

# CICADA Communication Protocol

There are several interfaces on the CICADA system. Any 3rd party system may use one of these interfaces to send the real time data (just like the score and timing data of a match) onto the CICADA. The screens which include these data will refresh immediately.

## 1. TCP Network Interface

CICADA listens on the port **6701** by default as a TCP server. Connect your system onto it as a TCP client, you may send the real time data onto it by following protocol.

General Format:

Head (1 BYTE)	ID (1 BYTE)	Data Length (4 BYTE, little-endian)	Data (N BYTE)	Tail (1 BYTE)
0xCC	?	?	?	0xCD

The data part is dynamic; the length of it is defined by “data length” part.

### 1.1 Query System Info

#### Client to CICADA:

ID: 0x01

Data: None

#### CICADA to Client:

ID: 0x01

Data: Major Version (1 BYTE) + Minor Version (1 BYTE)

Sample: 0x01 0x00

Version 1.0

### 1.2 Refresh Single Variable

#### Client to CICADA:

ID: 0x11

Data: key=value (In text mode, value is encoded in UTF-8)

Sample: 0x4D 0x61 0x74 0x63 0x68 0x3A 0x54 0x69 0x74 0x6C 0x65 0x3D 0x32 0x30 0x31 0x36

0x20 0x43 0x68 0x61 0x6D 0x70 0x69 0x6F 0x6E 0x73 0x68 0x69 0x70

Match:Title=2016 Championship

This will set “2016 Championship” to the variable “Match:Title”

#### CICADA to Client:

ID: 0x11

Data: 0x01=success, 0x00=failed

### 1.3 Refresh Multiple Variables

#### Client to CICADA:



ID: 0x12

Data:

Part 1 Length	2 BYTE (little-endian)
Part 1 Data	key=value, value encoded in UTF-8
...	
Part N Length	2 BYTE (little-endian)
Part N Data	key=value

Sample: 0x0F 0x00 0x54 0x65 0x61 0x6D 0x41 0x3A 0x4E 0x61 0x6D 0x65 0x3D 0x48 0x6F 0x6D  
0x65

0x10 0x00 0x54 0x65 0x61 0x6D 0x42 0x3A 0x4E 0x61 0x6D 0x65 0x3D 0x47 0x75 0x 65  
0x73 0x74

TeamA:Name=Home      TeamB:Name=Guest

**CICADA to Client:**

ID: 0x12

Data: 0x01=success, 0x00=failed

#### 1.4 Switch Preview Screen

**Client to CICADA:**

ID: 0x15

Data: a list of the ID of screen.

Sample: 0x01

Show screen #1 onto the Preview screen.

**CICADA to Client:**

ID: 0x15

Data: 0x01=success 0x00=failed

#### 1.5 Switch Program Screen

**Client to CICADA:**

ID: 0x16

Data: a list of the ID of screen.

Sample: 0x01 0x11

Show screen #1, and #17 on the Program screen.

**CICADA to Client:**

ID: 0x16

Data: 0x01=success 0x00=failed

## 2. UDP Network Interface

CICADA listens on port 6702 by default as a UDP server. You may send or broadcast a UDP data package in the network, which will be receive and process by CICADA.

General Format:



**Kazo Vision**

WEB: <http://www.kazovision.com> MAIL: [sales@kazovision.com](mailto:sales@kazovision.com)

Head (1 BYTE)	ID (1 BYTE)	Data Length (4 BYTE, little-endian)	Data (N BYTE)	Tail (1 BYTE)
0xCC	?	?	?	0xCD

The data part is dynamic; the length of it is defined by "data length" part.

This protocol is the same above "TCP Network Interface". The only exception is CICADA will not send back any response for each command.

### 3. Serial Port Interface

CICADA can be set to listen on a Serial Port to receive the commands.

General Format:

Head (1 BYTE)	ID (1 BYTE)	Data Length (4 BYTE, little-endian)	Data (N BYTE)	Tail (1 BYTE)
0xCC	?	?	?	0xCD

The data part is dynamic; the length of it is defined by "data length" part.

This protocol is the same above "TCP Network Interface".

### 4. Web Interface

CICADA can be set to request on a Web Service to receive the data.

General Format in Json:

```
{
  "Match:Event": "Event Name",
  "TeamA:Name": "Home Team Name",
  "TeamB:Name": "Guest Team Name",
  "TeamA:Score": "3",
  "TeamB:Score": "2",
  "Match:Time": "9:23",
}
```