GVG Series 7000 Native Setup

A third-party router can communicate with the MC1-MK via the GVG Series 7000 Native protocol over a serial or ethernet connection.

License Key

You must have the MC1-RTR license key installed on your MC1-MK before you can set up communications via the GVG Series 7000 Native protocol. Refer to the *MC1-MK Installation Manual* for details on installing a license key.

Cabling

Refer to the third-party router documentation for specific cabling requirements.

Serial Connection

A third-party router connects to the MC1-MK via the **Serial** port on the MC1-MK rear module.

Refer to the *MC1-MK Installation Manual* for cabling pinouts for the **Serial** port. Ross Video does not supply this cable.

Ethernet Connection

Contact your IT Department before connecting to your facility network to ensure that there are no conflicts. They will provide you with an appropriate value for the IP Address, Subnet Mask, and Gateway for the MC1-MK and your third-party router.

You will require a standard network CAT-5 cable to connect the MC1-MK to your facility network.

Communications Setup

This section outlines how to configure the MC1-MK to communicate with the third-party router.

To set up serial communications

1. From the **Tree View**, expand the node for the MC1-MK you want to access.

2. Select the **Configuration** node to display the interface in the right-half of DashBoard.

3. Select the **Config** tab.

4. Select the **Remote Control** tab.

5. Use the **Port Type** menu to select the transmission standard the MC1-MK uses to communicate with the router. The default is RS-422.

6. Use the **Protocol** menu to select **GVG 7000 Series Router**.

7. Use the **Bit Rate**, **Data Bits**, **Parity**, and **Stop Bits** as required.

8. Use the **Flow Control** menu to determine the data flow between the MC1-MK and the router.

9. Select the **Port Enabled** box to apply your changes and enable serial communications between the MC1-MK and the router.

To set up ethernet communications

1. From the **Tree View**, expand the node for the MC1-MK you want to access.

2. Select the **Configuration** node to display the interface in the right-half of DashBoard.

3. Select the **Config** tab.

4. Select the **Remote Control** tab.

5. Locate the **GVG Series 7000 Native** row.

6. From the **Role** menu, select **Client**.

7. From the **Protocol** menu, select **TCP**.

8. From the **IP Address** menu, specify the IP Address of the third-party router.

9. From the **Port** menu, specify the port number for the third-party router that is connected to the MC1-MK. The default value is **12345**.

10. Select the **Enabled** box.

11. Confirm that the **Remote Control** field reports "Connected". If it does not, verify the third-party router setup.

ROSS

To set up the protocol personality

1. From the **Tree View**, expand the node for the MC1-MK you want to access.

2. Select the **Configuration** node to display the interface in the right-half of DashBoard.

3. Select the **GVG Router Setup** tab.

4. Use the **Level Index** field to specify the level in the router that the transition will include.

5. Select the **Take All Levels** box to include all levels on the router in subsequent Take commands from the MC1-MK.

6. If required, select the **Send Optional Tabs** box to include tabs in the commands sent from the MC1-MK to the router. Only set this if you wish to modify the protocol for any routers that require the extra tab delimiter character before the check code.

7. Use the **Enable Log Messages** options to select what type of information the logging port specified in the **Config** > **Remote Control** tab will capture when communicating with the MC1-MK.

8. If required, select the **Log in Hexadecimal** box to convert the GVG protocol messages into hexadecimal.

9. Select the **Router Status** tab.

10. Use the **Minimum Delay** slider to specify the number of frames the MC1-MK waits between sending the next switch commands to the router.

11. Use the **Retry Interval** slider to specify the number of frames the MC1-MK waits before re-sending the same switch command to the router.

12. Use the **Maximum Retries** slider to specify the maximum number of times the MC1-MK will send the same switch command to the router before the switch is abandoned and an error condition is raised.

Supported GVG Series 7000 Native Commands

The MC1-MK supports a number of GVG Series 7000 Native ethernet commands. The exact commands and how the card reacts to the commands is outlined in **Table 1**.

Table 1   GVG Series 7000 Native Commands

Command	Meaning	Description
QI	Query by Index	The MC1-MK first issues this command 2 fields before "Minimum Delay" (4 fields when using the Serial protocol). Minimum delay before issuing the QI is 1 field following the TI command. The MC1-MK continues issuing QI commands until the expected result occurs or until reaching the Retry Interval value on the TI command.
QN, IS	Query Names	The MC1-MK supports Query Names: Sources with source indexes for label read-back.
TI	Take by Index	Supports two forms of this command: either on a specified level index or on all levels.