

CG000256 Rev A

QUICK REFERENCE CARDS

# Chromium Connect

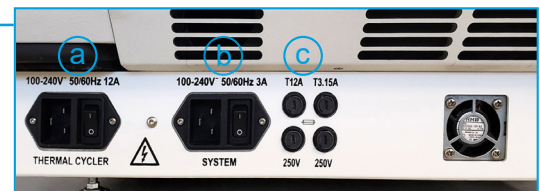
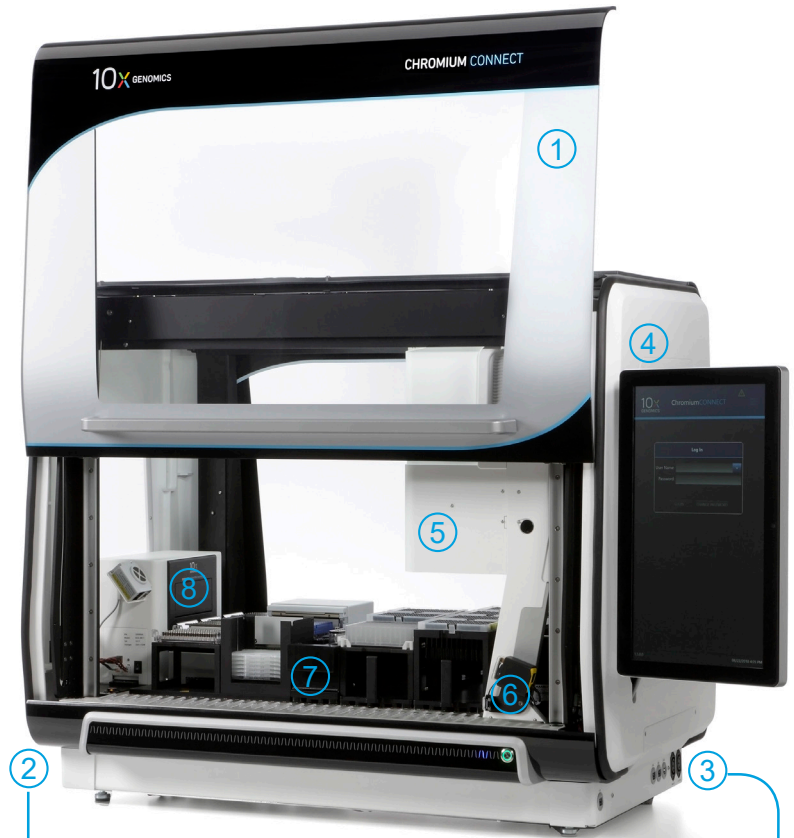
FOR USE WITH

Chromium Connect, PN-1000171

- ① Front Panel
- ② Left side of the power base assembly:
  - Ⓐ Thermal Cycler powered exclusively by this switched AC inlet & from a separate building mains circuit from the System switched AC inlet.
  - Ⓑ System powered separately from Thermal Cycler.
  - Ⓒ Fuses/Fuse covers (two 12A & two 3.5A fuses)
- ③ Right side of the power base assembly:
  - Ⓐ USB port: external devices
  - Ⓑ USB port: optional HEPA CAP hood
  - Ⓒ USB port: 10x Thermal Regulator
  - Ⓓ Ethernet to customer Wired Network
  - Ⓔ Power plug: optional HEPA CAP hood
  - Ⓕ Power plug: Thermal Regulator
- ④ Touchscreen  
USB port on monitor: User External Drive (download log files/upload setup files)
- ⑤ Gantry (liquid handling device)
- ⑥ Barcode Scanner
- ⑦ Deck Area
- ⑧ Chromium Automated Controller
- ⑨ Thermal Regulator (kept on/underneath benchtop)
  - Ⓐ Main power cable for thermal regulator (plugs into 3f)
  - Ⓑ USB port
  - Ⓒ ID port
  - Ⓓ External Sensor port

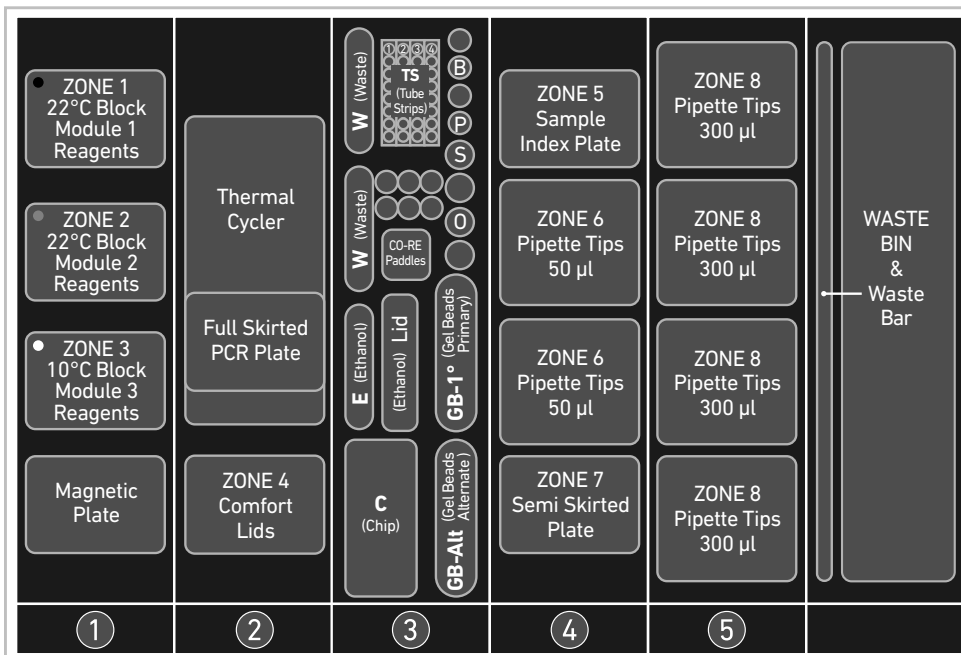
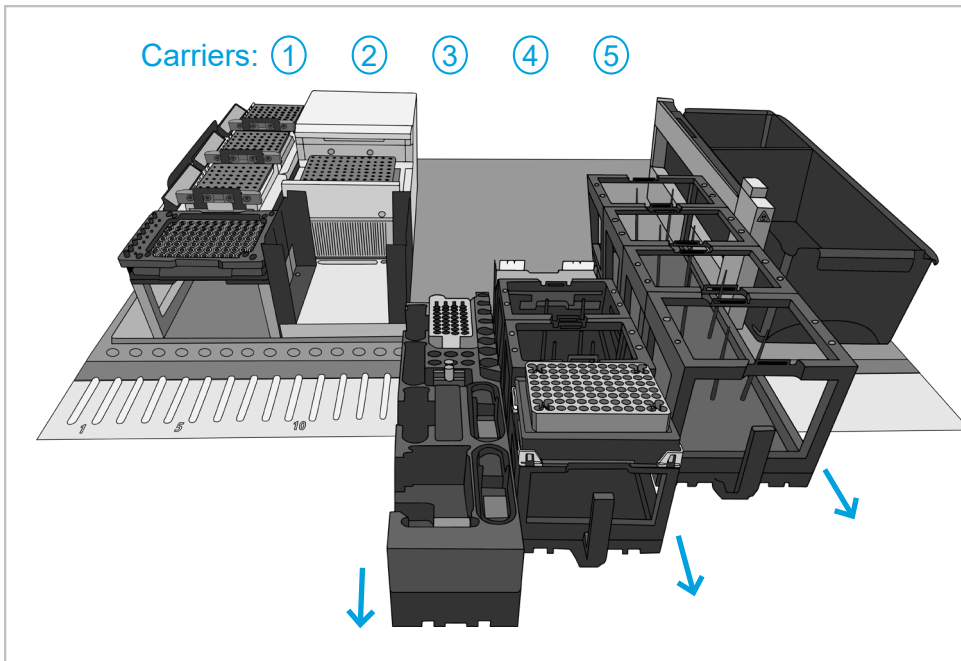
**⚠ REMOVE POWER FROM BOTH AC INLETS PRIOR TO ANY SERVICE ON THERMAL CYCLER OR SYSTEM.**

Information also available in Chromium Connect Instrument User Guide (CG000180) and in the Software Menu Options.



## Chromium Next GEM Automated Single Cell 3' Gene Expression v3.1 Assay

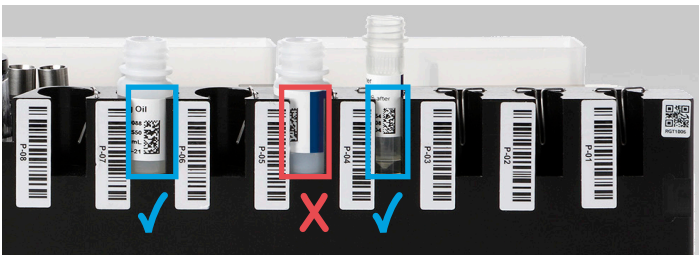
The deck includes five carriers. Carriers 1-2 are stationary while Carriers 3-5 slide out for loading/unloading items. The items displayed in the layout and table are specific to the assay listed above.



Zone	Item
<b>Carrier 1</b> Stationary	
Zone 1	22°C Block, Reagents, Module 1
Zone 2	22°C Block, Reagents, Module 2
Zone 3	10°C Block, Reagents, Module 3
-	Magnetic Plate
<b>Carrier 2</b> Stationary	
-	Thermal Cycler
-	Full Skirted PCR Plate (within the Thermal Cycler)
Zone 4	Comfort Lids
<b>Carrier 3</b> Rails: 15-18, Lights: 4	
W	Waste Reservoir
TS	Tube Strips
B	Dynabeads™ MyOne™ SILANE
P	Primer
S	Glycerol
O	Partitioning Oil
CP	CO-RE Paddles
E	Ethanol Reservoir
LID	Lid for Ethanol Reservoir
GB-1°	Gel Beads Primary
GB-Alt	Gel Beads Alternate
C	Next GEM Chip G (Automated)
<b>Carrier 4</b> Rails: 19-24, Lights: 6	
Zone 5	Sample Index Plate
Zone 6	Pipette Tips 50 µl
Zone 7	Semi Skirted Plate
<b>Carrier 5</b> Rails: 25-30, Lights: 6	
Zone 8	Pipette Tips 300 µl

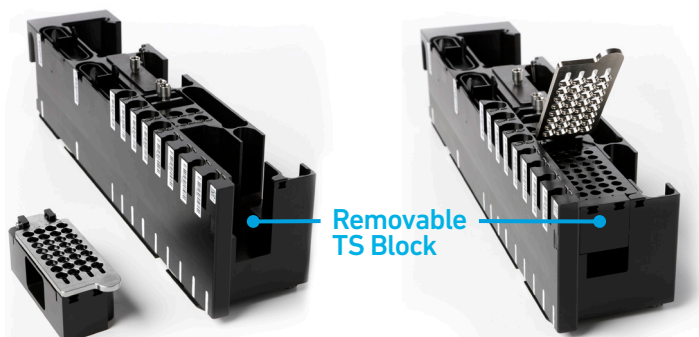
### Carrier Handling

- Establish a clean space near the instrument for placing sliding carriers during loading.
- To scan barcodes, slide carrier in SLOWLY and follow software prompts (chime & flashing lights).
- Practice sliding the carriers completely off the deck and replacing them back using rails.



### Deck Loading – Consumables

- Follow touchscreen for assay-specific handling.
- Ensure correct barcode orientation (on tubes and racks) as prompted by the touchscreen.
- The deck orients the A1 position to the back left corner of the instrument.
- Keep chip and gasket in sealed package until prompted to load.
- DO NOT use chips or gaskets specific to other 10x Genomics protocols.
- Optional removal of the TS block from Carrier 3 may facilitate loading tube strips.



### User Interaction

- CSV file upload enabled for Assay Setup and cDNA Input.
- For sample prep, refer to assay-specific Automation Kit User Guide
- The touchscreen provides a window for sample prep during which reagents are safely held on deck.
- Emulsion check requires user interaction ~30–50 min into the run.

### Deck Loading – Reagents

- Follow touchscreen for assay-specific handling.
- Ensure that no air gaps remain at the bottom of tubes.
- Prepare and dispense 80% ethanol off-deck to avoid spilling on consumables (i.e. chip).
- Carrier 3 gel bead positions allow use of one full tube strip or two partially used tube strips (adding up to 8 tubes total). Use GB-Primary first.
- Reagent thaw begins at specified points on touchscreen, with continued loading during thaw.
- Module loading: Use black handles to lift lids. Load from row 1 (back to front), inserting barcode end onto pin.
- **Press black handles while closing lids.** DO NOT allow lids to forcefully snap shut.
- DO NOT touch module mirrors. Smudges can prevent barcode scanning. Wipe clean when necessary.



### Chromium Connect Workflow Timing

1 > 2 > 3 > 4 > 5 1 h

Assay	Select
Setup	Input Info
Load	Samples, Reagents & Consumables

1 > 2 > 3 > 4 > 5 8.5 h

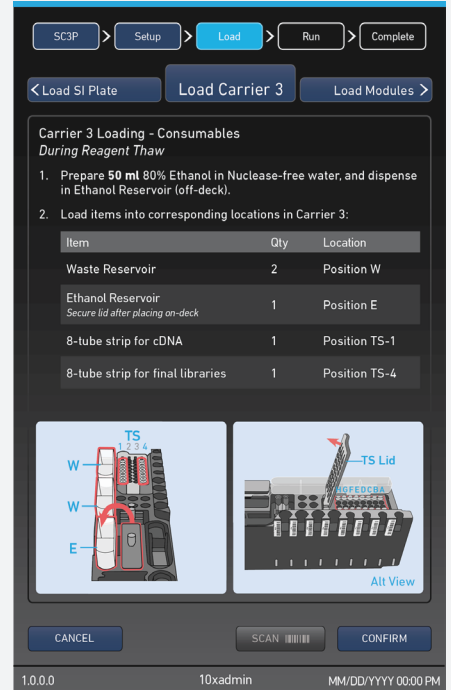
Run	Single Cell Partitioning, Barcoding & Reverse Transcription GEM QC (optional) cDNA Amplification & Cleanup cDNA QC (optional) Library Construction, Cleanup & Sample Indexing
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1 > 2 > 3 > 4 > 5 2 h

Complete	Final Library QC & Quantification Set Up qPCR (optional) Run qPCR (optional)
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## Load Screen

**Navigation Bar**  
Review previous & next steps



**Confirm**  
Required to proceed to next step

**Scan**  
Activated (blue) for barcode scanning

**Cancel**  
Ends assay (reagents not compromised)

## Toolbar

### Screen Capture

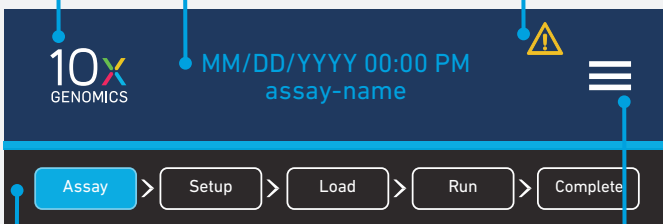
Tap logo (saved in run data package)

### Time Stamp

Experiment-specific display

### Notification Alert

Tap to see message



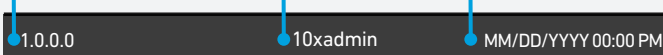
### Workflow Steps

**Menu Options**  
Admin settings & maintenance

### Selected Assay Name & Version

### Username

### Real-Time Stamp

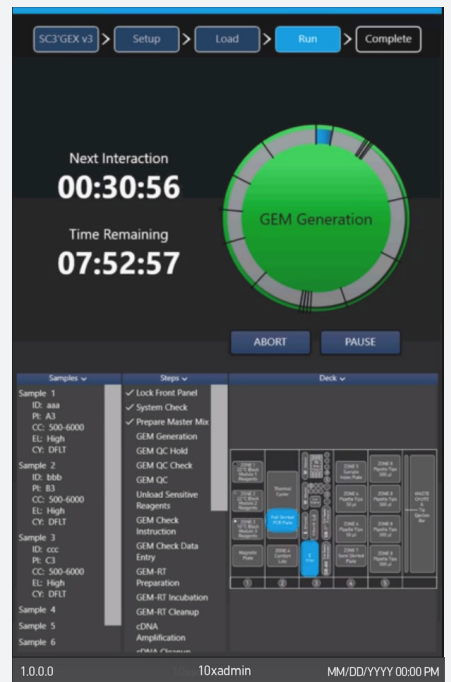


## Run Screen

**Abort**  
Ends assay (may compromise reagents)

**Pause**  
Completes in-progress step before pausing

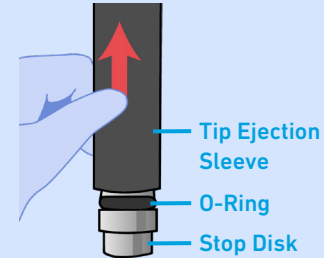
**Subwindows**  
Collapsible info updated in real-time



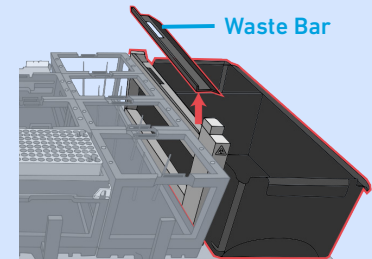


Running Maintenance via Software	Daily 15 min	Weekly 40 min
<b>Inspect for Condensation, Dust &amp; Smudges</b>	✓	✓
<b>Empty Waste Bin &amp; Liquid Waste</b>	✓	✓
<b>Channel Tests</b> Pipette Channel Tightness Test Liquid Detection Test	✓	✓
<b>Clean Deck, Rails, Carriers, Mirrors &amp; Walls</b>  Wipe down with laboratory wipes to minimize sources of particles and fibers  70% isopropanol or microcide on metal Deionized water or microcide on nonmetal		✓
<b>Clean Gantry Channels</b>  Lens-cleaning tissue and nuclease-free water		✓
<b>Calibration</b>		✓

Access Gantry pipette channels for cleaning by lifting up on tip ejection sleeve



Remove Waste Bar prior to maintenance and replace when prompted by UI



## References

- Chromium Connect Instrument User Guide (Document CG000180)
- Chromium Connect Specifications (Document CG000255)
- 10x Genomics Support website

## Support

Email: [support@10xgenomics.com](mailto:support@10xgenomics.com)

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