About the BioBrain

The BioBrain is a computing device placed into the BioHitech Eco-Digester to provide real-time waste analytics data.   The BioBrain communicates with the Eco-Digester's PLC (Programmable Logic Controller) to gather real-time data about the machine and periodically transmits this information securely over the Internet to BioHitech's cloud-based portal.

BioHitech provides end-users with secure, web-based access to our cloud for reporting and analytics.

BioBrain Network Access

The BioBrain communicates <u>OUTBOUND</u> to the Internet over HTTPS (HTTP over SSL/TLS).

Outbound TCP network access on port 443 is required to the following IP addresses:

- 54.221.243.115
- 54.209.122.209
- 54.209.181.132
- 54.208.204.191
- 54.85.105.167
- 54.85.142.150

DNS

The BioBrain uses DNS to resolve public Internet host names.

If you are not providing internal DNS servers, then outbound UDP access on port 53 is required to the following IP addresses:

- 8.8.8.8
- 8.8.4.4

Network Configuration

Out of the box, the BioBrain computers support dynamic network configuration using DHCP.

If static networking is required, BioHitech can pre-configure the BioBrain computers for network access.

The following information for each BioBrain is required for static networking configuration:

- Desired IP Address of the computer
- Net Mask
- Gateway IP address
- If internal DNS is used, the IP address(es) of the DNS server(s).

Proxy Servers

Use of SSL Proxy servers is not supported at this time.

Bandwidth Utilization

Bandwidth utilization is approximately 2MB per day (about 60MB per month).

Typically the BioBrain sends telemetry data over the Internet approximately every 10 minutes (and when the door is open and closed on the digester).