



Manufacturer: Linn
 Model: DS Media Streamers
 Device Type: Media Player

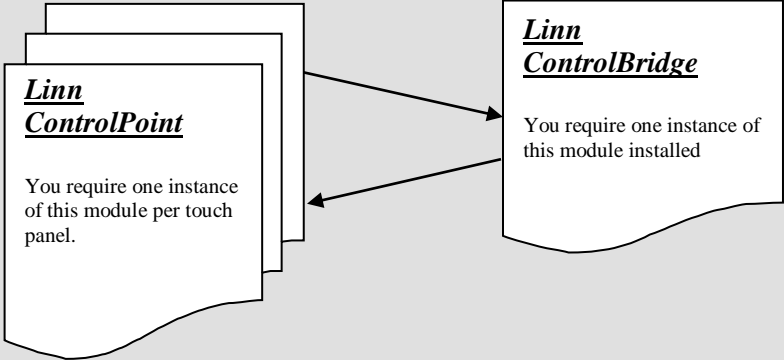
CONTACT SUPPORT:

COMPANY NAME:	Linn
SUPPORT CONTACT:	N/A
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NOTES:	Control of the Linn is via TCP. No connection handling set up is required; this is all managed in the module.

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Linn_DS_V4_1_37_Media_App_Demo_MC3.smw
CATEGORY:	Media Server
VERSION:	4.1.37
SUMMARY:	This driver has been designed to provide two-way control of Linn DS, DSM and pre-amplifier products, via TCP/IP. At the time of writing, the following models are supported: Klimax DS, Klimax DSM, KlimaxKontrol, Akurate DS, Akurate DSM, AkurateKontrol, Majik DS, Majik DS, Majik DS-I, MajikKontrol, Majik-I, Sneaky Music DS, Sneaky Music DSM, Sekrit DSM, Sekrit DS-I, Kinos, Kisto, RoomAmp2, Unidisk SC, Classik Movie, Classik Music.
GENERAL NOTES:	The package includes a demonstration file in smw format to aid with integration into a Crestron project. Additionally, touch panel designs have been created to mimic the Linn Kazoo application; these can be used for demonstration purposes, or directly integrated into your project.
CRESTRON HARDWARE REQUIRED:	A series 3 processor is required.
SETUP OF CRESTRON HARDWARE:	N/A
VENDOR FIRMWARE:	This Crestron module will only work with Linn Kazoo server v4.7 and above.

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VENDOR SETUP:	The Linn system should be installed and configured by a suitably qualified engineer, according to Linn documentation, prior to integration with this driver. Any subsequent changes to the configuration of the Linn system may require additional re-configuration of the Crestron modules. Note also that all authentication information required by online music services should be configured in the Linn system and tested to confirm their accuracy.
CABLE DIAGRAM:	<p>All devices should be connected to the same Subnet.</p>  <p>The diagram shows a stack of three Linn ControlPoint modules on the left. Each module has a callout box that says "You require one instance of this module per touch panel." On the right is a Linn ControlBridge module with a callout box that says "You require one instance of this module installed". Arrows point from the ControlPoint stack to the ControlBridge module.</p>

CONTROL (ControlBridge Module):

The Control Bridge module handles the initial discovery of the Linn players and manages which player is controlled by which Control Point module. Only one instance of the Control Bridge module is required in your program and once the signals are connected, no further configuration is required. Note that the Control bridge module can handle a maximum of 50 Control Point modules, and discovery begins 30 seconds after the program has loaded.

[ControlPoint_1Tx] to [ControlPoint_50Tx]	S	Signal FROM Control Point module
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FEEDBACK (ControlBridge Module):

[ControlPoint_1Rx] to [ControlPoint_50Rx]	S	Signal TO Control Point module
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CONTROL (ControlPoint Module):

The Control point module handles all communication to and from the Linn players. One instance of the Control Point module is required for each Linn player in the system. As per the below example, each Control Point module must be linked with the Control Bridge module by connecting the ControlPoint_TX inputs in the Bridge module with the ControlPoint_TX output in each Control Point module. Additionally, the ControlPoint_RX outputs in the Bridge module must be linked to the ControlPoint_RX input in the Control Point modules.

CRCP	S	Smart Graphic Signals
EthernetAdaptorID	A	Smart Graphic Signals
CIP_Port	A	Smart Graphic Signals
ControlPoint_Rx	S	Signal FROM Control Bridge module. Note: to force the Control Point on to a particular module you can send Gateway –connectTo <IP>:<PORT> to the 'ControlPoint_Rx' input. To discover the Linn gateway currently connected to Crestron, send Gateway –status to the 'ControlPoint_Rx' input.
RoomSelect	S	Selects a room to control by name. If the Room text is incorrect, or the module hasn't discovered the requested player, 'Notification_Subpage' will be pulsed with a notification message. If the selection fails, the module will remain on the previously selected Linn player
RoomOff	D	Turns the current Linn device to Standby
RoomOn	D	Turns the current Linn device On
HouseOff	D	Turns all Linn devices to Standby
SourceSelect	S	Selects a source. If the source text is incorrect or the Linn device hasn't discovered the source, 'Notification_Subpage' will be pulsed with a notification message. If the selection fails, the module will remain on the previous source
SelectTidal	D	Selects Tidal to browse
SelectQuobus	D	Selects Quobus to browse
SelectTuneIn	D	Selects TuneIn to browse
SelectUpnp	D	Selects Upnp to browse
SelectUpnpFavourite	D	Selects Upnp Favourite to browse



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SelectPlaylist	D	Selects a playlist to browse
SelectRadio	D	Selects Radio to browse
Select_UPnP_1_As_Favourite to Select_UPnP_50_As_Favourite	D	Save A UPnP item as a favorite index by 'UPnP_1_Name to UPnP_50_Name'
GroupVolumeUp	D	Increases the group volume
GroupVolumeDown	D	Decreases the group volume
GroupMuteOn	D	Enables mute for the group
GroupMuteOff	D	Disables mute for the group
GroupMuteToggle	D	Enables or disables mute for the group
DeviceVolumeUp	D	Increases the device volume
DeviceVolumeDown	D	Decreases the device volume
DeviceMuteOn	D	Enables device volume mute
DeviceMuteOff	D	Disables device volume mute
DeviceMuteToggle	D	Enables or disables device volume mute
AddToGroup	D	Adds the 'Select_AvailableList_Item_[]' high signals to the current group
RemoveFromGroup	D	Removes the GroupList_[]_Selected high signals from the current group
Select_GroupList_Item_1 to Select_GroupList_Item_50	D	Selects devices for removal from the group (pulse to toggle between selected and deselected)
GroupList_1_MuteToggle to GroupList_50_MuteToggle	D	Enables or disables mute for a grouped device (pulse to select and deselect)
GroupList_1_VolumeUp to GroupList_50_VolumeUp	D	Increases the volume of a grouped device
GroupList_1_VolumeDown to GroupList_50_VolumeDown	D	Decreases the volume of a grouped device



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Select_AvailableList_Item_1 to Select_AvailableList_Item_50	D	Select devices for addition to a group (pulse to toggle between selected and deselected)
Notification_Ok	D	Closes notification subpage

FEEDBACK (ControlPoint Module):

CRCP_FB	S	Smart Graphic Signals
ControlPoint_Tx	S	Signal TO Control Bridge module
LinnDevices_IsAvailable	D	Value is 0 if no Linn devices are discovered
Current_Linn_Device	S	Name of currently selected Linn player
DeviceList_NumberOfItems	A	The number of Linn devices that have been discovered
DEVICE_NAME_1 to DEVICE_NAME_50	S	String Array[50] list of discovered names (Note that only names that fall into the range of 'DeviceList_NumberOfItems' are valid)
RoomsOn	D	Indicates if a Linn device is currently on
SourceList_NumberOfItems	A	The number of Linn sources found for the current Linn device
Sources_IsAvailable	D	Value is 0 if no sources are discovered
Current_Browse_Source	S	Name of the currently selected source
SelectTidalsAvailable	D	Enable/disable the availability of Tidal
SelectQuobusIsAvailable	D	Enable/disable the availability of Quobus
SelectTuneInIsAvailable	D	Enable/disable the availability of TuneIn
SelectUpnplsAvailable	D	Enable/disable the availability of Upnp
SelectUpnpFavouriteIsAvailable	D	Enable/disable the availability of Upnp Favourite
SelectPlaylistIsAvailable	D	Enable/disable the availability of Playlist



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SelectRadiolsAvailable	D	Enable/disable the availability of Radio
SourceName1 to SourceName50	S	String Array[50] list of available sources for the current Linn device (note that only names that fall into the range of 'SourceList_NumberOfItems' are valid)
Current_Favourite_UPnP	S	Currently selected Upnp favourite
UpnpList_IsAvailable	D	Value is 0 if no UPNP devices are discovered
UPnP_NumberOfItems	A	The number of My Music sources for currently selected device
UpnP_1_Name to UpnP_50_Name	S	String Array[50] list of available My Music Sources for currently selected device. Note that only Names that fall into the range of 'UpnP_NumberOfItems' are valid.
GroupCurrentVolume	A	Reports the current group volume level (0-100)
GroupMutelsOn	D	Indicates if the group volume mute is on
DeviceCurrentVolume	A	Reports the current device volume level (0-100)
DeviceMutelsOn	D	Indicates if the device volume mute is on
AddToGroupsAvailable	D	Signal is high if any Select_AvailableList_Item_[] signals are currently high
RemoveFromGroupsAvailable	D	Signal is high if any GroupList[_]_Selected signals are currently high
GroupList_1_Selected to GroupList_50_Selected	D	Feedback indicating devices to remove
GroupList_NumberOfItems	A	The number of devices in the group
GroupList_1_Name to GroupList_50_Name	S	A string array, containing the names of the devices in the group (note that only names that fall into the range of 'GroupList_NumberOfItems' are valid)
GroupList_1_CurrentVolume to GroupList_50_CurrentVolume	A	The current volume level of a grouped device
GroupList_1_MutelsOn to GroupList_50_MutelsOn	D	The current mute status of a grouped device
AvailableList_1_Selected to AvailableList_50_Selected	D	Feedback indicating devices to add



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AvailableRoomList_IsAvailable	D	Value is 0 if no rooms are available
AvailableList_NumberOfItems	A	The number of devices not currently grouped
AvailableList_1_Name to AvailableList_50_Name	S	A string array, containing the names of the devices available for grouping (note that only names that fall into the range of 'GroupList_NumberOfItems' are valid)
Loading_ShowSubpage	D	Signal is high when driver is loading entries
CoverArtIsAvailable	D	Cover art is available to watch
NowPlaying_CoverArt	S	Art Work for currently playing item
NowPlaying_MetaData1 to NowPlaying_MetaData6	S	The metadata fields for the currently playing item
NowPlaying_MetaText1 to NowPlaying_MetaText6	S	N/A
NowPlaying_CurrentProgress	A	Progress of the currently playing track (0-100)
NowPlaying_Time	A	Currently playing track total time
NowPlaying_Duration	A	Currently playing track current time
Notification_Title	S	Title of notification
Notification_Text	S	Text of notification
Notification_Subpage	D	High subpage appears, low subpage disappears
IsOffline	D	Indication to the connection with the devices

PARAMETERS: (ControlPoint Module):

GATEWAY IP	S	The IP address of the device (optional) only if you require the module to connect to a chosen device
GATEWAY PORT	D	The port number used to communicate with the device (optional)
LINN DEVICE	S	The name of the device (Optional) for control a static room



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Table with 2 columns: LOCALE, S. Description: The preferred language for the device

TESTING:

Table with 2 columns: Test Parameter (e.g., OPS USED FOR TESTING, SIMPL WINDOWS USED FOR TESTING), Value (e.g., 1.502.3151.19579, 4.09.04)