



## CROSSFIRE Bluetooth Accessories

### Introduction

The LCO Technologies' Bluetooth accessory product line enables the CROSSFIRE Chemical Injection Pump and CROSSFIRE Instrument Air Compressor smart controller (Model LCOC-1000-B or LCOC-1000-A) to wirelessly communicate user interface data to a mobile device or a windows computer over Bluetooth Low Energy V5.0 Protocol (BLE5).

### Features and Benefits:

- Simple installation and operation with minimal wire clutter
  - Mobile control for quick and simple adjustments of CROSSFIRE products
- Wireless operation range: line-of-sight
  - Standard: 60 ft
  - Maximum: 130 ft
- Minimal power consumption due to BLE5 technology
  - Idle standby mode: 2.0 mA
  - Active communications mode: 2.44 mA
- Temperature range: -40°C to +65°C
- Water resistant
  - Water resistant enclosures to protect electronics from water and airborne contaminants

### Products Available:

- Bluetooth Serial Adapter Dongle (BT5-SAI)
- Bluetooth USB Dongle (BT5-USB)

### Bluetooth Serial Adapter Dongle (BT5-SAI)

The Bluetooth serial adapter dongle (BT5-SAI) is a RS232 Serial-to-Bluetooth communications module that enables the CROSSFIRE smart controller to wirelessly communicate user interface data to a computer or mobile device over BLE5. This module is designed for temporary installation within a hazardous area once declassified. It can be directly inserted into the COM2 RS232 DB9 connector on the CROSSFIRE controller for plug and play usability.

### Features:

- Water resistant
- Wireless range: 60 ft to 130 ft when in line-of-sight
- Baud rate: 115,200 – 8-N-1
- Working mode: Slave
- Single blue LED light for pairing indication





## **Bluetooth USB Dongle (BT5-USB)**

The BT5-USB is a USB to Bluetooth Dongle that enables wireless communication between a laptop computer and the CROSSFIRE smart controller. This adapter transmits user interface data between the two devices and requires a Windows laptop or computer with an available USB port for use.

### **Features:**

- Wireless range: 60 ft to 130 ft when in line-of-sight
- Baud rate: 115,200 – 8-N-1
- Working mode: Master
- LED lights
  - Single blue LED light for pairing indication
  - Red and yellow LED lights for transmit and receive indication



## **Installation and Operations Instructions:**

For successful communication, both a Master and Slave device must be actively paired over BLE5. A Master would be either the BT5-USB or a mobile device compatible with BLE5 protocol, such as a smart phone. The Slave is the BT5-SAI dongle. Mobile devices with operating systems iOS5 and later or Android 4.3 and later are compatible, however all windows computers and laptops will not communicate successfully over BLE5 due to insufficient Windows driver support and therefore the BT5-USB dongle must be used as Master.

Therefore, if using a mobile device, the only device required is the BT5-SAI dongle. However, if wireless communication to a laptop computer is required, purchase and use both the BT5-SAI and BT5-USB dongle in a pair.

### **Install BT5-SAI:**

- Ensure you are in a non-hazardous general location or you have declassified the area
- Access the front panel of the CROSSFIRE smart controller and plug the BT5-SAI directly into the COM2 RS232 DB9 port on the controller
- Follow the instructions below to pair device

*Note: Once any adjustments with the mobile software and Bluetooth connection are complete, remove the BT5-SAI from the CROSSFIRE smart controller if you are in a hazardous area. This dongle is not CSA approved for hazardous areas and cannot be left plugged in unless in general purpose area.*

### **Install BT5-USB:**

- Go to [www.lcotechnologies.com/resources.html](http://www.lcotechnologies.com/resources.html) and download the device driver for USB-Bluetooth Adaptor
  - No password required



- Unzip the file into CP210xWindows\_Drivers folder with WinZip or WinRAR
- Install CP210xVCPInstaller\_x64.exe or CP210xVCPInstallerx86.exe depending on Windows operating system
  - Choose CP210xVCPInstaller\_x64.exe for 64-bit Windows 7, 8 and 10
  - Choose CP210xVCPInstallerx86.exe for 32-bit Windows XP and 32-bit Windows 7
- Once the installation is complete, plug the BT-USB-01 into a USB port on your laptop computer
- Open “Device Manager”, go to “Ports” and determine the appropriate COM number
  - The Dongle should show up as “Silicon Labs CP210x USB to UART Bridge”
  - Keep note of this COM port for connection to the CROSSFIRE Software

### Pairing:

- Ensure a Master and Slave Bluetooth system is installed
  - Master: BT5-USB or BLE5 Mobile Device
  - Slave: BT5-SAI
- Plug the BT5-SAI directly onto the CROSSFIRE controller
  - The Blue LED light should be blinking to indicate the device is powered on, but currently not paired to a master device

#### Option 1: Using a BT5-USB

- Press and hold the button on the side of the dongle for 5 seconds
- Watch the blue LED light on both the BT5-USB and the BT5-SAI
- The blue LED light on both devices should stop blinking and become solid to indicate successful pairing

#### Option 2: Using a mobile phone or tablet

- Ensure the blue LED light on the BT5-SAI is flashing, if not, double check installation and power supply
- Open the CROSSFIRE Mobile App
  - Apple App Store: Search “CROSSFIRE” or “LCO CROSSFIRE”
  - Android Google Play Store: Search “CROSSFIRE” or “LCO CROSSFIRE”
- Click “Scan for Bluetooth Devices”
- A device should pop-up
- Select device and login as “Operator”, password: **Pristine**; or as “Technician”, password: **Automatic**
- The blue LED light on the BT5-SAI should now be solid to indicate a successful pairing and you will now see the home screen of the mobile app



