

ABB Mint Controller HCP driver for JMobile

This document contains the information needed to connect the panel to control devices using the ABB Mint Controller HCP communication protocol over a serial communication link.

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ABB Mint Controller HCP Driver

This communication protocol allows the panels to connect to the ABB motion and servo drive devices using the HCP and HCP2 communication protocols.

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Version 1.00

Settings

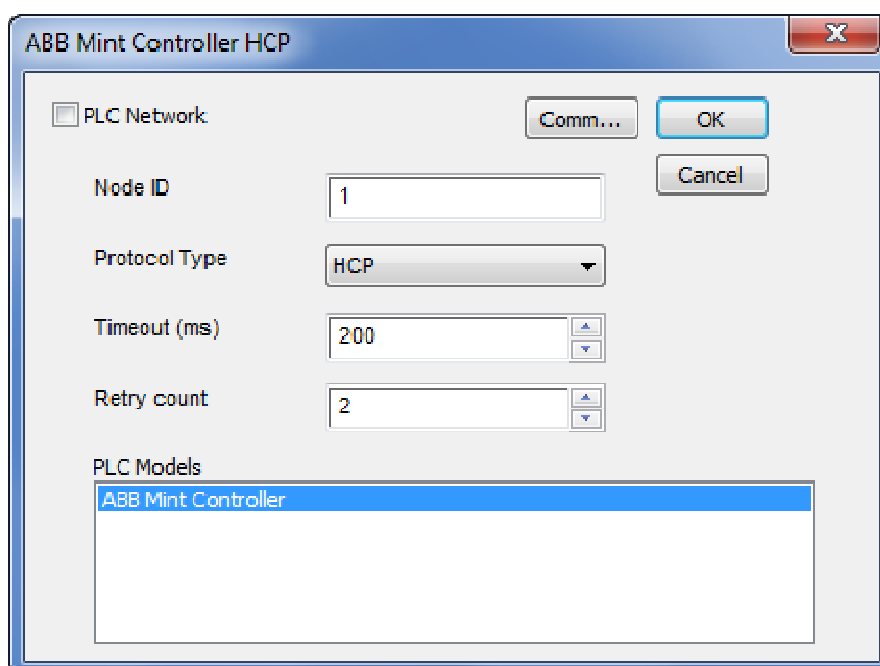


Figure 1

Node ID	Node ID assigned to the controller device
Protocol Type	Protocol selection; two protocols are available: HCP and HCP2; select the one requested by the specific device
Timeout (ms)	Defines the time inserted by the protocol between two retries of the same message in case of missing response from the server device. It is expressed in milliseconds.
Retry count	This parameter defines the number of times a certain message will be sent to the controller before reporting the communication error status. A value of 1 for the parameter "No of repeats" means that the panel will eventually report the communication error status if the response to the first request packet is not correct.
PLC Models	Controller model list
PLC Network	The protocol allows the connection of multiple controllers to one operator panel. To set-up multiple connections, check "PLC network" checkbox and enter the node ID per each slave you need to access.

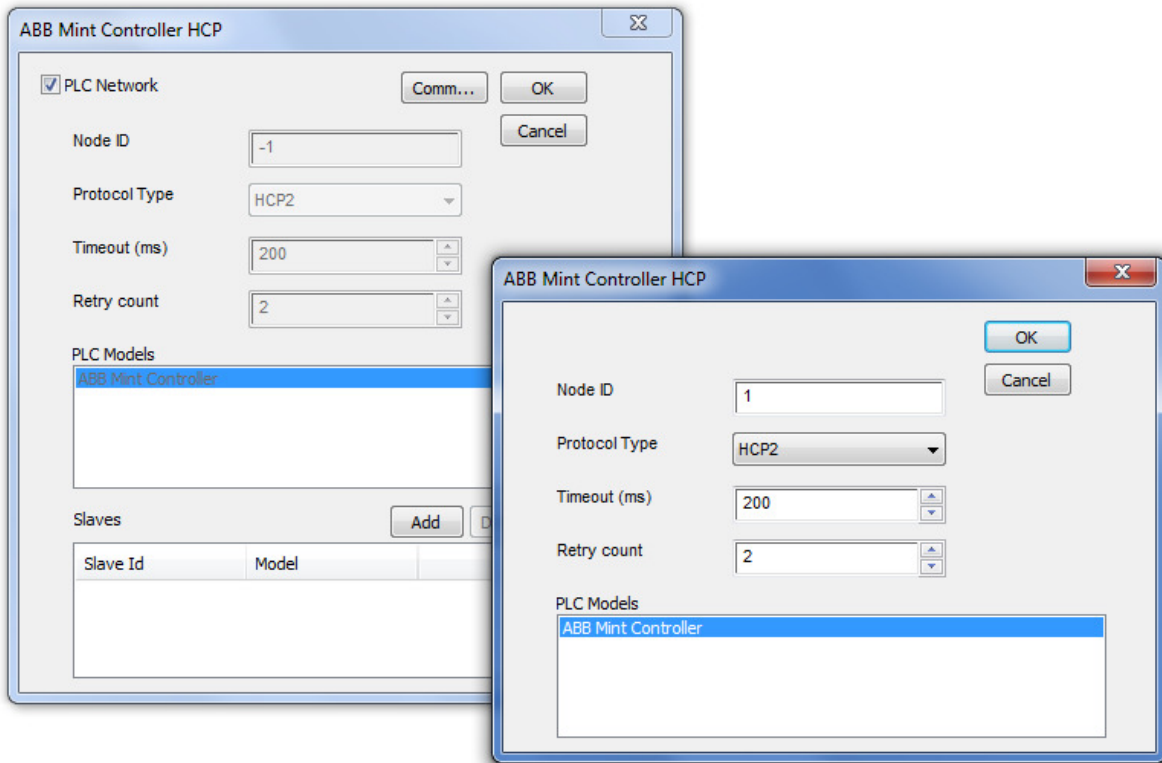


Figure 2

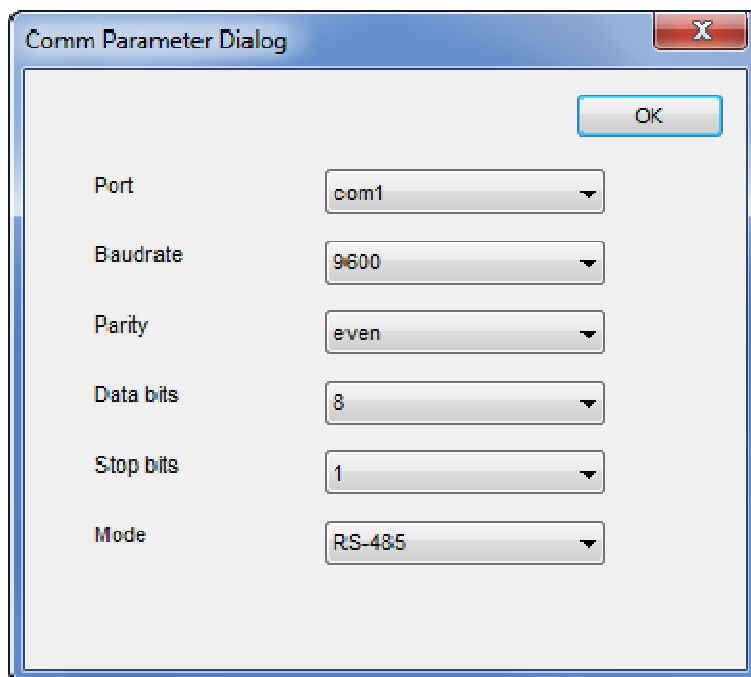


Figure 3

Port	Serial port selection. COM1 is the panel PLC port, COM2 is the PC/Printer port
Baudrate, Parity, Data bits, Stop bits	Communication parameters for the serial line
Mode	Serial port mode; can be selected between: RS-232, RS-485 (2 wires) RS-422 (4 wires)

Data types

The ABB Mint Controller HCP driver provides the support for two Memory Types: Comms and CommsInteger.

The two memory types are actually referring to the same physical memory area in the Mint controller. The Comms memory type should only be used with floating point values (and the Mint program on the ABB controller should use COMMS to access this data).

The CommsInteger memory type accesses the same locations on the Mint controller but allows a variety of integer-based data types to be selected as shown in figure 4.

If the Mint controller program uses the Mint COMMS keyword for a tag setup to use the Commsinteger memory type then only the bottom 23 bits will be accurate (due to floating point precision of the COMMS keyword).

If the Mint controller program uses COMMSINTEGER for a tag setup to use the Commsinteger memory type then the value is precise for the full 32 bits.

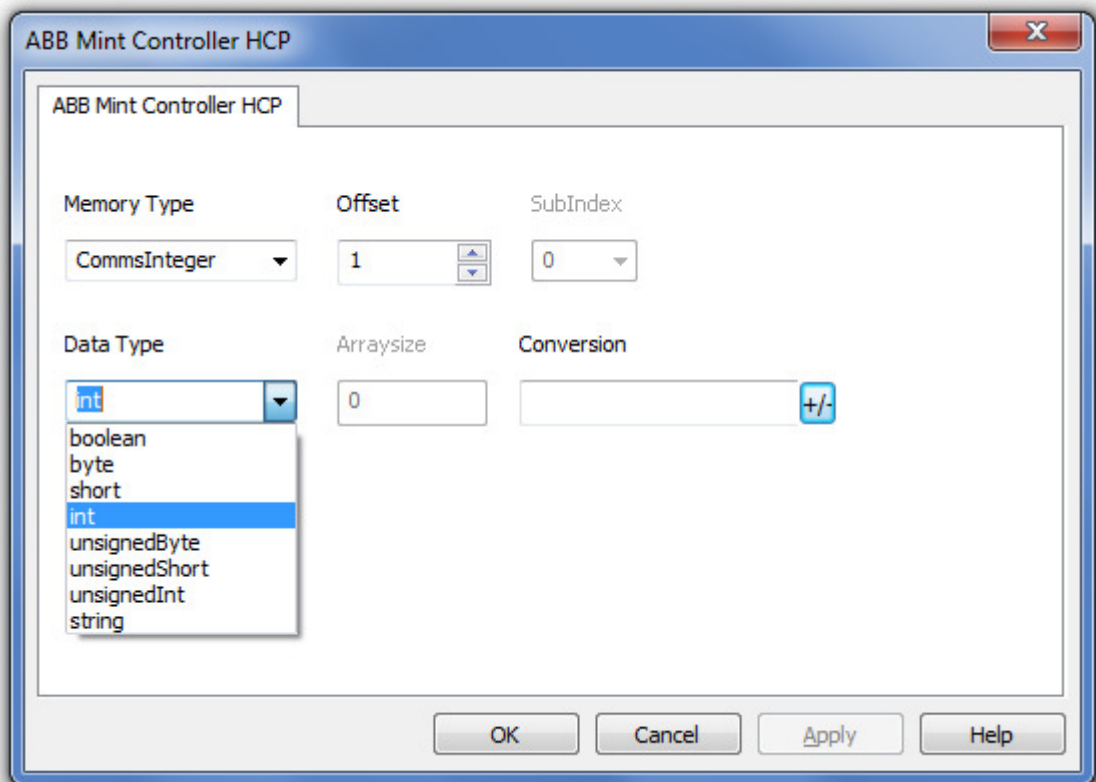


Figure 4

Communication Status

The current communication status can be displayed using the dedicated system variables. Please refer to the User Manual for further information about available system variables and their use.

The codes supported for this communication driver are:

Error	Notes
NAK	Returned in case the controller replies with a not acknowledge
Timeout	Returned when a request is not replied within the specified timeout period; ensure the controller is connected and properly configured to get network access
Line Error	Returned when an error on the communication parameter setup is detected (parity, baud rate, data bits, stop bits); ensure the communication parameter settings of the controller is compatible with panel communication setup
Invalid response	The panel did receive a response from the controller, but its format or its contents are not as expected; ensure the data programmed in the project is consistent with the controller resources
General Error	Error cannot be identified; should never be reported; contact technical support