

ControlLogix ControlNet Interface Module, Series E

Communication Module Catalog Numbers 1756-CNB/E, 1756-CNBR/E

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About This Publication

These release notes cover the 1756-CNB and 1756-CNBR ControlLogix ControlNet Interface Modules, Series E firmware, revision 11.005 and earlier. The 1756-CNB/E and 1756-CNBR/E modules support all nonredundant ControlLogix applications.

IMPORTANT The 1756-CNB and 1756-CNBR series D modules are supported only in ControlLogix redundancy revisions 8, 11, 13, and 15. After a firmware upgrade to revision 11.xx, series E will be supported in ControlLogix redundancy revision 15 or later. You cannot upgrade a series D module to a series E module.

Corrected Anomalies

These anomalies have been corrected in firmware revisions 11.005 and earlier.

Corrected Anomalies in Revision 11.005

Revision	Anomaly	Description
11.005	A BW and/or BX message appears on the four character display.	The 1756-CNB module may incorrectly report BX and/or BW>MAX on the display indicating that its ControlNet bandwidth has been exceeded. Each BX or BW event may cause incoming ControlNet data to be lost and, under rare conditions, may result in a connection timeout. Lgx00084318
	The module reports incorrect CPU utilization.	An anomaly was introduced in firmware revision 11.003 that caused the 1756-CNB module to incorrectly calculate the CPU utilization value to be up to 20% higher than expected. Configurations that were running at a high CPU utilization in revisions prior to 11.003 may experience 'Resource Unavailable' errors when the module was upgraded to 11.003 or 11.004. Lgx00093372
	SNGL KPR! not displayed when connected to a single-keeper network.	The 1756-CNB/E module did not correctly detect that it had been connected to a legacy ControlNet 1.5 (single-keeper) network. Lgx00091469
	A premature timeout of connection requests to busy devices in the chassis.	In some rare instances, the 1756-CNB module may not wait the full unconnected-message timeout for a connection request when the target device in the chassis is out of unconnected buffers. The module in the RSLogix 5000 software I/O tree connected to MSG instructions may intermittently report 16#204 'Unconnected Message Timeout'. Lgx00089441

Revision	Anomaly	Description
11.004	The OK status indicator remained flashing red.	After the module recovers from a NET ERR condition, the OK status indicator may remain flashing red until the first connection has been established through the module. Lgx00076105
	A new extended status code available: 16#812.	The 1756-CNB and 1756-CNBR modules now report error code 16#812 whenever its node address does not match the expected address. Lgx00075548
	A single-channel 1756-CNB module at the lowest node causes a network disruption.	Using a single-channel 1756-CNB module as the lowest node on a ControlNet network that has media redundancy configured for channels A and B or as a B only network may prevent normal network operation. Symptoms include the following: <ul style="list-style-type: none"> • Loss of all scheduled connections for the network • New devices are prevented from joining the network • Module fault. Display reads: ASSERT: smacdrv.c line 3440 Lgx00076950
	A fault occurred due to an unterminated ControlNet cable.	Leaving the ControlNet network unterminated for long periods of time may cause the 1756-CNB or 1756-CNBR modules to fault. The module display reads: ASSERT: smacisr.c. Lgx00070692
11.004	A power cycle caused a persistent fault, 16#0304.	A 1756-CNB or 1756-CNBR module that is also the current Active Keeper may fail any connections with an error code 16#304 (No Scheduled Configuration) if lower nodes are power cycled just after a major network disruption. Lgx00076167
	The ControlNet channel media redundancy state not configured correctly.	A 1756-CNB or 1756-CNBR module that is the current Active Keeper may not apply the channel media redundancy state correctly after a new RSNetWorx software project has been downloaded. Lgx00073910
11.002	1756-CNB and 1756-CNBR modules stop communicating.	All 1756-CNB and 1756-CNBR modules with firmware revisions prior to 11.002 will stop communicating after 70.96 days of powered operation. If this occurs, the OK status indicator will be solid red and the four character display on the front of the module will either freeze or scroll the message: ASSERT main.c line 1231. This anomaly can be avoided by removing and reinserting the ControlNet module, or cycling power to the chassis within the 71 days. Because the module will halt in another 70.96 days, you must perform a mandatory firmware upgrade to revision 11.002.
	1756-CNBR module may revert to using channel A only.	If the 1756-CNBR module is the only Active Keeper on the network while cycling power or there is a disruption, the module may revert to using channel A only.

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Revision	Anomaly	Description
10.007	The module displays an active/invalid keeper state.	<p>The TUI Polling sequence in revision 10.006 and earlier did not complete correctly, resulting in an Active/Invalid Keeper state on the module. In this state, new scheduled connections were prevented from forming on the network.</p> <p>Specific conditions for the anomaly include the following:</p> <ul style="list-style-type: none"> • Network running at the nondefault network parameters • No Active Keeper present on the network • The running network parameters match the values saved in its Keeper memory <p>Under these specific conditions, whenever a Keeper-capable device was attached onto a network it should have entered the TUI Poll state and did not.</p> <p style="text-align: right;">Lgx00066701</p>
	Downloading RSNNetWorx software project through bridge to 1756-CNB or 1756-CNBR, series E module fails.	<p>The RSNNetWorx software project may have failed with the following error message while performing either a download or . . . :</p> <ul style="list-style-type: none"> • Unable to send message to the online Active Keeper device due to resource limitations... • While performing either a download or an online save when the online path is through a gateway and the last hop is a 1756-CNB/E or 1756-CNBR/E module. <p style="text-align: right;">Lgx00066708</p>
10.007	The 1756-CNB or 1756-CNBR module, series E, may force its keeper parameters on the network which may not match the current configuration.	<p>If no other modules are on the ControlNet network, or the modules are not attached to a ControlNet network, the Keeper has skipped the first few nodes if it entered the TUI Poll state.</p> <p>Specific conditions for the anomaly include the following:</p> <ul style="list-style-type: none"> • Network running at the nondefault network parameters • No Active Keeper present on the network • The running network parameters match the values saved in its keeper memory • Number of nodes on the network is five or fewer <p style="text-align: right;">Lgx00066975</p>
10.006	Module halts operation.	<p>An anomaly seen in revision 10.004 or earlier, in which the module halts operation, was corrected. A frozen four-character display and a red OK status indicator are indicative of this condition, which will occur at approximately 70.96 days of continuous operation. Any reset or power cycle of the module clears the fault and returns the module to normal operation. The firmware revision 10.006 upgrade is mandatory for 1756-CNB and 1756-CNBR series E modules.</p>

Notes:

Additional Resources

These documents contain additional information concerning related Rockwell Automation products.

Resource	Description
ControlLogix ControlNet Bridge Module, Series E Installation Instructions, publication 1756-IN604	Provides guidelines for installing ControlNet single-media and redundant bridge modules.
ControlLogix Redundancy System User Manual, publication 1756-UM523	Guides the design, development, and implementation of a redundancy system for a ControlLogix controller.
ControlNet Coax Media Planning and Installation Guide, publication CNET-IN002	Provides ControlNet network planning information.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature/>.

To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

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