# FUJITSU Server PRIMERGY
Liquid Immersion Cooling System

Direct liquid immersion technology paves the way for next generation ultra-dense data centers. It's not air, it's not water – the future is FUJITSU Liquid Immersion Cooling System.

What is immersion cooling technology

Immersion cooling technology is a new paradigm to solve the challenges being associated with exponential data growth that plagues us today. Fully immersing servers in electrically non-conductive fluid provides greater cooling performance, eliminates the need for server fans, and reduces total cooling equipment power consumption.
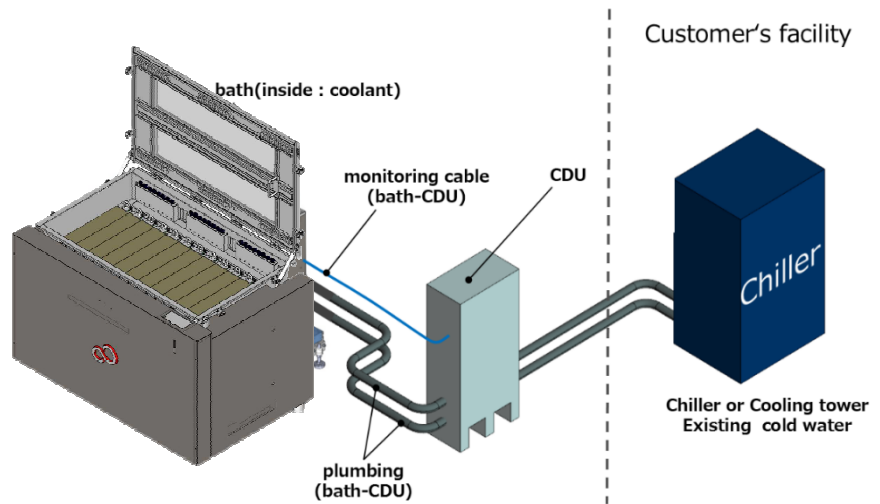
The FUJITSU Liquid Immersion Cooling System

With long-established extensive expertise in liquid cooling technology, FUJITSU is gearing up to the next stage by cutting edge immersion cooling system.

It's single-phase, closed-bath immersion technology, productized as an integrated offering of FUJITSU's ICT gear and unique cooling solution.

Universal 19" compatible design enables maximum utilization of air-based hardware with just slight modifications. So, you can always reduce time-to- market for your latest ICT environment.

How It Works

The system consist of a bath, a CDU (Coolant distribution Unit) and a fluorinated fluid (an inert fluid).

The inert fluid in a bath captures heat dissipated by ICT gear and transfers it from bath to CDU through inert fluid loop.

Then, built-in heat exchanger in the CDU exchanges the heat with water which comes from water-plant, and expels it outside the data center.

In case of abnormal status, the system can alert it to operators via network.

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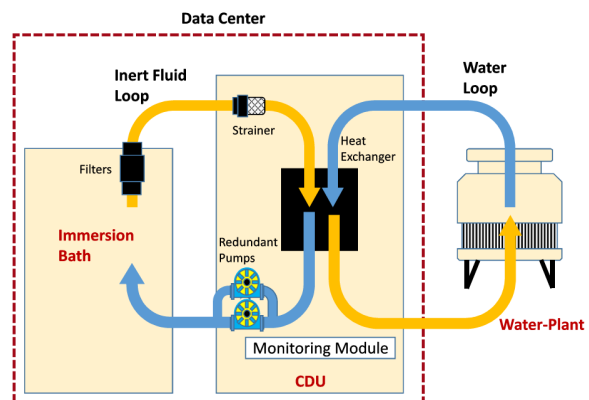
Benefits of FUJITSU Liquid Immersion Cooling System

40% Power Reduction *

Power

Immersion cooling technology significantly reduces total cooling power by eliminating the need of ICT fans and air-conditioners, besides greater cooling efficiency allowing relatively warm primary water-loop.

Harsh Environment Tolerance

Environment

The Inert fluid physically protects sensitive ICT equipment from polluted air, humidity and dust, etc.

50% Space Savings *

Space

What is often seen in recent data centers is insufficient cooling capacity for high performance servers which ends up extra white spaces in server racks. With great cooling capacity of immersion cooling, you can fully populate the ICT spaces and gain space savings.

Ultra Silence

Noise

No fans, no acoustic noise

* The actual reduction effect may vary depending on the installation environment.

Product Specifications:

FUJITSU Liquid Immersion Cooling System is provided as a package product with ICT and cooling system in one solution. FUJITSU offers solutions comprised of a proprietary mix of ICT hardware, software, cooling system and maintenance services.

FUJITSU Server PRIMERGY Liquid Immersion Cooling System

	Bath	CDU
Temperature and Humidity Condition	Operating : 5-45℃ / Humid : 8-85%RH (non-condensing)	
Acoustic Noise (Sound Pressure)	Max.50dB	
AC Power Connection	Hard Wire	
Distance between Bath-CDU (plumbing on floor)	1 Bath to 1 CDU : Max. 4m (13ft) 2 Baths to 1 CDU: Max. 2m (6ft)	
Dimensions （W×D×H)	1,330×850×880mm (52.4×33.5×34.6inch)	660×950×1,390mm (26.0×37.4×51.2inch)
Weight	Max.1,250kg (2,513lbs) *Including coolant & ICT Equipment	Max. 410kg (904lbs)
AC Input Voltage/Phase/Frequency	200-240V±10% / Single Phase / 50/60Hz+2%, -4%	200-240V±10% / Three Phase or 380-415V±10% / Three Phase 50/60Hz+2%, -4%
AC Input Power Redundancy	Yes (3+3 Dual Inputs)	No
Power Consumption	Depends on ICT equipment	2.0kW
Earth Connection	<10 Ω	<100 Ω

* Specifications may subject to change without prior notice.