

Point of Care Molecular Diagnostics Solution



Microfluidics-based RT-PCR system

GeneNAT 300

One Module (1-8 Samples)



GeneNAT 340

Four Module (1-32 Samples)



Rapid Output

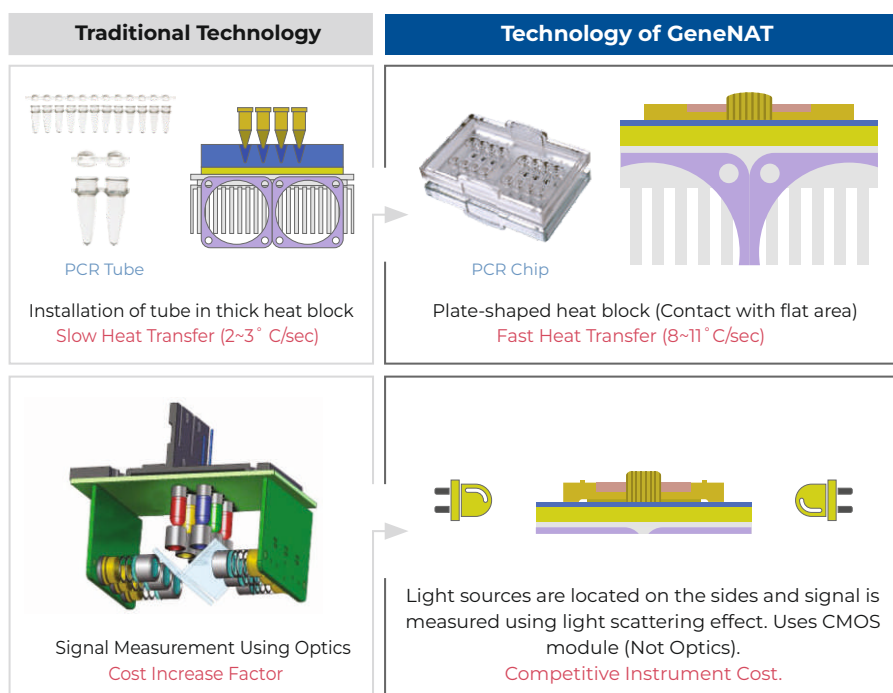
"40 cycles in 20 minutes"

Features

- Rapid & Robust
- Light weight & portable
- Small sample size
- Intuitive user interface (LCD touch Panel)
- Battery operation is possible
- Improved temperature accuracy and uniformity for delicate diagnostic applications
- Dual detection channels (FAM/ROX) for target and internal control detection
- Built in protocols
- Data management via USB, LAN or Wi-Fi connection.
- GeneNAT 340 - 4 individual testing modules in 1 device to increase test efficiency and versatility, makes it cost effective, 4 individual testing modules can work under different RT-PCR settings and time in one device.

Technology

It is a microfluidic chip-based (Patented) PCR method associated with compact and sophisticated hardware system which dramatically reduces the turn-around-time of RT-PCR testing to ~45 minutes. This platform adopted proprietary polymer chip which enables even faster thermal treatment of the samples than in the case of PCR tubes used in conventional RT-PCR instruments.



Microfluidics Chip Based RT PCR Reaction

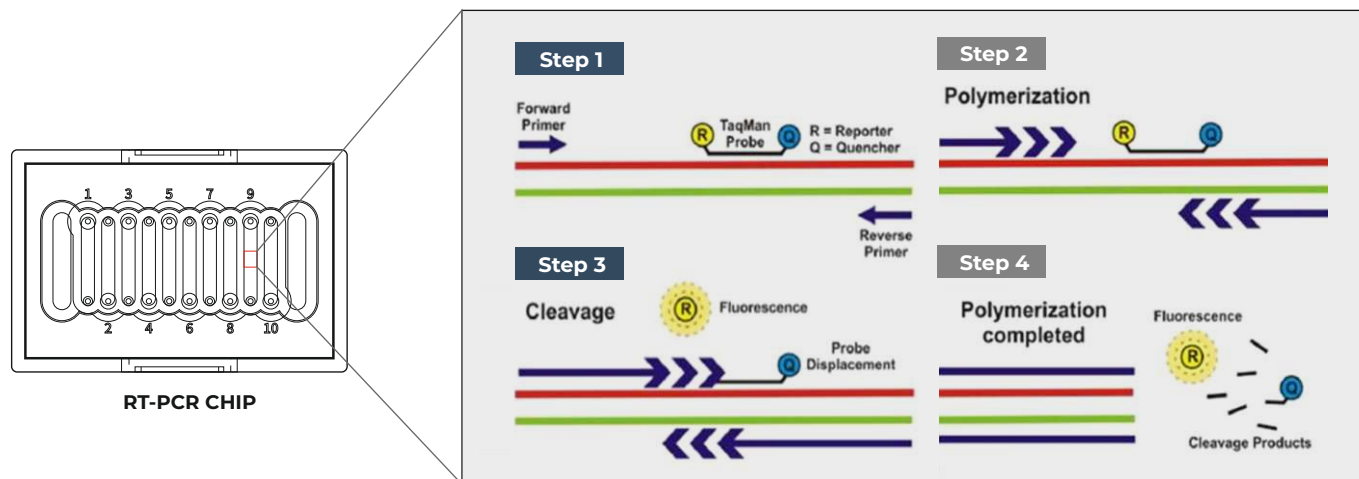
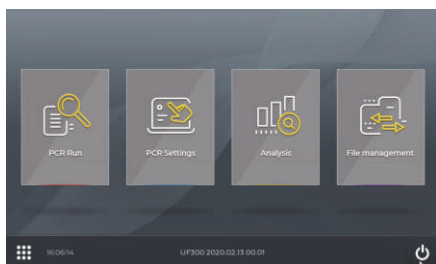


Figure 1. Taqman probe-based real-time polymerase chain reaction (PCR). (Step-1) Primers and probe anneal to the complementary target sequence; the probe, which is an oligonucleotide containing a fluorophore (R) and a fluorescence quencher (Q), is still intact. (Step-2) Polymerization takes place during the extension step of each PCR cycle. (Step-3) The fluorophore (R) is released from the Taqman probe, mediated by the 5' to 3'-exonuclease activity associated with the DNA polymerase as it copies the template strand and displaces the probe. The fluorophore (R) is no longer quenched by the quencher (Q) and fluoresces. (Step-4) Fluorescence accumulates in the reaction mix as polymerization is completed at every PCR cycle and is detected in real time.

GeneNAT 300

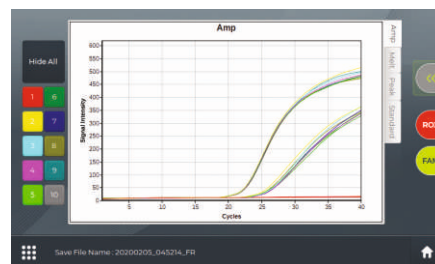
Intuitive User Interface Makes The Test Simple And Easy



Main screen consists of four simple menu which can be intuitively chosen and used.



Test protocols can be intuitively programmed and easily reviewed by user.



For easy analysis, real-time reaction curves are displayed as the same format of other real-time PCR instruments.

GeneNAT 340

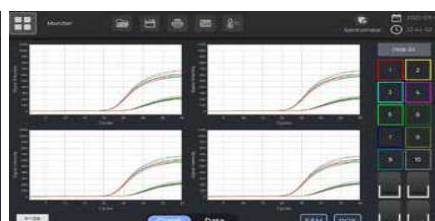
Intuitive User Interface Makes The Test Simple And Easy



Main screen of GeneNAT 340



Check Operation Status of Four-in-One Screen



Check PCR results of different modules at once.

Specifications

Instrument Name	GeneNAT 300	GeneNAT 340
Dimensions (cm)	21.8W x 14.2H x 20D	26W x 32.8H x 39.8D
User interface	7" TFT display capacitive touch panel	10.1" TFT display capacitive touch panel
PC/Laptop requirement	Not required (stand-alone), Option to connect is available	
Battery operation	Option available under unavailability of power supply	
Sample loading format	Polymer based 3-D microfluidic chip	
Number of samples/run (excluding controls)	1-8, single chip	1-32, 4 chips
Reaction Volume	10 µl	
calibration	Autocalibration	
Operation mechanism	Precise control of Peltier element	
Temperature Accuracy	± 0.2°C	
Temperature uniformity	± 0.2°C (well to well)	
Ramping Rate	Heating and cooling both 8°C/second	
Range of temp. settings	1-99°C (0.1°C resolution)	
Method of Detection	Measurement of fluorescence signal using CMOS module	
Type of Excitation	High brightness LED	
Detection Channels	FAM and ROX	
Power	AC 100V-240V, 50-60Hz/ DC 12V Output (MAX 2.0A0)	
Weight (kg)	3.3	13.7
Connectors	USB Type-A 2 ports, LAN, WI-FI	USB Type-A 3 ports, LAN, WI-FI

Matching Assay Kits (RT-PCR) for Diagnostics

Ordering Information

Cat Number	Description	Pack Size
GX-SMTB-96	*Smart Sure™ MTB Screening Kit, Targets: MPB64 & IS6110, 12 chips, 8 tests/test chip	96 Tests/PK
GX-SMDR-25	*Smart Sure™ MDR TB Detection Kit, for RIF+INH resistance, Targets: MPB64, IS6110, rpoB, inhA, and katG genes, 25 chips, 1 test/test chip	25 Tests/PK
GX-0041519979	*CoviNAT™ Novel Coronavirus (SARS-CoV-2) Detection Kit, Targets: N gene & RdRp gene, 25 chips, 4 tests/test chip	100 Tests/PK
GX-SHPV-25	*Smart Sure™ HPV Detection Real-Time PCR Kit, Targets: HPV 16/18 & 11 high-risk HPV genotypes (type 16, 18, 31, 33, 35, 39, 51, 52, 56, 58, 59, 45 and, 68), 25 chips, 1 test/test chip	25 Tests/PK
Smart HBV-96	*SMART HBV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, 12 chips, 8 tests/chip	96 Tests/PK
Smart HBV-48	*SMART HBV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, 6 chips, 8 tests/test chip	48 Tests/PK
Smart HCV-96	*SMART HCV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, 12 chips, 8 tests/test chip	96 Tests/PK
Smart HCV-48	*SMART HCV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, 6 chips, 8 tests/ chip	48 Tests/PK
GX-HBV-50	**HBV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, Universal	50 Reactions
GX-HBV-100	**HBV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, Universal	100 Reactions
GX-QHBV-50	**HBV _{sure} ™ Quantitative Real-Time PCR Kit, Targets: P gene, Universal	50 Reactions
GX-QHBV-100	**HBV _{sure} ™ Quantitative Real-Time PCR Kit, Targets: P gene, Universal	100 Reactions
GX-HCV-50	**HCV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, Universal	50 Reactions
GX-HCV-100	**HCV _{sure} ™ Qualitative Real-Time PCR Kit, Targets: P gene, Universal	100 Reactions
GX-QHCV-50	**HCV _{sure} ™ Quantitative Real-Time PCR Kit, Targets: P gene, Universal	50 Reactions
GX-QHCV-100	**HCV _{sure} ™ Quantitative Real-Time PCR Kit, Targets: P gene, Universal	100 Reactions
GX-SHIV-96	*Smart Sure™ HIV Qualitative Real-Time PCR Kit, 12 chips, 8 tests/chip	96 Reactions
GX-QHIV-100	**GX-DX™ HIV _{sure} Quant Real-Time PCR Kit, Universal	100 Reactions
GX-SHHH-72	*Smart Sure™ HHH RT- PCR Kit, 24 chips, 3 tests/chip	72 Reactions
GX-HHH-100	**GX-DX™ HHHSure RT- PCR Kit, Universal	100 Reactions
CovizOne-100	**COV _{sure} ™ COVID-19 Real Time PCR Kit, Targets: E gene & RdRp, Universal	100 Reactions
CovizOne-200	**COV _{sure} ™ COVID-19 Real Time PCR Kit, Targets: E gene & RdRp, Universal	200 Reactions
CovizOne-400	**COV _{sure} ™ COVID-19 Real Time PCR Kit, Targets: E gene & RdRp, Universal	400 Reactions
CoWizard-100	**COV _{sure} ™ COVID-19 Real Time PCR Kit (Version 2.0), Targets: N-gene & Orflab, Universal	100 Reactions
CoWizard-200	**COV _{sure} ™ COVID-19 Real Time PCR Kit (Version 2.0), Targets: N-gene & Orflab, Universal	200 Reactions
COVI-quick-100	**COVI-quick™ COVID 19 Real Time PCR Kit, Targets: E gene & RdRp, Universal	100 Reactions
COVI-quick-200	**COVI-quick™ COVID 19 Real Time PCR Kit, Targets: E gene & RdRp, Universal	200 Reactions
Smart STI-25	*SMART STI _{sure} ™ Qualitative Real-Time PCR Kit, Detects Ureaplasma urealyticum, Chlamydia trachomatis, Mycoplasma hominis, Mycoplasma genitalium, Neisseria gonorrhoeae, Trichomonas vaginalis, 25 chips, 1 test/chip	25 Tests/PK
FluSure CFR-25	*FluSure™ COVID-19/Influenza A+B/RSV Simultaneous Detection Kit, Targets: N-gene & RdRp (Covid-19), A & B (Influenza), A & B (RSV), 25 chips, 1 test/chip	25 Tests/PK

*Chip-based Tests: 30-40 minutes

**Universal Tests: 60-90 minutes

Automated Nucleic Acid Extraction

Technology: Magnetic Bead-based

To automatically complete the nucleic acid extraction from specimens, SiO₂-coated magnetic beads are used to adsorb, transfer, and purify nucleic acids. Magnetic beads with a unique separation system can rapidly extract high-purity DNA/RNA from biological/clinical specimens with high sensitivity and efficiency. The extracted nucleic acid can be used for enzyme digestion, reverse transcription (cDNA synthesis), PCR, RT-PCR, southern blot, and other common molecular experiments.

Mini Purifier P4

1-4 Samples/run



One Click Start of the Extraction Program
Highly Efficient Magnetic Suction



Small Footprint (POCT)
Suitable for Research, Human Disease
Screening & Pet Diagnostics



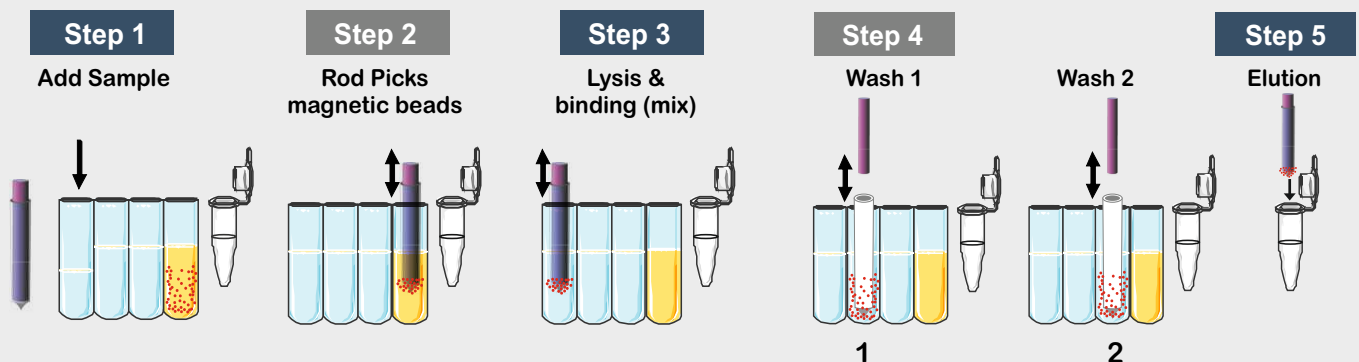
UV Lamp Sterilization
Close Operation to Avoid Contamination &
Pathogen Spread



Turnaround Time ~15–25 Min (Depends on sample type)
Can be placed in Laminar Flow/Biosafety Cabinet



Principle of Operation



Specification (Mini Purifier P4)

Cat. Number	GXHT101-4 (GENETIX Mini Purifier P4 Magnetic Particle Separator, 100-240V, 50/60Hz)
Sample Type	Whole Blood, Serum, Plasma, Throat Swab, Sputum, Plant/Animal Tissue, FFPE, cf-DNA etc.
Extraction of Samples per run	1-4 samples
Sample Volume	50µL-500µL
Elution Volume	upto 100 µL
CV	≤3%
Processing time	8-13 minutes depends on type of samples
Sensitivity	Detection rate of 50-100 copies/ml positive samples is ≥95% (Minimum 10 copies/ml Viral sample)
Operation Interface	7" LCD touch screen
Disinfection Sterilization	Ultraviolet sterilization
Weight (Kg)	4.0
Dimension (mm)	230(W) x 190(D) x 290(H)
Power	100V-240V ≤70W

Ordering Information

Matching Nucleic Acid Extraction Kits (Mini Purifier P4)

Cat. No.	Description
GXHT101-4	GENETIX Mini Purifier P4 Magnetic Particle Separator, 100-240V, 50/60Hz
GXMAG-MTB-PF4	GeneMag Quick Sputum DNA/RNA Purification Kit 40 prep & 40 tips /pack
GXMAG-WB-PF4	GeneMag Quick Whole Blood Nucleic Acid Purification Kit 40 prep & 40 tips /pack
GXMAG-HPV-PF4	GeneMag Quick HPV Nucleic Acid Purification Kit 40 prep & 40 tips /pack
GXMAG-BAC-PF4	GeneMag Quick Bacterial Nucleic Acid Purification Kit 40 prep & 40 tips /pack
GXMAG-PL-PF4	GeneMag Quick Plant Leaf Nucleic Acid Purification Kit 40 prep & 40 tips /pack
GXMAG-PS-PF4	GeneMag Quick Plant Seed Nucleic Acid Purification Kit 40 prep & 40 tips /pack
GXMAG-PF4	GeneMag Quick Viral Nucleic Acid Purification Kit 40 prep & 40 tips /pack
GXMAG-Gel/PCR-PF4	GeneMag Quick gel/PCR Purification kit 40 prep & 40 tips /pack
GXMAG-FOR-PF4	Genemag Forensic Sample Purification kit 40 prep & 40 tips /pack
GXMAG-FFPE-PF4	Genemag Quick FFPE DNA Purification kit 40 prep & 40 tips /pack
GXMAG-cf-DNA-PF4	Genemag Quick cf-DNA Purification Kit 40 prep & 40 tips /pack

RT-PCR System / P4 Nucleic Acid Extraction System

Cat Number	Description
GX-1399100200	GeneNAT-300 Real-Time PCR System
GX-1499100100	GeneNAT-340 Four-in-one Real-Time PCR System
GX-1399100200EM	GeneNAT-300 Real-Time PCR System with Mini Purifier P4
GX-1499100100EM	GeneNAT-340 Four-in-one Real-Time PCR System with Mini Purifier P4
GX-9900300701	Optional Power cable for Battery Operation
GX-1699100500	Optional Power cable for Car Cigarette Power Socket
GXHT101-4	GENETIX Mini Purifier P4, Magnetic Particle Separator, 100-240V, 50/60Hz