

# Creating Device Connections with Ignition scripting

Device connection configurations for the Cirrus Link drivers can be created through scripting using the standard Ignition function

`system.device.addDevice()`



The Description and Enabled properties may not be configured with this function. By default, the Enabled property is set to true and can be disabled with a call to `system.device.setDeviceEnabled()` after creating the connection.

The device driver types for the Cirrus Link EFM Modules are listed in the table below:

Driver Name	Device Type
Emerson ROC	EmersonRoc
ABB Totalflow	AbbTotalflow
Opto 22 groov EPIC and SNAP PAC	SnapPacDriver

Below are the table of properties callable by `system.device.addDevice`.



Device properties in bold are mandatory properties that must be included in the `addDevice` call

## Emerson ROC Keys

Device Property	Key	Datatype
<b>Protocol Type</b>	ProtocolType	String
<b>Hostname</b>	Hostname	String
<b>TCP Port</b>	Port	Integer
Socket Timeout	SocketTimeout	Integer
<b>ROC Unit Code</b>	RocUnitCode	Integer
<b>ROC Group Code</b>	RocGroupCode	Integer
<b>Host Unit Code</b>	HostUnitCode	Integer
<b>Host Group Code</b>	HostGroupCode	Integer
Periodic Mapping	PeriodicMappingId	Long
Configuration Mapping	ConfigurationMappingId	Long
Add All TLP Definitions	AddAllTLPDefinitions	Boolean
Security Enabled	SecurityEnabled	Boolean
Operator ID	OperatorId	String
Password	Password	String
Access Level Enabled	AccessLevelEnabled	Boolean
Access Level	AccessLevel	Integer
Date Time Offset	DateTimeOffset	Integer
Sync ROC RTC	SyncDateTime	Boolean
Sync Expression	SyncDateTimeExpression	String

Alarm Scan Rate	AlarmScanRate	Integer
Event Scan Rate	EventScanRate	Integer
Minute History Scan Rate	HistoryMinuteScanRate	Integer
Periodic History Scan Rate	HistoryPeriodicScanRate	Integer
Daily History Scan Rate	HistoryDailyScanRate	Integer
Enable Signature	EnableSignature	Boolean
Algorithm	HashingAlgorithm	String
Password	SignaturePassword	String
Group ID	GroupId	String
Edge ID	EdgeId	String
Device ID	DeviceId	String
Serial Number	SerialNumber	String
History Time Stamp	HistoryTimestamp	Boolean
Read Delay	ReadDelay	Long
Poll Watchdog Rate	PollerWatchdogRate	Integer
Enable CFX	EnableCfx	Boolean
Flow Computer Brand	CfxFlowComputerBrand	String
Flow Computer Model	CfxFlowComputerModel	String
Flow Computer Software Version	CfxFlowComputerSwVerison	String
CFX Publish Time	CfxPublishTimeExpression	String
CFX Cutoff Time	CfxCutoffTimeExpression	String
CFX File Transfer	CfxFileTransferId	Long



Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a particular need.

#### Emerson ROC Sample Script

```
# Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any
particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a
particular need.
#new device connection using default settings
newProps = {}
newProps["ProtocolType"] = "ROC"
newProps["Hostname"] = "10.1.2.3"
newProps["Port"] = 2000
newProps["RocUnitCode"] = 10
newProps["RocGroupCode"] = 100
newProps["HostUnitCode"] = 20
newProps["HostGroupCode"] = 200
newProps["HashingAlgororithm"] = "SHA_1"
system.device.addDevice(deviceType = "EmersonRoc",deviceName = "MyROC",deviceProps = newProps)
```

## ABB Totalflow Keys

Device Property	Key	Datatype
-----------------	-----	----------

<b>Board Type</b>	BoardType	String
<b>Hostname</b>	Hostname	String
<b>TCP Port</b>	Port	Integer
Socket Timeout	SocketTimeout	Integer
Connection Type	ConnectionType	String
Enable Auto-discovery	EnableAutoDiscovery	Boolean
Add All Totalflow Application Definitions	AddAllTotalflowApplicationDefinitions	Boolean
Add All Array-Register Definitions	AddAllArrayRegisterDefinitions	Boolean
Auto-generate Templates and Poll Group	AutoGenerateDefaultTemplatesAndPollGroup	Boolean
Array-Register Template Import Policy	ArrayRegisterTemplateImportPolicy	String
Poll Group Import Policy	PollGroupImportPolicy	String
Station ID	StationId	String
Keep Alive	ConnectionKeepAlive	Integer
Host Timeout	HostTimeout	Long
Number Retries	NumberRetries	Integer
Supervisory Frames	SupervisoryFrames	Integer
Password	SecurityCode	String
RBAC Enabled	RbacEnabled	Boolean
Operator ID	OperatorId	String
Password	OperatorPassword	String
Date Time Offset	DateTimeOffset	Integer
Alarm Source	AlarmSourceSelector	String
Alarm Scan Rate	AlarmScanRate	Integer
Event Scan Rate	EventScanRate	Integer
Periodic History Scan Rate	HistoryPeriodicScanRate	Integer
Daily History Scan Rate	HistoryDailyScanRate	Integer
Record Info Scan Rate	RecordInfoScanRate	Integer
Max Records To Read	MaxRecordsToRead	Integer
Periodic Mapping	PeriodicMappingId	Long
Enable Signature	EnableSignature	Boolean
Hashing Algorithm	HashingAlgorithm	String
Password	SignaturePassword	String
Group ID	GroupId	String
Edge ID	EdgeId	String
Device ID	DeviceId	String
Use INI Categories	UseIniCategories	Boolean
Poller Watchdog Rate	PollerWatchdogRate	Integer
Enable CFX	EnableCfx	Boolean
Flow Computer Brand	CfxFlowComputerBrand	String
Flow Computer Model	CfxFlowComputerModel	String

Flow Computer Software Version	CfxFlowComputerSwVerison	String
CFX Publish Time	CfxPublishTimeExpression	String
CFX Cutoff Time	CfxCutoffTimeExpression	String
CFX File Transfer	CfxFileTransferId	Long



Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a particular need.

#### ABB Totalflow Sample Script

```
# Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any
particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a
particular need.
#new device connection using default settings
newProps = {}
newProps["BoardType"] = "G4"
newProps["Hostname"] = "10.1.2.3"
newProps["Port"] = 2000
system.device.addDevice(deviceType = "AbbTotalflow",deviceName = "MyABB",deviceProps = newProps)
```

## Opto 22 groov EPIC and SNAP PAC

Device Property	Key	Datatype
Address	Address	String
TCP/IP Port	Port	Integer
Timeout	Timeout	Long
Data Scan Rate	DataScanRate	Long



Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a particular need.

#### Opto22 Sample Script

```
# Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any
particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a
particular need.
#new device connection using default settings
newProps = {}
system.device.addDevice(deviceType = "SnapPacDriver",deviceName = "MyOpto22",deviceProps = newProps)

#new device connection
newProps = {}
newProps["Address"] = "156.23.25.42"
newProps["Port"] = 22001
newProps["Timeout"] = 3500
newProps["DataScanRate"] = 1500
system.device.addDevice(deviceType = "SnapPacDriver",deviceName = "MyOpto22",deviceProps = newProps)
```

