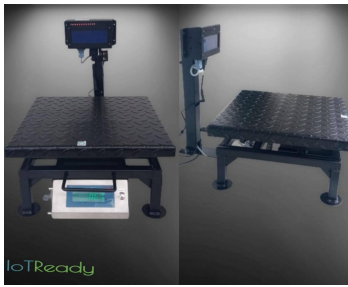


Weighing Scale Data Logger

BLE weight and scan capture — turns any RS232 scale into a connected station

Product Datasheet
BLE • Firmware V1.1



20×4
JUMBO LCD
DISPLAY

8
RGB STATUS LEDs

7–24 V DC
SUPPLY RANGE

4.2
BLUETOOTH LE

OVERVIEW

The IoTReady BLE Weighing Scale & Scanner Data Logger sits between an existing weighbridge or bench scale and the application that needs the number. It reads weight over RS232 from **any desktop or floor-mounted scale with a text-based protocol**, pairs it with a scanned barcode or RFID tag, shows both on a jumbo operator display, and publishes the result over Bluetooth LE — so a site keeps the scales it already owns and still gets structured, operator-verified capture.

The unit is bidirectional by design. The same BLE characteristics that report weight and scan data also accept writes: an application can push a supplier name and SKU to the display, freeze a submitted weight on screen, set a software tare, drive the PASS/FAIL LED array from an API response, and print a label — all without the operator touching a keyboard.

Identification is an add-on, and both kinds are available: a USB or RS232 **QR and barcode scanner** for all common 1D and 2D codes, and a built-in **RFID reader** for EPC and TID with software-controlled read range. Either feeds the same Scanner characteristic, so the integrating app is unchanged by the choice. A 4×4 membrane or USB numeric keypad and a powder-coated aluminium stand complete the station.

APPLICATIONS

Procurement

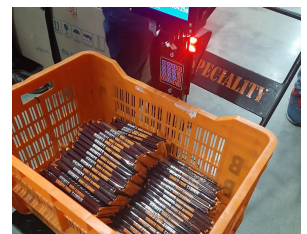
- Weigh and identify inbound stock at the gate or dock
- Supplier and SKU pushed to the display before the operator weighs

Labelling

- Captured weight drives a label printed at the station
- PASS/FAIL LEDs confirm the API accepted the record

Inventory audits

- Scan-then-weigh cycle counting against system stock
- Software tare avoids re-taring the scale for every crate



KEY FEATURES

Works with the scale you have

Any desktop or floor-mounted scale with an RS232 port and a text-based protocol — "2020 g", "2020", "2.02 kg" and "2.02" all resolve to 2020 grams.

20×4 jumbo operator display

Line 0 shows the scan, line 3 shows the weight, and lines 1 and 2 are yours to write — supplier, SKU or an instruction to the operator.

PASS/FAIL at a glance

An 8-LED RGB array driven straight from your API response, so the operator sees accept or reject without reading a screen.

Bidirectional characteristics

Weight and scan characteristics accept writes as well as reads — freeze a submitted weight on the display, or write an app-generated asset ID for the operator to confirm.

Software tare

Write a tare value over BLE and the reported weight subtracts it, so a crate or pallet weight need not be re-tared on the scale each cycle.

Label printing built in

Write a printer-formatted string to the label characteristic and the station prints it — no separate print path from the app.

BLE INTERFACE

Bluetooth LE 4.2, one simultaneous connection. All UUIDs share the base d3edcb21-d7aa-4731-bad8-9466515385xx the table lists the final byte. Services group the characteristics: ...8500 is the read service, ...8510 the read/write service.

CHARACTERISTIC	UUID	FORMAT	ACCESS	PURPOSE
Scanner	...8501	String	R / W / Notify	Reads the scanner result (e.g. "ABCD1234"). If the app generates asset IDs, write one here to show it on the display.
Weight	...8502	Int, LE byte array	R / W / Notify	Weight in grams (e.g. [0x5F, 0x5D, 0x00, 0x00]). Writing a stable or submitted weight freezes it on the display until the weight changes.
Weight Offset	...8511	String	R / W	Application-side tare (e.g. "1500"). The weight returned over BLE subtracts this value; the operating procedure around taring is the developer's to define.
Display	...8512	String	R / W	Zero-indexed, comma-separated line write — "2,Tomato" writes "Tomato" to row 3 of the display.
Label	...8513	String	R / W	Writes a label to the connected printer. Format depends on the printer model and requires a trailing newline.
Pixels	...8514	String	R / W	Lights the RGB array as "R,G,B" with no spaces (e.g. "100,0,0"). Only the last 6 LEDs are controllable — LED 1 is power (red), LED 2 is connection status (pink).
System	...8515	String	W	System control. Currently accepts "reboot", "disconnect" and "ota".

INTEGRATION

Connecting. Each station carries a QR code holding its BLE identity, so an operator selects a station by scanning it rather than picking from a device list. The app scans for BLE devices, connects to the one matching the QR, looks up the services and characteristics, and subscribes to Weight and Scanner.

Per-item cycle. Before the weighment, write the tare to Weight Offset and the supplier and SKU to lines 1 and 2 of the Display. Weight notifications then stream until your API responds — write the verdict to Pixels, the confirmed value to Weight to freeze the display, and the label string to Label to print.

A WiFi variant is integrated with the IoTReady Operations Traceability Platform — write to sales@iotready.com for details.

WHERE THE DATA LOGGER PAYS

WORKFLOW	THE PROBLEM TODAY	WITH THE DATA LOGGER
Raw material procurement and GRN	Intake weight is read off the scale and keyed in later, so the GRN reflects what someone remembered rather than what arrived.	Weight captured at the station with LED feedback to the operator, aggregated by supplier into SKU line items and posted as an auto-GRN to your WMS.
Finished goods and labelling	Labels are printed before anyone checks the pack is right, so a mis-fill leaves the floor with a valid-looking label on it.	Fill-rate validation at the bench: on a mismatch the station alerts the operator and blocks both the label print and the ERP submission.
Inter-warehouse transfer in	Received quantity is reconciled against the despatch note after the fact, when the discrepancy is no longer anyone's to fix.	Quantity in is compared to quantity out as it is weighed, with real-time feedback to the receiving operator and bulk transfer-in by weight for statistical averaging.
Cycle count	Weight-UOM SKUs are counted by eye or skipped, so the count that matters most to value is the least reliable.	A weight-based counting workflow for SKUs held in weight UOM, with real-time alerts on unexpected stock level changes.
Customer picking	Short and over-picks on weight-based SKUs are found by the customer, not at the pick face.	Pick lists drawn from sales orders in your WMS, with a weight-based workflow and quantity alerts that catch the error at the bench.

TECHNICAL SPECIFICATIONS

Function	Industrial, business	RGB indicator	8 RGB LEDs, PASS/FAIL indication
Compatible scales	Any desktop or floor-mounted scale with an RS232 port and a text-based protocol	Enclosure	ABS plastic, black; optional IP68 enclosure available
Weight formats	"2020 g" or "2020" = 2020 g; "2.02 kg" or "2.02" = 2020 g	Power supply	7–24 V DC
Custom protocols	Binary protocols supported if the scale is shared with us; MoQ 20 units	BLE version	4.2, one simultaneous connection
Display	20×4 jumbo LCD character display	Firmware revision	V1.1
Display default	Line 0 scanner, line 3 weight, lines 1–2 user controlled	Platform	WiFi variant integrates with IoTReady Operations Traceability Platform

OPTIONS

QR and barcode scanner USB or RS232 scanner supporting all common 1D and 2D codes, including QR. Scanned values arrive on the Scanner characteristic and show on line 0 of the display.	RFID reader Built-in reader supporting EPC and TID, with software-controlled read range and a response time under 100 ms. Reads arrive on the same Scanner characteristic.	Keypad 4×4 membrane keypad for the RS232 variant, or a USB numeric keypad for the USB variant. Supplied with a mounting plate for the stand.	Stand Powder-coated aluminium stand, carrying the display head and the optional keypad mounting plate.
---	--	--	--

Specifications are subject to change without notice. Compatibility with a given scale depends on its RS232 output format; share the scale with us to confirm support for custom or binary protocols. © 2026 IoTReady Solutions. All rights reserved.