

New Features of Communication Drivers

The purpose of this document has two folds:

- 1) The driver developers are able to develop and test the new communication drivers with the new features for the software V1.2.
- 2) The application engineers can explain the new features to the customers and make demo projects for the new features.

New Features

- 1) Supports the sub-links. An RS485 link can have many slave devices connected to it. The HMI uses the same communication protocol to talk with all those slave devices. The connection between the HMI and each of the slave devices is a sub-link. With the Sub-link table, the operator can enable or disable a sub-link at any time.
- 2) A link can be disabled or enabled dynamically. The macro command EN_LINK is designed for this purpose. This command can also be used for sub-links.
- 3) Supports the logging of communication status. If this feature of a link is selected, the communication status of that link or that link's sub-links can be recorded in the operation log. The recordable types of status include: Enabled, Disabled, Failed, and Recovered. The operation log display can show the logged communication status.
- 4) Supports reliable termination of the DLL drivers. This is extremely important for the SCADA software. The DLL drivers should be successfully terminated without causing any system crash under any conditions. The current DLL drivers have problems of termination if they are in some abnormal conditions such as COM port initialization failure, connection failure, and no PLC response error.

One important thing is that the driver designed or modified for the software V1.2 should still work well with the software V1.1.

Using Macro Command to Enable/Disable Communication Link

The macro command EN_LINK can enable or disable a communication link dynamically. The format and the parameters of this command are shown below.

EN_LINK(*p1*, *p2*, *p3*)

p1: The link number of the communication link to be enabled or disabled.

p2: The node address of the sub-link to be enabled or disabled. If the specified link has no sub-link, this parameter is ignored. If the specified link has sub-links and you want to enable or disable the link itself, this parameter should be 0.

p3: Specifies whether to enable or disable the specified link/sub-link. If this parameter is 0, the link/sub-link is disabled. If the parameter is 1, the link/sub-link is enabled.