CLAIMS

What is claimed is:

1. A system comprising:

a messaging server connected to a wireless network;

a host application server connected to the wireless network, wherein the host application server and the messaging server are separately connected to the wireless network and are configured to communicate within the wireless network; and

a dispensing machine comprising:

at least one application running on the dispensing machine;

a display;

a microcontroller;

a microprocessor;

a wireless network module configured for data communication between the dispensing machine, the host application server, and the messaging server;

peripheral devices comprising a plurality of readers; and

a dispensing mechanism comprising a product collection area, motors, limit switches, and one or more sensors

wherein the system is configured to send and receive data from the wireless network as follows:

a web application is configured to send preconfigured instructions to the host application server and thereby receive a response from the host application server, wherein the preconfigured instructions comprise operations parameters, configuration details, notification instructions, software updates, and/or diagnosis routines;

the host application server is configured to communicate with the message server;

after a response is received from the host application server, the messaging server is configured to send a notification trigger for the preconfigured instructions

from the host application server to the at least one application associated with the dispensing machine;

the at least one application associated with the dispensing machine is configured to send a request to the host application server for preconfigured instructions, wherein the at least one application is configured to receive the preconfigured instructions from the host application server;

the display of the dispensing machine is operable based on one or more signals from the host applications server; the dispensing machine is operable to convert the preconfigured instructions in a form of one or more signals into pulses for operating the dispensing mechanism, wherein the pulses are preconfigured pulses stored in the microprocessor of the dispensing machine to operate at least one motor of the dispensing mechanism; and

the at least one application on the dispensing machine sends data to the host application server via the wireless network, wherein the at least one application is configured to monitor the data sent from the dispensing machine.

2. The system of claim 1, wherein the dispensing machine is further configured to transmit microprocessor logs.

3. The system of claim 2, wherein the dispensing machine is further configured to transmit user access logs.

4. The system of claim 3, wherein the dispensing machine is further configured to transmit sensor logs.

5. The system of claim 4, wherein the dispensing machine is further configured to transmit display and networking logs.

6. The system of claim 5, wherein the dispensing machine is further configured to transmit user input logs.

7. The system of claim 6, wherein the dispensing machine is further configured to transmit sales logs.

8. The system of claim 7, wherein the dispensing machine is further configured to transmit error logs.

9. The system of claim 1, wherein the dispensing machine includes a vending machine.

10. The system of claim 1, wherein the dispensing machine includes at least one reader.

11. The system of claim 1, wherein the dispensing machine is further configured to transmit microcontroller logs.

12. The system of claim 1, wherein

the dispensing machine further comprises local storage that includes media files, preference values, and other data.

13. The system of claim 1, wherein the dispensing machine is configured to be troubleshooted remotely via the wireless network by sharing at least one error code of the microcontroller associated with a dispense failure, system malfunction, or machine breakdown.

14. The system of claim 13, wherein the sharing the at least one error code comprises sending a push notification from the dispensing machine via either an API call or through a wireless connection to an application via the wireless network.

15. The system of claim 1, wherein the display is further configured to show a product expiry date, nutritional facts, product ingredients, and allergen details associated with a selected product.

16. The system of claim 1, wherein the product selection shown on the display is updated over the wireless network using the pre-configured instructions.

17. The system of claim 1, further comprising a lockable door to access products, wherein the lockable door is remotely unlocked over the wireless network when the dispensing machine is presented with a computer-readable authorized personnel identifier based on updated instructions saved to one or more microprocessors of the dispensing machine.