



## QUICK GUIDE to using the LINK - DSD software



### Insert the standard SSD serial lead into a LINK module (LINK 2 if possible)

Before you can go online with LINK to use the SAM (Setup and Monitor) features you must create a CE module list. This is done by selecting **UPDATE PARTIAL** or **UPDATE FULL** from the **WINDOW** menu list. **Note** that this listing does not update automatically as the fibre-optic network is only updated once so you must do an update if you unplug the lead to say, plug in elsewhere in the system.

A graphical **SAM** window can be opened by highlighting the required node in the module list using the mouse pointer and then pressing **ENTER**. It is a good idea to resize the window so that you can see the scratchpad. **Keep the Scratch card and module visible at all times**. If you want to know what a **block** does then you can open the **help** file by highlighting the block and then pressing **shift/enter**.

For **Navigating** around a graphical SAM window you can use the four arrow keys, you can also zoom in on an area by dragging a box around the area to be magnified and **'zoom' out to full page again just press 3**. Some nodes have several sheets and you can ascertain which sheet you are viewing from the **DRAW** menu and then scroll through the sheets using **shift/PGUP** or **shift/PGDN**. Generally **don't** use the function keys.

Parameters can be **Monitored** in several ways:

**I) Monitor** each parameter directly by moving the mouse pointer over the parameter to be displayed until a crosshair appears (x) and then left click the mouse. The instantaneous value appears on the scratch pad and updates in the SAM window too.

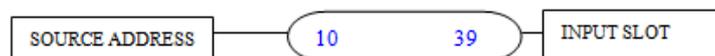
**II) Monitor** each parameter discretely using a parameter window by highlighting the necessary function block then pressing enter, then selecting the required **GET** parameter from the list by pressing enter. Again the value appears on the scratch pad.

**III) Chart** one parameter continuously. Again open up a parameter window, select the required GET parameter from the list and then select **CHART** from the **COMMAND / SAM** menu option. The continuous value appears. The time base can be set (0.1sec or greater). Range is +/-100%

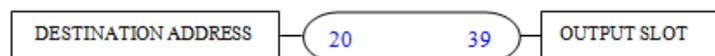
**IV) Monitor List**, especially useful if you want to monitor more than one parameter dynamically. Again open up a parameter window but select the required GET parameter by highlighting it then pressing **shift enter**. A monitor list window appears and the dynamic value is displayed. You will need to overwrite the previous monitor list. Other parameters from anywhere on the system can be added to this Monitor List.

To assist in navigating between nodes LINK provides link Input and Output tags as below:

LINK INPUT - NODE 20



LINK OUTPUT - NODE 10



www.sasdrives.com - info@sdsdrives.com 0044 (0) 1179 38 18 00

## QUICK GUIDE TO FAULT FINDING ON LINK

Firstly look at the status of the link modules and drives to determine if a particular node is at fault.

Link 1 units should have a permanently lit red led, link 2 unit's display the digit 7 and on the 590L Drives the health led is lit. You may find that the led's are flickering, if so determine if a node is flickering at a different rate to the rest as this may help identify the node at fault.

LINK 2 Modules on the list also show a list of additional diagnostics – the end Right column counts Errors- these are 'serious' potentially leading to LINK 'crash'. If this error value counts up over a period of time then the Fibre-optic cable or cards around this card should be checked.

Go on line with [LINK DSD](#) and create a Module List (WINDOW Full Update) paying particular interest to the address and the status of each node. If for any node the status does not indicate OK then there is a fault. Before you clear the fault select each faulty node in turn by highlighting it and from the [COMMAND](#) menu select [GET INFO](#). This brings a message up on the scratchpad to aid fault finding but also gives a record as the scratchpad automatically saves to a text file which can be used later.

Common status of LINK nodes is OK, PEER HALTED, with alarm states being -CHECKING NETWORK, HALTED, NO CONFIGS, L-ERROR, H-ERROR & DUP-ADDRESS.

Refer to LINK Ring Topology for the machine if possible. If the address is not as indicated in the table then the system has re-addressed the node for some reason and the configuration file for that node will have to be re-installed at the required address as follows:

- 1) In the CE module list highlight the node with fault or incorrect address.
- 2) Select [MANAGE](#) from the [PROJECT](#) menu; select the LINE program then click on DONE.
- 3) Select [OPEN](#) from the [FILE](#) menu, then select the description of the node with the faulty address and its configuration file will open.
- 4) From the [COMMAND](#) menu select [INSTALL AT SELECTED](#). The CE module list should update automatically showing the correct address.

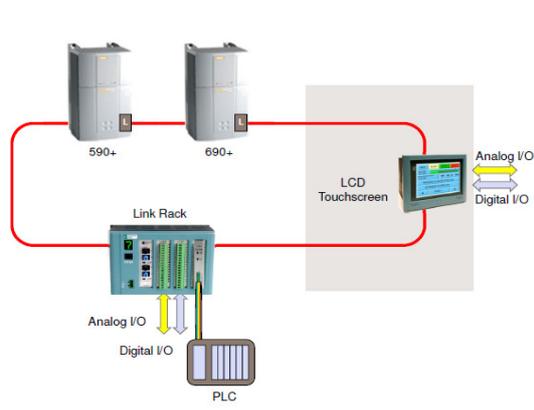
If the status of a node indicates [NO CONFIG](#) then re-install as above.

If the status of a node indicates [SELF TEST FAILURE](#) then the module needs to be replaced and the configuration file installed as above.

A typical **LINK 1** system



A typical **LINK 2** system





L5300, L5301 LinkRacks

## SETUP & TROUBLESHOOTING

Apply power once you have fully wired the unit. If the unit has a configuration pre-installed in its memory, the *LINK* network is established and all *LINK* devices on the network are functional, the seven-segment green LED status display should read "7".

If the display does not power up, you may connect the serial port on a personal computer running DSD or ConfigEd version 5 or higher, to the module's RTNX port located on the face of the unit. Poll the module with the GET INFO function to identify the state. Or, check the status display on the face of the unit. Each number or letter indicates a different error. Use the table below to identify the error and correct the problem.

NOTE. All *LINK2* modules operate in either a "boot" or a "run" state. The decimal point in the status display differentiates between the two. If the decimal is on, then the module is in boot mode; if off, it is in run mode. A blinking status number— shown below with an asterisk (\*)— indicates that the module is not running its configuration.

### Status Display codes

#### BOOT CODES

Code	Status	Meaning/ Action
1 . *	Halted	DSD/ConfigEd requested boot mode or rear cover is off. Replace rear cover or restart the module.
2 . *	No Config	Flash memory is empty, or persistents were invalid. Reinstall the configuration.
5 . *	Self-Test-failure	One or more self tests failed. Contact Customer Service.

#### RUN CODES

Code	Status	Meaning/ Action
0 . *	Initializing	Configuration is decompressed from flash into ram.
1 . *	Halted	DSD/ConfigEd requested halt. Use ConfigEd to restart module.
2 . *	No Config	Persistents were invalid. Reinstall the configuration.
3 . *	L-Error	Low-level error. See <i>LINK Overview Manual</i> section 8.3.3.
4 . *	H-Error	High-level error. Indicates a problem with a function block. Contact customer service.
6 . *	Shutdown	A function block (likely SYSTEM CONTROL) forced a shutdown.
7 . *	OK	Module is running and the fiber optic network is OK locally.
8 . *	Network Warning	Brief loss of received <i>LINK</i> signal, or a long-term loss in topologies where the signal is redundant or optional. Network is intact but may require service.
9 . *	Net Fail	Long-term loss of a fiber optic signal which is required by the configured topology.
A . *	Checking Net	Module is starting-up and attempting to send a message to itself. If it persists, the ring is physically broken.
b . *	Peer Halted	Module is starting-up and was able to send a message to itself. It waits here for all other modules to do the same.
C . *	Dup. Address	While "Peer Halted", the module found duplicates of its configured address in other module(s). Use DSD/ ConfigEd to install configurations with unique addresses.