Integration Note

Manufacturer:	CoolAutomation
Model Number(s):	**1000D, 2000S, 3000T 4000M, 7000F, 8000I, 9000H, CoolMaster, CoolMasterPRO, CoolMasterNet, CoolLinkHUB, CoolLinkBridge**
Minimum Core Module Version:	8.7
Document Revision Date:	10/18/2022

OVERVIEW AND SUPPORTED FEATURES

This driver allows a **g!** system to communicate with a Coolmaster climate system via RS-232 or Ethernet.

COOLMASTER CLIMATE SYSTEMS SUPPORT THE FOLLOWING FEATURES:

Any feature not specifically noted as "supported" is not supported.

Temperature Control: Temperature control can be managed by the viewer. Temperature can be shown as either Fahrenheit or Celsius on the viewer interface, and show one decimal place or whole numbers only.

Schedule Control: Multiple schedules can be set using the Viewer software.

Mode Control: Depending on the Coolmaster interface being used, the modes Cool, Dry, Heat, Auto and Fan may be supported. These can be enabled/disabled for each Thermostat in Configurator.

Fan Control: Depending on the Coolmaster interface being used, Fan modes of On, Off, Low, medium, High, Top and Auto may be supported. These can be enabled/disabled for each Thermostat in Configurator.

Device Discovery: Discovery of connected devices.

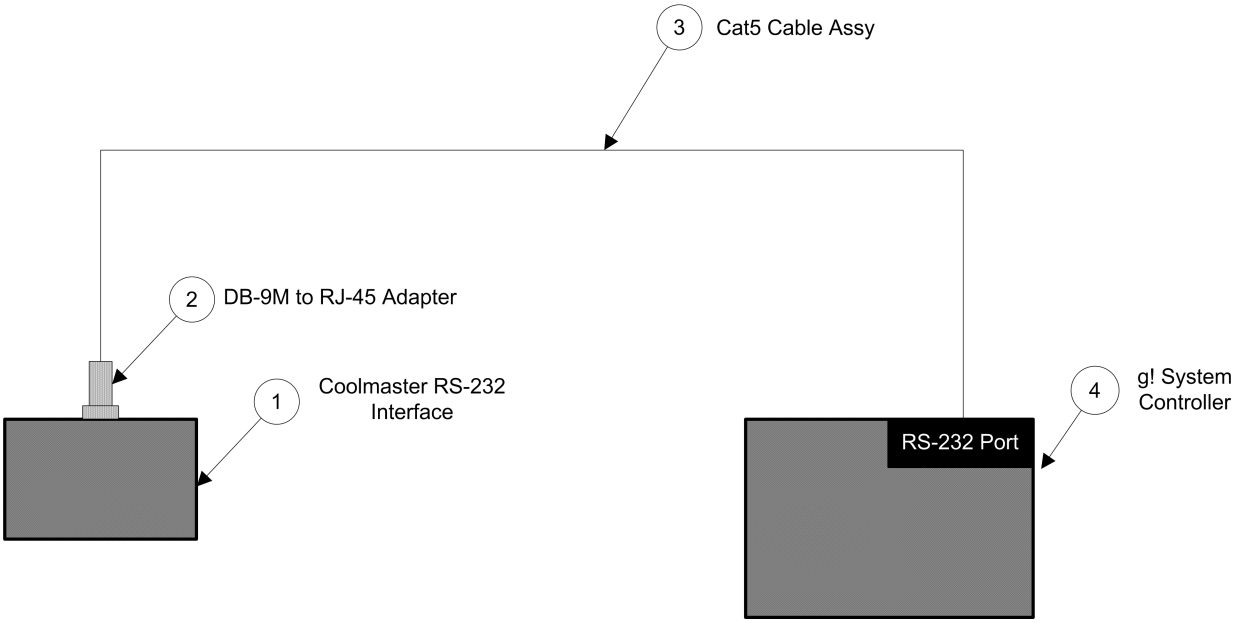
History View: The history view shows the inside temperature, outside temperature, unit run times, and the current set point.

COOLMASTER MODEL MODE SUPPORT:

Model	Supported Climate Modes	Supported Fan Speed Modes
1000D	Off, Cool, Heat, Dry, Fan, Auto	Low, Medium, High
2000S	Off, Cool, Heat, Dry, Fan	Low, Medium, High, Auto
3000T	Off, Cool, Heat, Dry, Fan	Low, Medium, High, Auto
4000M	Off, Cool, Heat, Dry, Fan	Low, Medium, High, Auto, Top
7000F	Off, Cool, Heat, Dry, Fan	Low, Medium, High, Auto
8000I	Off, Cool, Heat, Dry, Fan	Low, Medium, High, Top
9000H	Off, Cool, Heat, Dry, Fan	Low, Medium, High
NET	Off, Cool, Heat, Dry, Fan, Auto	Low, Medium, High, Auto
CoolLinkHUB	Off, Cool, Heat, Dry, Fan, Auto	Low, Medium, High, Auto, Top

CONNECTION DIAGRAM: RS-232 CONTROL

Refer to the **Bill of Materials** and **Wiring Diagram** that follow:

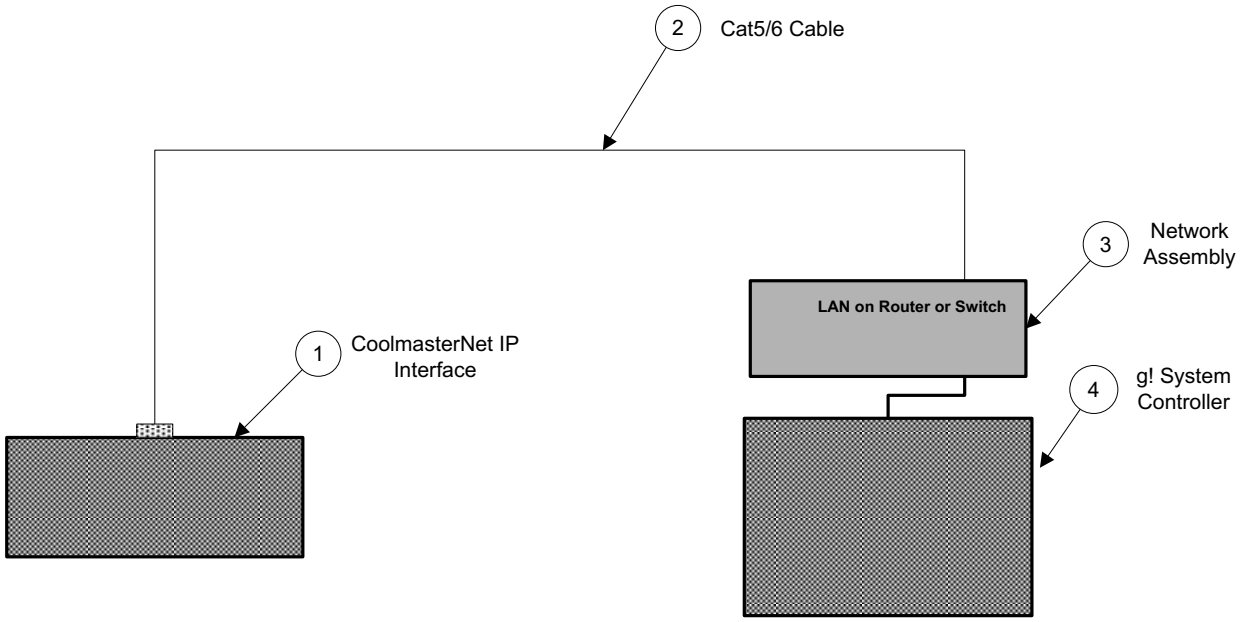


BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	RS-232 Interface	Coolmaster	Various (e.g. 1000D)	RS-232	DB-9 Female	
2	DB-9M to RJ-45 Adapter	ELAN	HA-CB-307	RS-232	DB-9 Male X RJ-45 Female	
3	Cat5 Cable Assy.	Installer	N/A	RS-232	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
4	g! Controller	ELAN	Various (e.g. HC12)	RS-232	RJ-45 Female	

CONNECTION DIAGRAM: ETHERNET CONTROL

Refer to the **Bill of Materials** and **Wiring Diagram** that follow:



BILL OF MATERIALS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	IP Interface	Coolmaster	CoolmasterNet	Ethernet	RJ-45 Female	
2	Cat5 Cable Assy.	N/A	N/A	Ethernet	RJ-45 Male X RJ-45 Male	
3	Network Assembly	Elan	NWA18	Ethernet	RJ-45 Female	
4	g! Controller	ELAN	Various (e.g. SC10)	Ethernet	RJ-45 Female	

CONFIGURATION OVERVIEW

The Coolmaster climate system must first be installed and configured by a suitable qualified and experienced installer. Further information about Coolmaster installation can be found here: http://www.coolautomation.com/.

The CoolmasterNet and CoolLinkHUB Ethernet-controlled devices can be configured to support multiple “lines” of thermostats. This is NOT supported in the driver. All thermostats must be installed on the same line, and the line number (“L1” – “L8”), must be defined in the driver’s properties.

Groups

Coolmaster systems use groups to allow several thermostats to be controlled together.

If grouping is not supported by your device (e.g. CoolLinkHUB), then the **Settings** field of each discovered thermostat in configurator should be ignored (and will say **No Group**).

If your device supports groups, and you have groups already defined in Coolmaster, these will be automatically detected in the thermostat **Settings** field when you discover thermostats in **g!.** If you have no groups setup already, you can choose to assign a thermostat as a Group Master or Slave in the **Settings** field. If a thermostat is assigned as a Group Master, all Group Slave thermostats will mirror any configuration changes made to the Group Master. You can then choose to display only the Group Master thermostat in the user interface.

Disable/Enable HVAC and Fan Modes

If a thermostat doesn’t support a certain HVAC or Fan mode, the mode option can be hidden in the user interface of the thermostat by removing the mode from the **HVAC** or **Fan** setting of the thermostat in configurator.

HVAC modes

c=Cool,

d=Dry,

f=Fan,

h=Heat,

a=Auto.

For example the string "**c,h,a**" would enable **Cool, Heat, Auto**, but disable all other HVAC options from appearing in the UI of the thermostat.

Fan modes

a=Auto, l=Low, m=Medium, h=High, t=Top,

sV=Swing Vertical, sH=Swing Horizontal, s30=Louvre 30°, s45=Louvre 45°, s60=Louvre 60°, sA=Swing Auto, sS=Swing Stop

For example the string "**a,l,m,sA,sS**" would enable **Auto**, **Low**, **Medium**, **Swing Auto** and **Swing Stop**, but disable all other Fan options from appearing in the UI of the thermostat.

G! CONFIGURATION DETAILS

The following table provides settings used in the **g!** Configurator. Please refer to the Configurator Reference Guide for more details.

- "<Select from list>" in the Configurator. — Select the appropriate item from the list (or drop-down)
- "<User Defined>", etc. — Type in the desired name for the item.
- "<Auto Detect>", etc. — The system will auto detect this variable.

Refer to the **g! System Programming Details** below for additional information.

Devices	Variable Name	Settings (Serial)	Settings (Ethernet)
Communication Devices	Name	<User Defined> (Default: **Cool Master RS232**)	<User Defined> (Default: **Cool Master IP**)
	System #	<Auto Detect>	<Auto Detect>
	Device Type	**Serial Port / Cool Master RS232**	**Ethernet / Cool Master IP**
	Enable Sharing	<Select from list>	<Select from list>
	COM Port	<Select from list>	*Not Applicable*
	Protocol	<Auto Detect>	*Not Applicable*
	Baud Rate	<Auto Detect>	*Not Applicable*
	Flow Control	<Auto Detect>	*Not Applicable*
	Parity	<Auto Detect>	*Not Applicable*
	Data Bits	<Auto Detect>	*Not Applicable*
	Stop Bits	<Auto Detect>	*Not Applicable*
	Server(s)	*Not Applicable*	<Select from list>
	IP Address	*Not Applicable*	<User Defined> (Enter the IP address of the CoolmasterNet unit)
	Port	*Not Applicable*	<User Defined> (Default: **10102**)
Thermostats	Name	<User Defined> (Default: <Auto Detect>)	<User Defined> (Default: <Auto Detect>)
	System #	<Auto Detect>	<Auto Detect>
	Driver Version	<Auto Detect>	<Auto Detect>
	Driver Vendor	<Auto Detect>	<Auto Detect>
	Device Type	**Cool Master Thermostat**	**Cool Master Thermostat**
	HVAC	<User Defined> (Default: c,d,f,h,a)	<User Defined> (Default: c,d,f,h,a)
	Fan	<User Defined> (Default: a,l,m,h,t,sV,sH,s30,s45,s60,sA,sS)	<User Defined> (Default: a,l,m,h,t,sV,sH,s30,s45,s60,sA,sS)
	Communication Device	<Select from list> (Choose Serial Communcation Device)	<Select from list> (Choose Ethernet Communcation Device)
	Thermostat ID	<Auto Detect>	<Auto Detect>
	Settings	<Select from list>	<Select from list>
	Heating Unit	<Select from list>	<Select from list>
	Cooling Unit	<Select from list>	<Select from list>
	Show Usage in History	<Select from list>	<Select from list>
Schedules	Number of Schedules	<Select from list>	<Select from list>
	Select House Modes for Schedules	<Select from list>	<Select from list>
	Periods per Day	<Select from list>	<Select from list>
	Number of Weekly Programs	<Select from list>	<Select from list>
	Select Days for each Weekly Program	<Select from list>	<Select from list>
Global Options	Units	<Select from list>	<Select from list>
	Temporary Hold Mode	<Select from list>	<Select from list>
	Temporary Hold Default Time	<Select from list>	<Select from list>
	Outside Temperature Sensor	<Select from list>	<Select from list>
	Outside Humidity Sensor	<Select from list>	<Select from list>

COMMON MISTAKES

- Not entering the correct IP address and port number into the driver properties.
- Not selecting the correct COM port in the driver properties.
- Not selecting the correct "line" number in the driver properties.