of the management module, securing it to the chassis.



## 6 Closing the Chassis

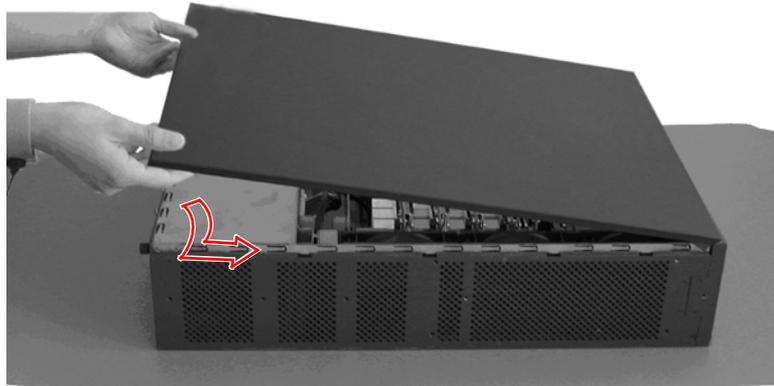
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After replacing the memory modules, you can put the top panel back onto the chassis.

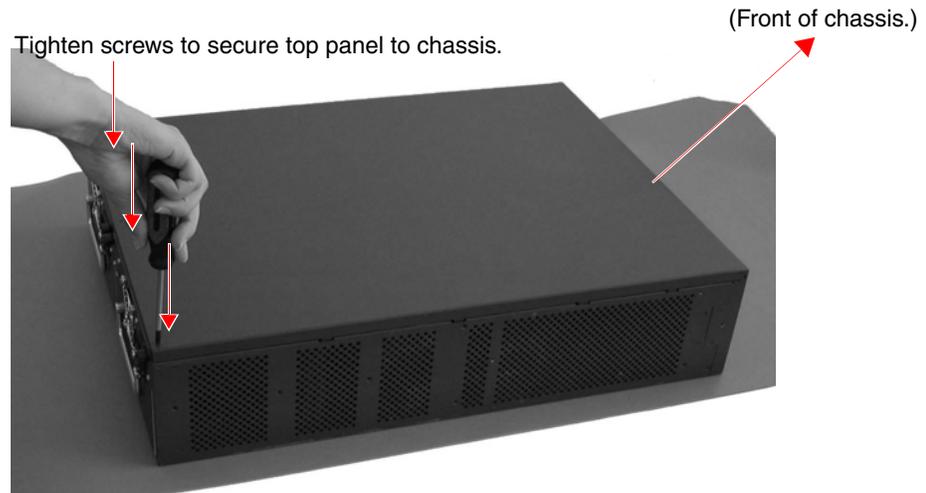
1. Set the front edge of the top panel into the groove that runs along the top front edge of the chassis. Lower the top panel and then push it forward until it completely covers the chassis.

1a. Align front edge of top panel into groove near front of chassis.

1b. Push top panel.



2. Use the Phillips-head screwdriver to tighten the three screws you removed earlier, securing the top panel to the chassis.



At this point the ISG 1000 is able to support GPRS.

## Juniper Networks Documentation

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To obtain technical documentation for any Juniper Networks product, visit [www.juniper.net/techpubs/](http://www.juniper.net/techpubs/).

For technical support, open a support case using the Case Manager link at [www.juniper.net/support/](http://www.juniper.net/support/) or call 1-888-314-JTAC (within the United States) or 1-408-745-9500 (outside the United States).

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