AVENIO Edge System
Technical specifications

General

Configuration	Floor model
Throughput per run	1–48 samples for library prep and target enrichment
Runtime	Up to 31 hrs (including 16 hrs hybridization time)
Setup time	Approximately 15 mins prior to run
Inventory check	Pre-run consumable list. Pre-run check for empty positions and incorrectly placed items
Quality control on deck	Fluorescence-based quantification method
Barcodes	2D imager scans for 2D and 1D barcodes
Regulatory label	US-IVD, CE-IVD

Kits and applications

Reagent design	Pre-filled, barcoded, ready-to-use. Reagent kits are optimized for 3 runs
Sample type	Extracted DNA samples
Workflow	Hybridization-based target enrichment

Software and connectivity

Traceability	21 CFR part 11 (subsection B), audit trail, process monitoring, user guidance
Data export	CSV, XML and PDF run exports. Sample input in .csv format
Interfaces	2 external USB ports and 1 network port
Connectivity	AVENIO Connect Workflow Manager or HL7 LIS connection, Roche remote service solution

Deck capacity

Consumables	17 tip racks of 96 tips each, supporting 3 tip types (50 / 200 / 1000 µL) 6 processing plates 5 processing lids 2 quantification plates 2 tip parks 4 panel tubes (to reconstitute custom panels)
Reagents	15 control mini racks; each rack includes 4 individual 2.0 ml tubes 10 troughs 20 cooled reagent tubes, 0.5 or 2.0 mL 2 primer plates
Inputs	1 MagNA Pure 96 output plate or 12 MagNA Pure 24 8-tube strips, low or high profile, or 1 processing plate

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Hardware

Instrument footprint (WxDxH)	1659 mm x 900 mm x 2043 mm 65.3 in x 35.4 in x 80.4 in
Operating space (WxDxH)	2659 mm x 1984 mm x 2100 mm 104.7 in x 78.1 in x 82.7 in
Construction and service space (WxDxH)	2659 mm x 3000 mm x 3000 mm 104.7 in x 118.1 in x 118.1 in
Weight	560.9 kg 1236.3 lbs
Contamination control	Work deck layout optimized to minimize contamination risk, UV light, optimized pipetting parameters with each TDF
Pipetting head	Single 8-channel pipetting head
Cooling block	2 °C–8 °C 36 °F–47 °F
On-deck thermocycler	Temperature range thermal block: +4°C to +99°C Temperature range heated lid: +30°C to +115°C Maximum average heating rate: 4.4°C /sec Maximum average cooling rate: 2.2°C /sec Temperature accuracy: ±0.3°C at 55°C Temperature uniformity: ±0.2°C at 55°C, 72°C, 95°C
Quantification module	High-performance multimode plate reader powered by a monochromator

Power and environmental requirements

Maximum pressure	< 1 MPa on floor for each foot
Ambient room temperature	15 °C–30 °C 59 °F–86 °F
Operating humidity	30–80%
Power requirement	110–240 VAC, 50/60 Hz (200 VAC between phases for Japan)

Roche Sequencing Solutions, Inc.
4300 Hacienda Drive
Pleasanton, CA 94588

sequencing.roche.com

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