


### Lighting Digital Interface

#### Communication Bridge for Digital Light Fixtures

## Specifications

Input Power	1A@12-24Vdc  Class II / Limited Energy Power Supply
Typical Power Use	3W
Device Port	RS-485, 2-Wire Screw Terminals & RJ-12
Controller Port	RJ-45 (GrowNET™)
Data Indicator	Red LED
Enclosure Rating	TYPE 12 NEMA
Protocols Supported	Thinkgrow Dutch Light Innovations (DLI) Hydrofarm / Phantom Scynce Fohse Revolution Lighting



## Contents

<b>Introduction</b>	<b>2</b>
Supported Manufacturers	2
Device Features	2
<b>Connections</b>	<b>3</b>
Thinkgrow	3
Dutch Light Innovations	4
Hydrofarm / Phantom	4
Scynce	5
Fohse	5
Revolution Lighting	6
<b>Technical Information</b>	<b>7</b>
Maintenance & Service	7
Storage and Disposal	7
<b>Warranty</b>	<b>7</b>

# Introduction

LXD Digital Lighting Link modules connect Agrowtek GrowControl™ GCX Cultivation Control Systems to lighting fixtures from various manufacturers that are controlled with digital communication protocols.

One module is required per lighting zone and is situated between the GCX controller and the light fixtures as a communication bridge.

The LXD module enables full intensity and spectrum control on compatible fixtures from the GCX control system.

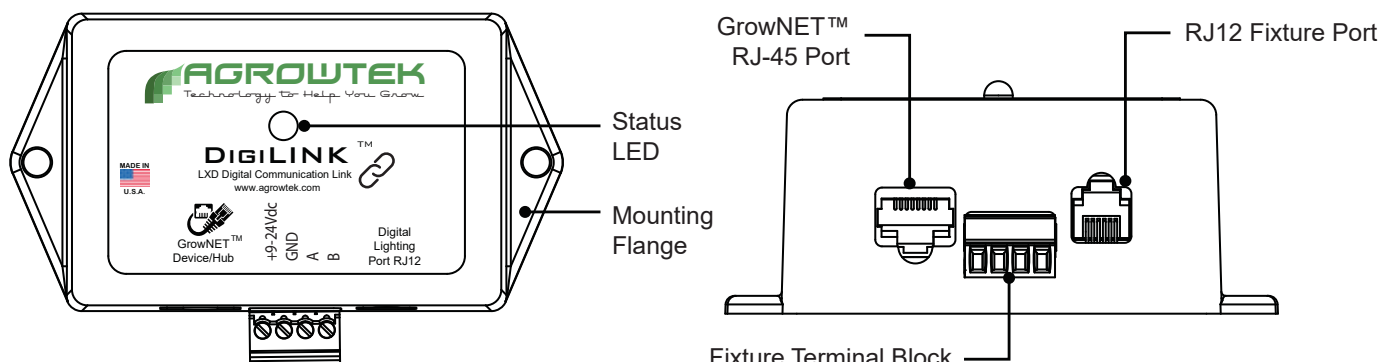
## Supported Manufacturers

Manufacturer	Connection Type
Thinkgrow	RJ-12
Dutch Light Innovations (DLI)	RJ-12
Hydrofarm / Phantom	Terminals
Scynce	Terminals
Fohse	Terminals
Revolution	Terminals

Manufacturers with compatible RJ-12 connector can be plugged into the RJ-12 digital lighting port. Manufacturers with terminal connection requirements, see wiring diagrams.

## Device Features

Two mounting flanges on each side allow the module to be wall mounted. A DIN rail kit is available for cabinet mounting.

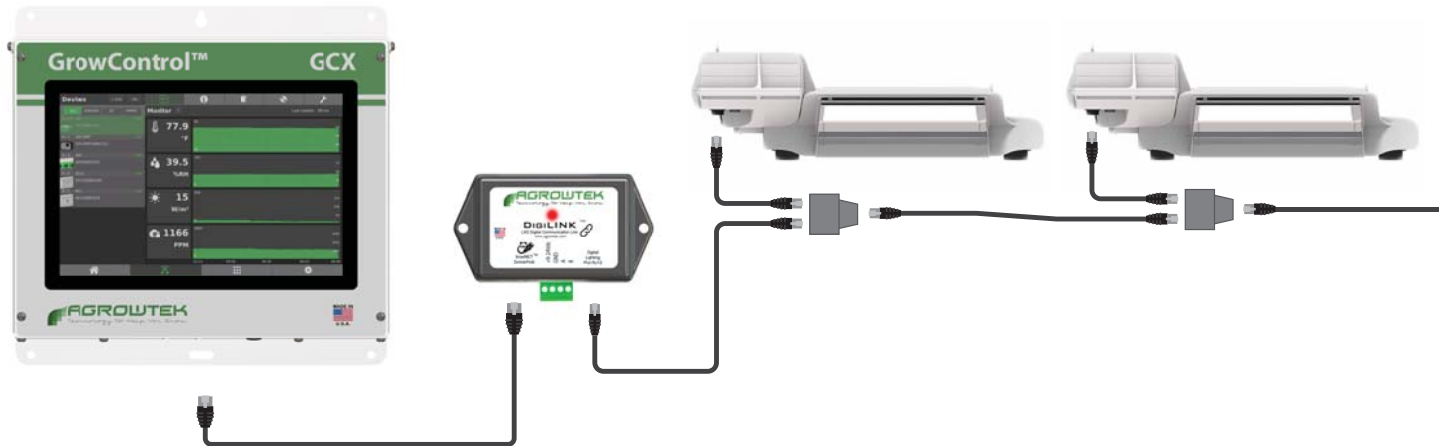


Fixtures connect to either the RJ-12 connection (see compatible fixtures above) or via manual connection to the terminal block. See wiring diagrams for connection details. A status LED will flash when communicating with the GCX controller.

# Connections

The LXD module is a bridge between the GCX control system's language and the light fixture's language. It can be located any place between the GCX system and the fixtures.

It is recommended to keep the module in low humidity (outside of the growing environment.)

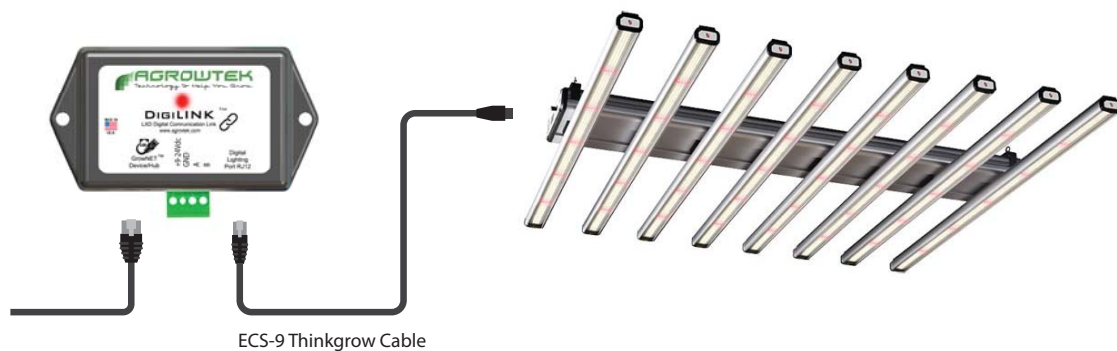


The LXD module connects to the GCX control system using standard RJ-45 connections and Cat5/6 cable.

Fixtures connect to the module using the standard cabling provided by the light fixture manufacturer.

## Thinkgrow

Thinkgrow fixtures require the ECS-9 Data cable (12ft/ RJ12 to 4-pin IP65 connector cable) available from Thinkgrow. This cable plugs directly into the LXD module for fixture control.



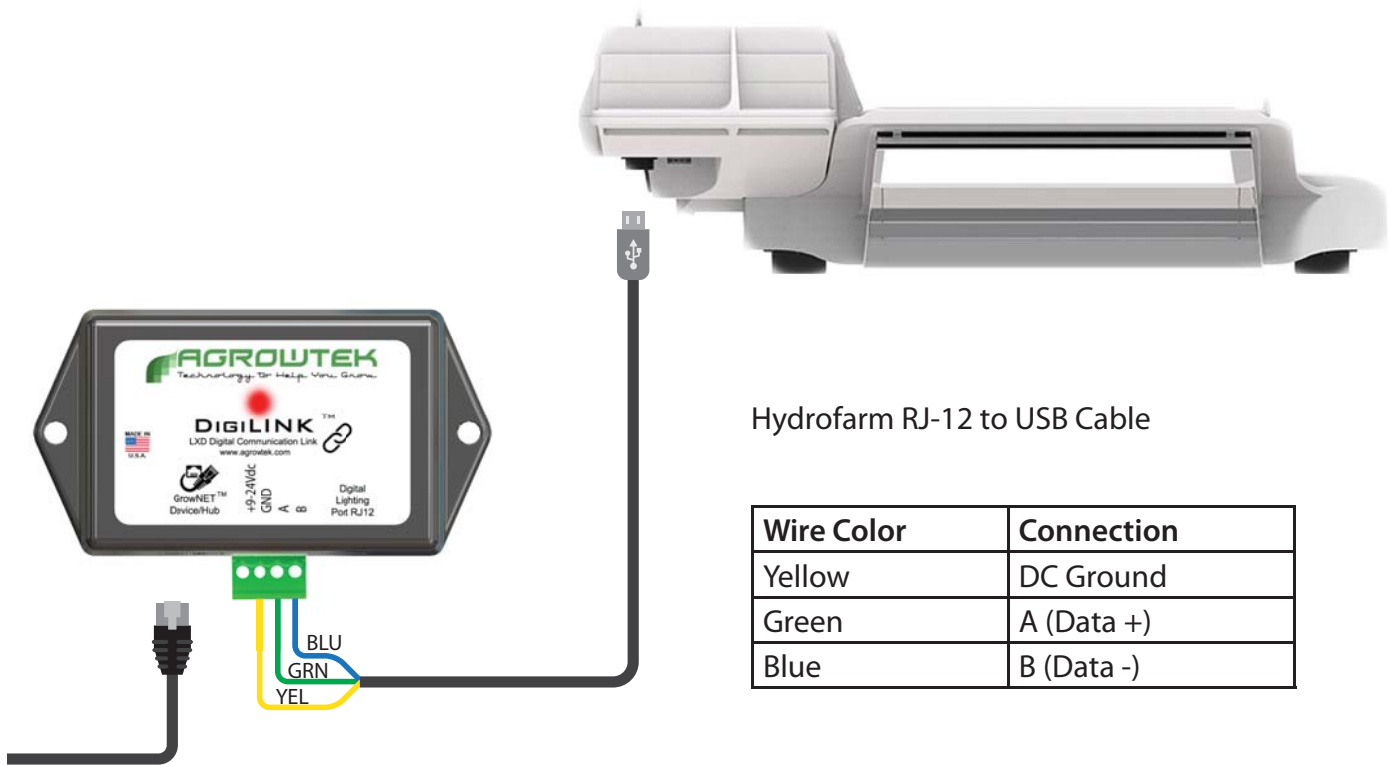
# Dutch Light Innovations

DLI (Dutch Light Innovations) fixtures require standard RJ-12 phone cables and RJ-12 splitters. This cable plugs directly into the LXD module for fixture control.



# Hydrofarm / Phantom

Hydrofarm fixtures that are controlled by the Autopilot series of controllers have a unique wiring configuration despite using the same RJ-12 connectors as the previous manufacturers. These fixtures require wiring to the terminal blocks by cutting and stripping the wire of the RJ-12 cable.



Hydrofarm RJ-12 to USB Cable

Wire Color	Connection
Yellow	DC Ground
Green	A (Data +)
Blue	B (Data -)

# Scynce

Scynce fixtures require the use of the Scynce gateway device (THEIA Echo Air.) The LXD module is connected to the RS-485 MODBUS port on the gateway, and the gateway is put into remote control mode.



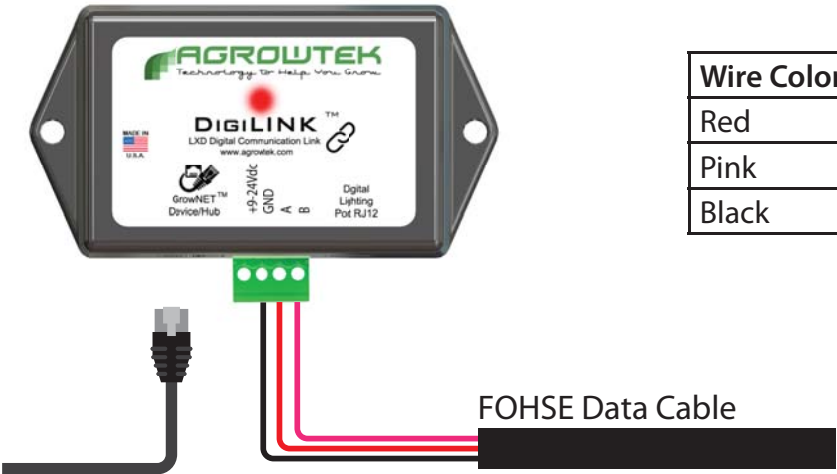
LXD	THEIA Echo AIR
GND	Pin 2 (GND)
A	Pin 3 (Data +)
B	Pin 4 (Data -)

NOTE: One LXD module is required for each lighting zone operated by the Scynce interface.

# Fohse

Fohse fixtures use a 3-conductor cable between fixtures for RS-485 data and a reference ground.

Connection to Fohse fixtures requires manual connection to the terminal blocks by cutting and stripping the wires of the Fohse data cable at one end. See connection details below.

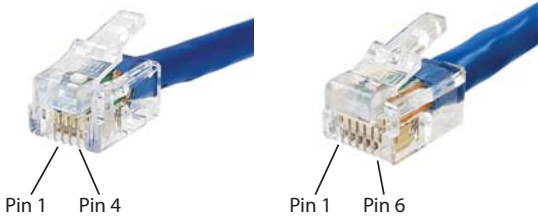
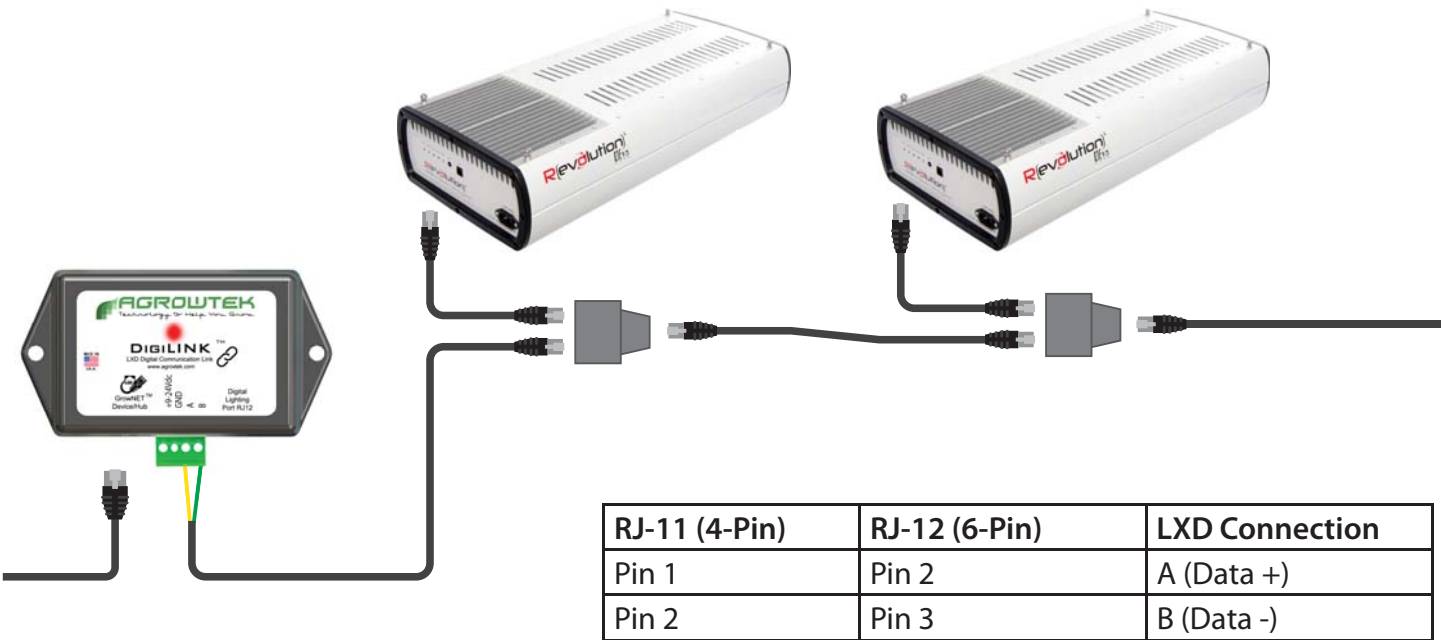


Wire Color	Connection
Red	A (Data +)
Pink	B (Data -)
Black	GND

# Revolution Lighting

Revolution fixtures use a RJ-11 or RJ-12 cable between fixtures for RS-485 data. Standard RJ-12 couplers allow multiple fixtures to be daisy chained together.

Connection to Revolution fixtures requires manual connection to the terminal blocks by cutting and stripping the wires of the RJ data cable at one end. See connection details below.



# Technical Information

---

## Maintenance & Service

---

### Exterior Cleaning

Exterior may be wiped with a damp cloth with mild dish detergent, then wiped dry. Disconnect power before cleaning the enclosure to prevent electrical shock.

## Storage and Disposal

---

### Storage

Store equipment in a clean, dry environment with ambient temperature between 10-50°C.

### Disposal

This industrial control equipment may contain traces of lead or other metals and environmental contaminants and must not be discarded as unsorted municipal waste, but must be collected separately for the purpose of treatment, recovery and environmentally sound disposal. Wash hands after handling internal components or PCB's.

## Warranty

Agrowtek Inc. warrants that all manufactured products are, to the best of its knowledge, free of defective material and workmanship and warrants this product for 1 year from the date of purchase. This warranty is extended to the original purchaser from the date of receipt. This warranty does not cover damages from abuse, accidental breakage, or units that have been modified, altered, or installed in a manner other than that which is specified in the installation instructions. Agrowtek Inc. must be contacted prior to return shipment for a return authorization. No returns will be accepted without a return authorization. This warranty is applicable only to products that have been properly stored, installed, and maintained per the installation and operation manual and used for their intended purpose. This limited warranty does not cover products installed in or operated under unusual conditions or environments including, but not limited to, high humidity or high temperature conditions. The products which have been claimed and comply with the aforementioned restrictions shall be replaced or repaired at the sole discretion of the Agrowtek Inc. at no charge. This warranty is provided in lieu of all other warranty provisions, express or implied. It is including but not limited to any implied warranty of fitness or merchantability for a particular purpose and is limited to the Warranty Period. In no event or circumstance shall Agrowtek Inc. be liable to any third party or the claimant for damages in excess of the price paid for the product, or for any loss of use, inconvenience, commercial loss, loss of time, lost profits or savings or any other incidental, consequential or special damages arising out of the use of, or inability to use, the product. This disclaimer is made to the fullest extent allowed by law or regulation and is specifically made to specify that the liability of Agrowtek Inc. under this limited warranty, or any claimed extension thereof, shall be to replace or repair the Product or refund the price paid for the Product.