

通信驅動的新特點

本文的目的有二：

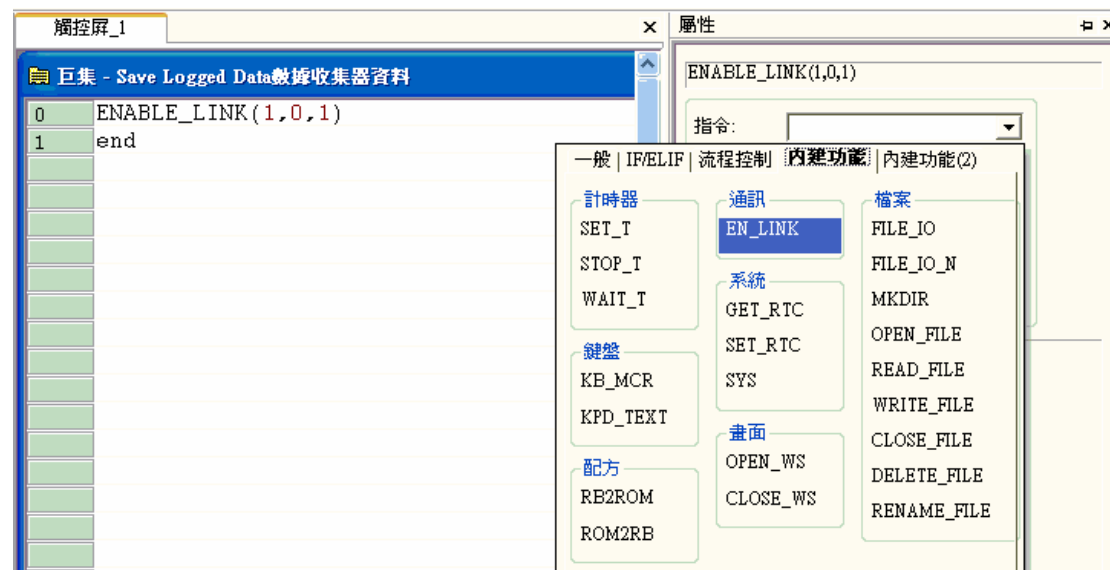
- 1) 驅動開發者能為本軟體 V1.2 開發和測試新的通訊驅動與新的特點。
- 2) 應用工程師能解釋新的驅動特點，也可以對顧客展示新的特點。

新功能特點 **New Features**

- 1) 支持次連線。針對 RS485 鏈接可能有許多子設備連接到它。HMI 使用同一個通信協議與所有那些子設備通訊。HMI 和每一個子設備之間的連接稱之為次連線。經由次連線表，操作員能在任何時候控制讓子設備致能或取消連線。
- 2) 連接可以動態地取消或致能。巨集(宏)指令 `EN_LINK` 就是為完成此一應用要求而設計。這個命令也可以為次連線來使用。
- 3) 支援監測通信狀態。如果連接的這個監測通信狀態特點被選擇，那麼這個連接或這個連接的次連線的通信狀況在操作日誌就可以被記錄。會被記錄的狀態類型包括：致能，取消，出故障和恢復連線。操作日誌可顯示當前的通信狀態。
- 4) 支持 DLL 驅動從此可以被可靠的終止程序。這對圖控軟體是極端重要的。現在的 DLL 滿足其他程式可以成功地終止 DLL 驅動，而且保證在所有情況下，不會導致任何系統當機事故的發生。如果 DLL 驅動在某個異常條件、例如 COM Port 初始化失敗、連接失敗和沒有 PLC 反應錯誤，先前本軟體 v1.1 舊 DLL 驅動會有不正常終止的問題。

一件重要的事是新為本軟體 V1.2 設計或修改的驅動，應該會仍然可以在本軟體 V1.1 使用的。

使用巨集(宏)指令致能/取消通信



巨集(宏)指令 **EN_LINK** 可能動態地致能或取消通信線路的能力。

EN_LINK 命令格式和這個命令的參數如下所示。

EN_LINK(p1, p2, p3)

p1: 將致能/取消通信線路的連接數字(Link Number)。

p2: 將致能或取消通信的次連線的連結設備地址。如果指定的鏈接沒有次連線，這個參數就忽略。如果指定的連接有次連線，而且當您想要使使次連線致能或取消通信，使次連線整體失去能力，這個參數應該是 0。

p3: 啟動或關閉所指定的通訊鏈接或次連線。如果這個參數是 0，鏈接或次連線是關閉連接。參數是 1，連接或次連線是啟動連接。

New Features of Communication Drivers

The purpose of this document has two folds:

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

New Features

- 5) 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.
- 6) 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.
- 7) 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.
- 8) Supports reliable termination of the DLL drivers. This is extremely important for the PanelExpress. 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.