

MaxCore™ MC3000 Platform AC Quick Start Guide

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1 Box contents

Make sure you receive all items of your shipment:

- One MaxCore MC3000 Platform
- One printed copy of *Quick Start Guide* (this document)
- One printed copy of *Safety Notes Summary*
- Other items that were ordered



When installing or servicing the system or accessories, strictly observe the safety precautions in the *Safety Notes Summary*. Ignoring these instructions can void the system warranty and cause personal injury or property damage.

2 ESD

Use ESD protection



Electrostatic discharge and incorrect installation or removal of the card can damage circuit or shorten its life.

Use a properly grounded ESD wrist strap or make work in an ESD-safe environment.

Connect to the ESD connector at the front or the rear of the system.

3 Site preparation

Prior to installation, prepare your site.

1. Make sure that all environmental and power requirements defined in the *MaxCore MC3000 Platform Installation and Use* manual are met.
2. Remove all items from the box.
3. Provide the following cables:
 - Earth grounding cable, 1.25mm², with a two-hole lug, distance 5/8" (15.9mm) behind in case of rack installation.
 - A power input cable for each installed power supply with a minimum cross section of 1mm².
 - Twisted pair Ethernet cable for connecting the BMC ETH port or any of the other four ETH ports of the system.
 - USB and/or microUSB cables to connect the system's USB ports.
4. Have the following tools available:

For more information about connecting cables and power cords, refer to the *MaxCore MC3000 Platform Installation and Use* manual.

4 Install PCIe cards

Note: Before removing the housing cover ensure that the system is shut down and disconnected from AC power.

1. Remove the housing cover of the system.
2. Press the lock button in the center of the housing cover and push the housing cover towards the rear of the system. The cover slides backward and can be lifted off the system.
3. Remove the filler cards or filler panels in the PCIe slots.
4. Install the PCIe card(s) in the respective slot(s).
5. Fill the empty PCIe slots with filler cards or filler panels. A slot adjacent to the component side (primary side) of a high power card should always contain a filler card for better cooling.

For more information about PCIe card installation, refer to the *MaxCore MC3000 Platform Installation and Use* manual.

5 Install system in rack

Note: Screws or bolts should be a minimum of 6mm (0.24") in diameter.

1. Insert the system into a 19" ANSI rack.
2. Fasten the system to the rack using the integrated chassis mounting flanges and two bolts or screws on the left side and two on the right side of the system.

6 Ground the system

1. Connect the rack grounding cable with a two-hole lug to the M5 system ground lug location on the rear of the system, to the right of slot 15.
2. Torque the system ground lug nuts to maximum of 2.5 Nm (22.12 in-lbs).
3. Use a grounding cable of size 1.25mm² for the AC system.
4. Connect the system permanently to the earth ground of the building.

7 Connect to power feed

If you are not in an ESD safe environment put on an ESD wrist strap and connect the strap to the system by attaching the rear ESD jack/ESD snap.

1. Make sure the external power feeds that you are attaching are powered off and cannot be powered on while you are working.
2. Connect the AC International Electric Code (IEC) wired connector to the AC power supplies.
3. Turn on the external feed power. The input LEDs on the power supplies turn green.



8 Connect to MegaRAC on BMC

The Baseboard Management Controller (BMC) device provides the back door entry into MaxCore which accesses a web server with remote access to the power button, other chassis infrastructure, and to the shelfHost CPU. This is available even when the main power is switched off.

1. Connect your PC to the RJ-45 labeled **BMC** on the I/O panel on the front of the system.
2. Connect to IP address *192.168.201.9* from the PC browser and login with credentials as *admin/admin*. The MegaRAC console for remote management is displayed.
Note: If you are not able to access via RJ-45 connector, the IP address may have been changed.
3. Set the IP address to the default value (*192.168.201.9*) by pressing the reset (**RST**) button for more than 5 seconds.

9 Set system time

To check and set the system time:

1. In the **MegaRAC** application, go to **Configuration > System Time** to display the **NTP Settings** screen.
2. Enter the **Date** and **Time** in the given fields.
Note: These fields are enabled only when the option **Automatically Synchronizes Date & Time with NTP Server** is disabled.
3. Select the *Timezone* from the drop-down list.
4. Click **Save**, or
5. Enable the **Automatically Synchronize Date & Time with NTP Server** option to automatically synchronize date and time with the NTP Server.

For more details on how to check and set the system time, refer to the *NTP Settings* section in *MaxCore MC3000 Platform Installation and Use* manual.

10 Power up MaxCore CPUs

Make sure that the system has been located in an area at room temperature for at least 24 hours before powering it up.

There are two options to switch on the main power.

1. Using a pen or similar tool, quickly press the **PWR** button on the MaxCore front panel.
2. In **MegaRAC** application, go to **Remote Control > Chassis Power & Reset**, select **Power On Chassis** and then click **Perform Action** button to power up the box remotely.

Note: Fans will spin up and calm down after a while. The main CPU of the MaxCore platform, the shelfHost, will now boot. Allow a few minutes to complete the boot.

For more information about powering the system CPUs on and off, refer to *Operation and Maintenance* chapter in the *MaxCore MC3000 Platform Installation and Use* manual.

11 Connect to shelfHost over VGA

Like a PC, the shelfHost has access to a built-in VGA. MegaRAC provides the display and a remote connection is established over Ethernet. There is no VGA cable connector provided by the MaxCore platform.

To connect to shelfHost over VGA:

1. Connect your PC to the **BMC** connector and login to MegaRAC (as described in Step 8).
2. Go to **Remote Control > Console Redirection** and click **VGA Console** button.

When everything is setup correctly, a **JViewer** window launches and displays VGA graphics output.

Note: You may need to install or update the Java version on your PC and change the security settings of that Java engine.

12 Connect to any CPU's serial port via BMC

Other CPUs in the MaxCore platform do not have access to the built-in VGA graphics, but the console access is provided over the serial ports. This is required to configure the BIOS and to access a CPU without network connectivity.

You can use the microUSB CONSOLE connector at the card bracket that connects to *tty0/COM1* or you can access *tty1/COM2* over the network via the BMC.

To connect to CPU serial port over the BMC:

1. Use a terminal emulator on your PC (download from <http://www.putty.org/>) to open an *ssh* session on the BMC.
2. Use the same IP address and the login credentials as for MegaRAC, (as described in Step 8).
3. Execute the following command to open a serial console session to a CPU in MaxCore:
`$/conf/sol <slotID> <cpuID>`
4. Replace the *slotID* with a slot number between 1 and 15 and *cpuID* with **1** or **2** for one of the two CPUs in the same slot. You are now connected to the *ttyS1/COM2* port of the selected CPU.
5. Press **<Enter>** one or two times to get an output from the OS. If the display remains dark, it means the target CPU is not powered or the OS responds to *ttyS0/COM1* serial port, which is available at the microUSB connector on the card panel.
6. Terminate the *ttyS* session by pressing **<ESC + t>** at the beginning of a line. It will take you back to the BMC OS prompt.

Alternatively, you can connect to the serial port of each CPU with an USB cable between your PC and the microUSB CONSOLE connector at the card bracket.

- As soon as your target CPU is powered, the PC provides two serial devices.
- The default settings are **38400** baud rate, **8** bits, **no** parity, **no** flow control.
- The BIOS is always visible on this port and the OS must be configured to use the *tty0/COM1* port.

13 Connect to SSF on shelfHost

System Services Framework (SSF) represents the front door entry into the MaxCore platform. It provides access to all application relevant resources including the PCIe cards. SSF is executed by the shelfHost and is supported by the BMC.

To connect SSF on shelfHost:

1. Unplug the cable from **BMC** and plug it into the **ETH4** connector on the I/O panel on the front of the system.
Note: The **ETH4** connector supports 1G and 10G link speed. It does not support 100M link speed. Check if your PC supports 1G link speed, if not, place a 1G switch between PC and **ETH4**.
2. Connect to *172.26.1.2* from the PC browser and login with credentials *Admin/Admin*.
You will see the SSF for the MaxCore GUI application.
3. In the SSF MaxCore GUI, click the **Software Update** button to know about the installed firmware and software. It is recommended to update any new MaxCore platform.
4. For more information about SSF for MaxCore GUI features and operations, click the help icon on the top right corner in the SSF MaxCore GUI application.

For information about documentation available, refer to the *Related Documentation* appendix in the *MaxCore MC3000 Platform Installation and Use* manual.

To install MaxCore MC3000 Platform software on MaxCore PCIe cards, refer to *MaxCore MC3000 Platform Software Installation and Use* manual.

When you install SMART Embedded Computing PCIe cards, refer to the documentation of the respective PCIe card. Contact your local SMART EC sales representative.

14 Single cable for BMC and shelfHost

You can connect your PC to the BMC and shelfHost with a single cable.

1. Make sure the **eth0** interface of the BMC and the **ETH4** interface of the shelfHost have IP addresses from the same subnet.
 - The factory defaults are *172.26.1.1* for the BMC and *172.26.1.2* for the shelfHost.
2. Connect your PC to the **ETH4** connector at the MaxCore front panel and then access BMC and shelfHost over the same cable.

Note: Be aware that the chassis must be powered for any network access over ETH4. Otherwise, you will lose the connection when you power down the chassis from the PC.

Technical Assistance

For technical assistance or to report product damage or shortages, contact your local SMART Embedded Computing sales representative or visit <https://www.smartembedded.com/ec/support/>.

Get More Information



For more information on this product, see the *MaxCore™ MC3000 Platform Installation and Use* manual and other related technical documentation, which can be found by using the Documentation Search at <https://www.smartembedded.com/ec/support/>.



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