Hydro-X Pro System / HCS-2

Advanced V ersion of Hy dro-X System

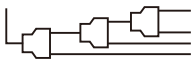
The Hydro-X Pro (HCS-2) is an upgraded main controller that features a 10.1-inch touch screen. The main controller HCS-2 comes standard with a 4-in-1 (Temp / Humidity / CO2 / Photocell) sensor. It is backward compatible with all current Hydro-X control & device modules and provides greater flexibility and much more advanced functions.



HCS-2 for Hydro-X Control System

Connection

Daisy Chain Connection



The sensors and control modules (device stations) are connected to the HCS-2 with a standard RJ12 cable and RJ12 Y-splitters, making installation as simple as plug-and-play. The modules are "daisy-chained" together using the RJ12 cables allowing for flexible installation, and future expansion. To make installation even easier, you can also use the SPH-1 8-port hub instead of using the Y-splitters.

Remote Control

Web-based softwar e

Besides the onboard user interface/touch-screen, the Trolmaster app will provide real-time data and user notifications from the HCS-2. The HCS-2 also offers a free web-based software program that allows remote control and monitoring through the internet with any desktop, laptop, smartphone or tablet. To access the online software, simply login with your app email and password at pro.trolmaster.com

Specifications

HYDRO-X PRO (HCS-2)

Product Capacity

Sensors	Maximum 50/pcs
Devices	Maximum 50/pcs
Light Channels	2
Amount of Lights	Unlimited

Environment Setting

Temperature	40°F-100°F
Humidity	20-99%
CO2	300-2500PPM
Light Intensity	10-2000 PPFD

*current setting range

Operating Requirements

Temperature	32 °F-120 °F
Humidity	5% to 90% RH

Power Supply

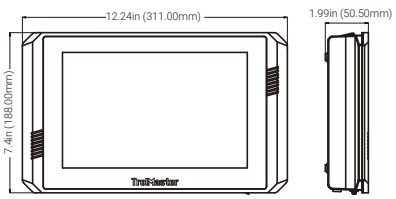
Supply Voltage	100-240VAC, 50/60Hz, 0.5A

Dimensions & G.W.

Dimensions	380*270*85mm 0.5A
Approx. G.W.	2.98kg

Display & Control

Size	10.1" LED Screen
Control	Touch Screen Control
Language	English (International)
USB/micro-SD	Save/Copy/Import/ Export data



Intertek 5008191 RoHS

TrolMaster

Distributed by SURNA Cultivation Technologies

Hydro-X Pro

Unique Featur es

Smoke Alarm Control

Device modules are now able to react if the MBS-SD smoke detectors are triggered by the presence of smoke. Users can now set up their Hydro-X Pro to shut off power to selected devices when smoke is detected.

Multiple Sub-zone Control

Sub-Zones can be created to ensure a complete and balanced growing environment by allowing separate control on device groups by assigning specific sensors to control specific device modules.

DLI (Daily Light Integral) Control and Monitoring

Can be used to calculate the exact amount of light needed based on the PPFD to enhance growth rates and to save energy.

4 Adjustable Spectrum

Ultimate control on UV, White, Deep Red and Far Red spectrums for creating special light recipes.

Group Control

(Up to 10 Groups of) lighting control for ThinkGrow brand LEDs allows a customized combination of light settings for up to 10 separate groups of LEDs on a single HCS-2 controller.

Multiple Activation Conditions

Each plug-in module can be programmed with multiple conditions, allowing almost unlimited control options on the device modules.

Customized Ramp Up/Down Environment Climate Control

Allows Temp & CO2 & Humility & Light Parameters to be changed gradually and avoid instant drastic changes to better mimic the natural outdoor conditions.

Cloud Effect

The HCS-2 can simulate natural cloud movements to mimic a natural outdoor environment which ensures less stress on the plants and will also save electricity.

Spray Mode

Will automatically reduce the power to the lights, or turn lights off … lower fan speed or turn off equipment when foliar spraying, and then turn the equipment back on to the initial setting after a period of time.

Calendar Control Presets & Customized Reminders

Allow users to "build" their own custom multi-week crop schedules and program reminders.

Media Moisture & EC & PH & Temp Level

Percentage of water or nutrients within the growing medium can be monitored with the WCS-1 & 2 Water Sensor.

Lighting Control

With Hydro-X System



Light Control

The Hydro-X Pro can control almost all horticultural lighting systems (LED / HID) in the market using one of Trolmaster' s LMA series of lighting adapters. Two separate lighting control channels allow users to control two different lighting systems with separate setpoints.

When used with Hydro-X Pro, the LMA-T can provide user' s ultimate control over ThinkGrow LED (i.e. individual control on 4 different spectrums of the PLUS series), and allows users to adjust and control the light spectrum according to their individual needs.

MBS-PAR Sensor

The PAR sensor can be incorporated into the Hydro-X Pro system to provide a measurement of "PAR" (Photosynthetically Active Radiation). After entering the value of the desired amount of PPFD to HCS-2, the PPFD sensor will automatically increase or decrease the output level of the supplemental lighting systems to continuously maintain the exact lighting level (in terms of PPFD) selected.



4-in-1 Sensor MBS-PRO

Temp/Humidity/CO2/Phot ocell

This sensor will measure air temperature, humidity, CO2 (PPM) and has a photocell to detect Day or Night operation, making it a perfect all-in-one environmental sensor. The sensor will detect the environmental parameters then send the collected data back to the Hydro-X Pro. By using different modules connected to the Hydro-X Pro system, the controller will then send signals to the modules and control those devices based on the environmental readings provided by the 4-in-1 sensor.

* Phot oc ell sensor det ect s only the pr esence of light, not light intensity .

Temperature

Temperature can be regulated with the modules by controlling the temperature control devices.

For example, the ARS-1 can control mini-split AC, TS-2 can control HVAC system etc.

Humidity

Humidity can be regulated with the modules by controlling the humidity control devices.

For example, the HS-1 can control dehumidifiers, TSH-1 can control EC fans etc.

CO2

CO2 level can be regulated with the modules by controlling the CO2 control devices.

For example, the DSC-1 can control CO2 tank regulators and CO2 generators etc.

All DS modules are universal and multi-purposed in the Hydro-X Pro system.

Other Control & Sensor

For Differ ent Cir cumstances

Other Control

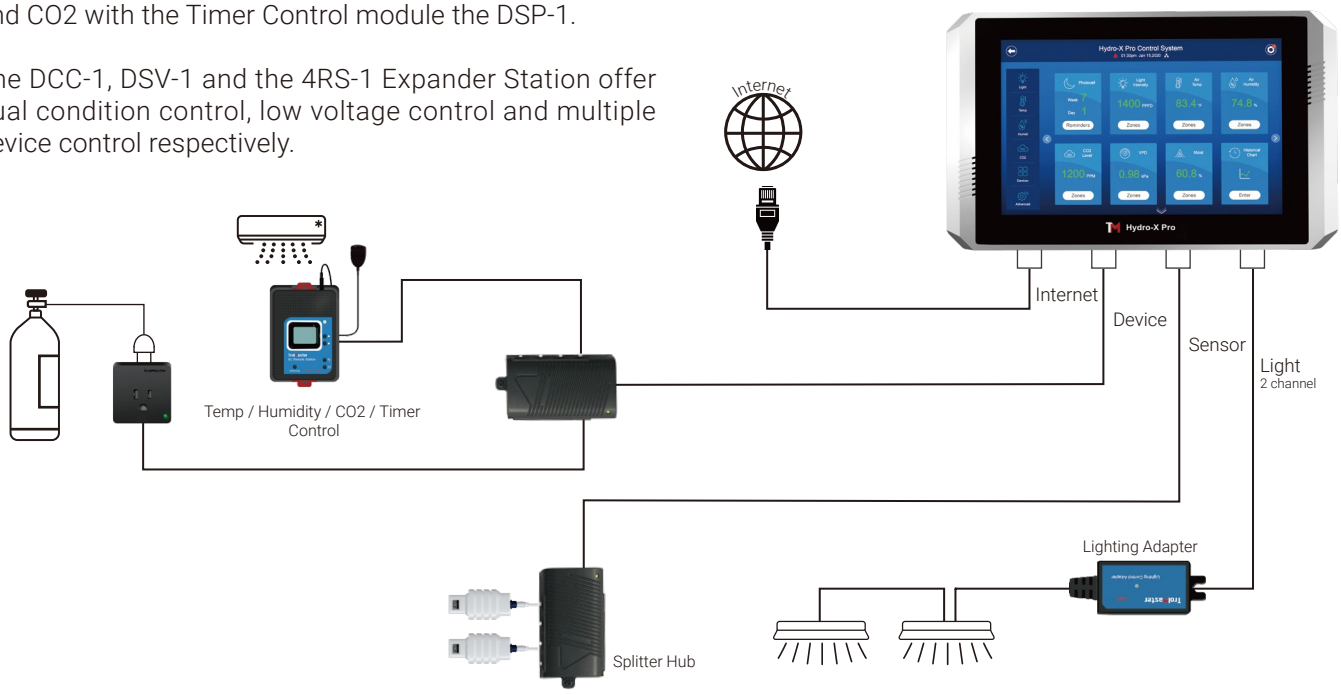
There are other modules that can be used to control devices in different circumstances in accordance with user’ s need.

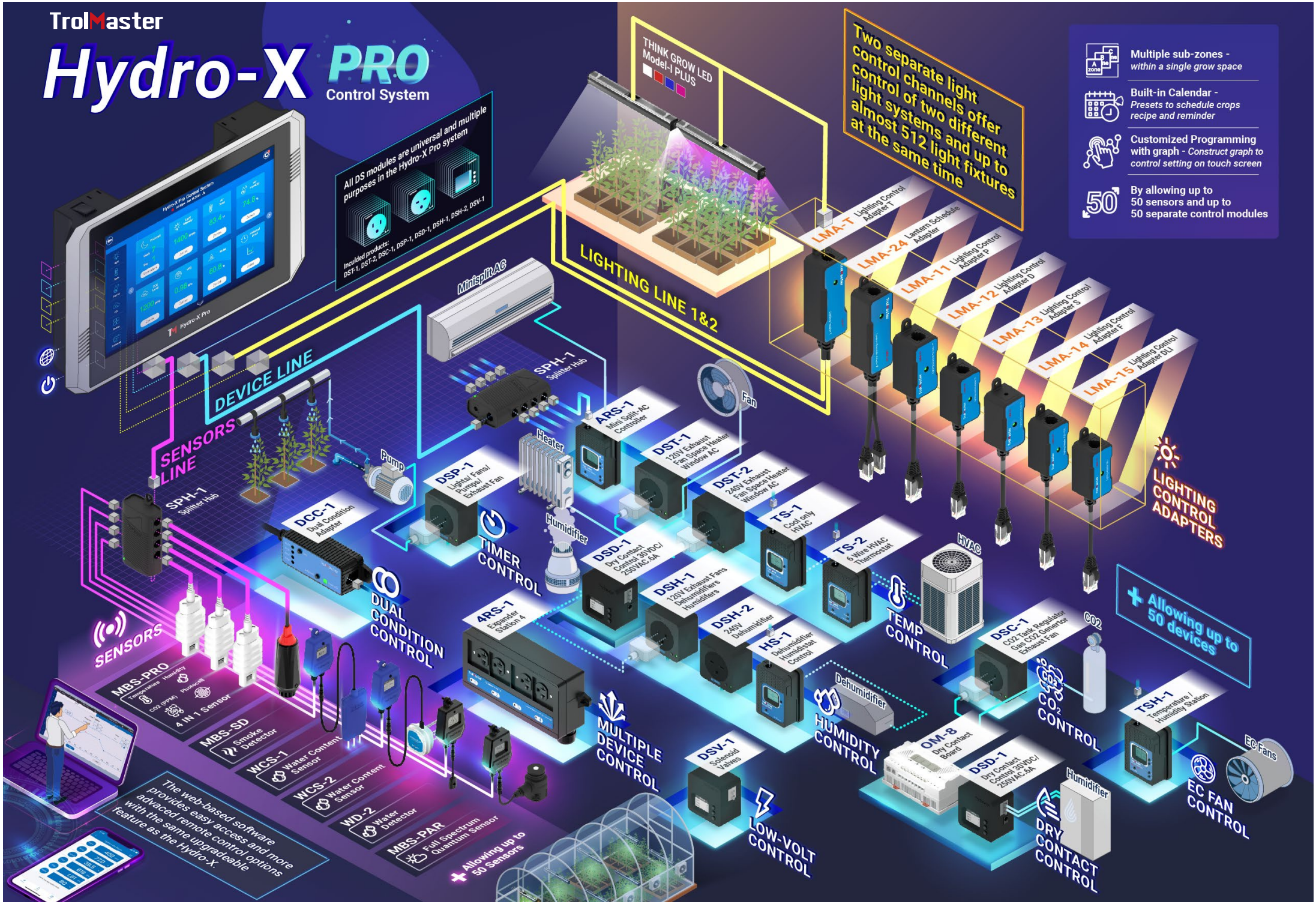
For instance, devices like fans or pumps can be controlled based on time rather than Temperature, Humidity, and CO2 with the Timer Control module the DSP-1.

The DCC-1, DSV-1 and the 4RS-1 Expander Station offer dual condition control, low voltage control and multiple device control respectively.

Other Sensor Alert

These 3 sensors: MBS-SD, WD-2, WCS-1, are used to detect smoke, water leakage and abnormal moisture level of medium. Warning alerts will be sent to users on the TrolMaster App when abnormal conditions are detected to alert them about potential problems before things get out of hand.




TrolMaster
Hydro-X PRO
Control System
All DS modules are universal and multiple purposes in the Hydro-X Pro system
Incualded products:
DST-1, DST-2, DSC-1, DSP-1, DSD-1, DSH-1, DSH-2, PSV-1
THINK GROW LED
Model-I PLUS
Two separate light control channels offer control of two different light systems and up to almost 512 light fixtures at the same time
Multiple sub-zones - within a single grow space
Built-in Calendar - Presets to schedule crops recipe and reminder
Customized Programming with graph - Construct graph to control setting on touch screen
By allowing up to 50 sensors and up to 50 separate control modules
LIGHTING LINE 1&2
LMA-T Lighting Control Adapter T
LMA-24 Lantern Schedule Adapter
LMA-11 Lighting Control Adapter P
LMA-12 Lighting Control Adapter D
LMA-13 Lighting Control Adapter S
LMA-14 Lighting Control Adapter F
LMA-15 Lighting Control Adapter DLI
LIGHTING CONTROL ADAPTERS
DEVICE LINE
SENSORS LINE
Mini split AC
SPH-1 Splitter Hub
ARS-1 Mini Split-AC Controller
DST-1 120V Exhaust Fan Space Heater Window AC
DST-2 240V Exhaust Fan Space Heater Window AC
Fan
Heater
Humidifier
Pump
DSP-1 Light/ Fans/ Pumps/ Exhaust Fan
DCC-1 Dual Condition Adapter
TIMER CONTROL
DUAL CONDITION CONTROL
DSD-1 Dry Contact Control 30VDC/ 250VAC 6A
DSH-1 120V Exhaust Fans Dehumidifiers Humidifiers
DSH-2 240V Dehumidifier
HS-1 Dehumidifier Humidistat Control
TS-1 Cool only HVAC
TS-2 6 Wire HVAC Thermostat
HVAC
TEMP CONTROL
4RS-1 Expander Station 4
MULTIPLE DEVICE CONTROL
Dehumidifier
HUMIDITY CONTROL
DSC-1 CO2 Tank Regulator Gas CO2 Generator Exhaust Fan
CO2
CO2 CONTROL
Allowing up to 50 devices
TSH-1 Temperature / Humidity Station
EC Fans
EC FAN CONTROL
SENSORS
MBS-PRO Temperature Humidity CO2 (PPM) Photosol 4 IN 1 Sensor
MBS-SD Smoke Detector
WCS-1 Water Content Sensor
WCS-2 Water Content Sensor
WD-2 Water Detector
MBS-PAR Full Spectrum Quantum Sensor
Allowing up to 50 Sensors
DSV-1 Solenoid Valves
LOW-VOLT CONTROL
OM-8 Dry Contact Board
DSD-1 Dry Contact Control 30VDC/ 250VAC 6A
Humidifier
DRY CONTACT CONTROL
The web-based software provides easy access and more advaced remote control options with the same upgradeable feature as the Hydro-X.