

Automation Title -- **Gadgets E-commerce Inventory & Order Automation System**

BY

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Category - E-commerce Automation / Inventory & Operations

Detailed Description

This automation powers a fully connected e-commerce backend for a gadgets store by linking the website, Airtable inventory, Google Forms, Google Sheets, and Make.com into a single synchronized system.

The moment a product is submitted through a Google Form, it flows into Google Sheets, is validated to prevent duplicates, then automatically creates a new record inside Airtable—including product images uploaded via Google Drive. The website syncs with Airtable every 30 seconds, ensuring new products, prices, and stock levels appear instantly.

Customer orders placed through the website are routed through a Make.com webhook. Each order reduces inventory, creates a Stock Movement record, generates an Order entry, and maintains complete transaction history.

Stock changes entered through a separate Stock Management Form also flow through Sheets → Make → Airtable, updating product quantities and logging all adjustments. An admin panel inside the website provides real-time order views, date filtering, quick links to forms, and manual sync controls.

This system eliminates manual updates, prevents overselling, protects data accuracy, and provides a clean operational infrastructure suitable for small businesses, all without the need for Shopify, Zoho, or Odoo.

This is a **complete, scalable, automation-driven e-commerce backend**.

Tools Required

Core Tools

- **Make.com** — automation orchestrator
- **Airtable** — primary inventory database
- **Google Forms** — product creation & stock update forms
- **Google Sheets** — form response storage + workflow triggers
- **Website Frontend** — HTML/JS site pulling data from Airtable
- **Node.js Scripts** — product sync generator (products.json)

Optional

- Access to Google Drive (for image uploads)
 - Hosting for website
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Size of Project

Large (10+ modules, 3 workflows, 3 databases, live sync system)

Setup Requirements

Airtable Setup

Create a base with these tables:

TABLE 1 — Products

Field	Type
Product ID	Formula
Name	Single line text
Category	Single select
Selling Price	Number
Cost Price	Number
Current Stock	Number
Low Stock Threshold	Number
Description	Long text
Images	Attachment (multi-image)
Notes	Long text
Last Updated	Last Modified Time

Product ID formula:

UPPER(LEFT(Category,3)) & "-" & RECORD_ID()

TABLE 2 — Stock Movements

Field	Type
Product	Linked record → Products
Movement Type	Single select (Stock In / Stock Out)
Quantity	Number
Description	Long text
Date	Created Time

TABLE 3 — Orders

Field	Type
Order ID	Autonumber

Field	Type
Products	Linked records
Quantities	Number array
Customer Name	Text
Customer Phone	Text
Total Price	Formula
Order Date	Created Time

Google Forms Setup

Product Creation Form

- Product Name
- Category
- Selling Price
- Cost Price
- Low Stock Threshold
- Description
- **Image 1 (File upload)**
- **Image 2 (File upload)**
- Notes

Stock Management Form

- Product Name
 - Movement Type
 - Quantity
 - Notes
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Google Sheets Setup

Create two sheets:

1. **Product Submissions Sheet** (linked to creation form)
2. **Stock Movements Sheet** (linked to stock form)

These are the real-time trigger points for Make.com.

Make.com Setup

You will configure **three scenarios**:

Automation 1: Product Creation Workflow

Trigger:

Google Sheets — Watch New Rows

Modules:

1. **Google Sheets – Watch New Rows**
2. **Airtable Search Records** (search by Product Name or Product ID)
3. **Filter:**
 - Continue only if:
 - Total number of bundles = 0
4. **Airtable – Create Record**
 - All product fields mapped
 - Two images mapped directly using:
 - `https://drive.google.com/uc?export=download&id={{trim(substring(imageCell;33;66))}}`
5. End workflow

Outcome:

- No duplicate products
- Images saved correctly
- Website will sync automatically

Automation 2: Stock Management Workflow

Trigger:

Google Sheets — Watch New Rows

Steps:

1. Search Airtable for product
2. Filter out invalid products
3. Prevent negative stock using condition:
4. $(\text{CurrentStock} - \text{Quantity}) \geq 0$ (for Stock Out)
5. Update Product stock
6. Create Stock Movement record

Outcome:

- Real-time stock updates
- Full audit log

Automation 3: Website Order Processing Workflow

Trigger:

Webhook module → receives order JSON from website

Steps:

1. Parse customer details and line items
2. For each product in the order:
 - Search airtable
 - Reduce stock
 - Create Stock Out movement
3. Create Order record
4. Send confirmation back to website

Outcome:

- Orders automatically logged
 - Stock automatically deducted
 - Zero manual involvement
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Automation 4: Website Auto-Sync

The website refreshes every **30 seconds** using:

- /products.json generated from Airtable via Node script
- On admin dashboard:
 - “Sync Inventory” button
 - Real-time data view
 - Date-filtered order reporting

Outcome:

- Website stays up-to-date automatically
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Deployment Time Estimate

- Initial setup: **2–4 hours**
 - Full integration + website sync: **2–5 days**
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Value Proposition

This automation system:

- Eliminates manual product uploads
- Stops inventory errors & overselling
- Reduces labor by **20–40 hours per month**

- Provides enterprise-level tracking without enterprise cost
 - Combines 4 tools into one seamless backend system
 - Gives business owner a full dashboard with live data
 - Supports growth without extra complexity
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Known Limitations

- Google Drive links must be publicly accessible
 - Free Make.com plan may hit execution limits
 - Large image uploads can slow syncing
 - Website depends on 30-second polling unless replaced with webhooks
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Testimonials / Use Cases (Optional)

Recommended placeholders:

“Our inventory updates itself automatically, we no longer oversell.”

“Order processing is now zero-touch.”

“Perfect for small e-commerce businesses without Shopify.”

Size Classification

Large automation system

(3 scenarios, 3 tables, website integration)

Estimated ROI

Example:

- 30 hours saved monthly
- Value of time per hour = ₦6,000
- Total monthly savings = ~~₦180,000~~ **₦180,000**
- Cost of Make.com + Airtable = ~~₦15K~~ **₦15K max**

Net ROI: ₦165,000 monthly

Versioning

Version Description

- v1.0 Product creation workflow
- v1.1 Stock management workflow
- v1.2 Order processing & webhook

Version Description

v1.3	Website auto-sync
v1.4	Admin dashboard reporting
v1.5	Two-image direct mapping improvement