

AVend SmartVending API Guide

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Revisions

Version	Date	Changes
V1.1.0	2020.10	Initial public release
V1.1.5	2021.04	Added Port option in the API Endpoint specs.

Overview

AVend SmartVending API (“API”) provides an easy way to effect physical dispense of supported vending machines. This enables software-control dispense and opens up numerous new possibilities and use cases for vending machines.

The API is based on the HTTP REST model. It provides Cart functionality for multiple-item dispense (“Multi-Vend”)¹. It supports Session concept for robust operation.

Prerequisites

An AVend SmartVending kit (“AVend kit”) is properly integrated with the target vending machine.

The AVend API middleware (“middleware”) installed on the AVend kit establishes an API host with an endpoint for the API calls.

To use the API it is assumed that proper network setup is done and the calling app is able to reach the API endpoint provided by the middleware.

API

Syntax

API_Endpoint/?action=v1&code=v2

Where:

API_Endpoint has the format of “http://host[:**portnum**]/avend”, where the host is the IP or hostname where AVend API middleware is installed; the default TCP port is 8080.

action is a required keyword, and **v1** is one of the following values:
(**start** | **dispense** | **add** | **remove** | **clear**);

code is required when the action keyword is “**add**” or “**remove**”;
it is optional when the action is “**dispense**”;
Its **v2** is a 2-digit number from 01 to 99, with leading zero for number less than 10.

portnum is required when the endpoint is installed at a specific TCP port **portnum**. The [:portnum] can be omitted if the API endpoint is set up using http default port 80.

Note that some OSes by default block port 80. In those cases, a specific TCP port will need to be specified.

API Calls

API Call	Description
http://host:8080/avend?action=start	Start a session to begin transaction. All other API calls will have no effect unless a session has started. Inactive session timeouts in 5 minutes.
http://host:8080/avend?action=dispense&code=v2	Dispense selection v2 if cart is empty. Otherwise dispense the item(s) in cart.
http://host:8080/avend?action=add&code=v2	Add selection v2 to Cart.
http://host:8080/avend?action=dispense	Dispense item(s) in Cart.
http://host:8080/avend?action=remove&code=v2	Remove selection v2 from Cart.
http://host:8080/avend?action=clear	Clear Cart.

Table 1

Note: Swap “host” in the API Calls documented in Table 1 with the API host IP (or hostname if defined and reachable in the network).

Examples

The following examples assume AVend middleware is running at IP 127.0.0.1.

Single-Vend API calls

Start – <http://127.0.0.1:8080/avend?action=start>

Dispense – <http://127.0.0.1:8080/avend?action=dispense&code=37>

What physically happens

Product at selection 37 is dispensed

Multi-Vend API calls¹

Start – <http://127.0.0.1:8080/avend?action=start>

Add 05 selection to Cart –

<http://127.0.0.1:8080/avend?action=add&code=24>

Add 01 selection to Cart–

<http://127.0.0.1:8080/avend?action=add&code=05>

Dispense – <http://127.0.0.1:8080/avend?action=dispense>

What physically happens

Product at selection 24 is dispensed

Product at selection 05 is dispensed.

Notes

1. Multi-Vend function requires vend-status integration between the AVend kit and the target vending machine.