

Real-Time Concrete Performance and Compliance

For Better Productivity, Quality and Sustainability



In-situ Real-time Concrete Strength and Temperature



KEY BENEFITS

Improve Productivity

Shorten casting cycle by 30% to accelerate the project at the structural stage

Reduce Embodied Carbon

Adopt more low-carbon concrete without productivity concerns and reduce sample test/wastages

Quality and Safety

Prevent premature early-age concrete activities and reduce safety risk

CONCRETE NUMBERS

6

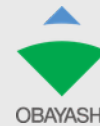
Countries

150+

Mix Designs

60+

Projects



USE CASES

Demould, lift, transport, loading, stressing, etc



Building



Civil



Airport



Precast



Underground

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Smarthub for In-situ Concrete Strength Monitoring



SmartHub is the wireless sensor device that monitors in-place concrete strength, maturity, and temperature development in real-time, 24/7.

It eliminates reliance on standard-cured concrete samples by bringing intelligence to the concrete.

KEY CAPABILITIES


- ▶ **Remote & Wireless Monitoring**
Install at any location, access 24/7 real-time information anytime and from anywhere
- ▶ **Operational Efficiency**
Timely WhatsApp and dashboard alerts for strength thresholds, temperature exceedance, and device status.
- ▶ **Reusable with Multiple Monitoring Points**
One SmartHub connects up to 4 sensors across different structural elements simultaneously.
- ▶ **Data Resilience**
2-year battery with 512 MB local SD card backup — stores up to 100 years of data at 10-minute intervals.
- ▶ **Compliance**
Generate PDF and Excel reports in customisable formats to meet local regulatory requirements.



SPECIFICATIONS

Accuracy	0°C to 90°C: $\pm 1^{\circ}\text{C}$ 90°C to 120°C: $\pm 1.5^{\circ}\text{C}$
Measurement Frequency	Every 10 mins (Customisable)
Dimensions	192 x 112 x 50 mm, 686g
Battery Life	2 Year (rechargeable)
IP Rating	IP65
Local SD Card	4 GB, 100 years (10 mins interval)
No. of Monitoring Points	4
Operating Temperature	-20°C to 60 °C

Together as a Package

 Check out the 1-mins [youtube Link](#) for More Info

SENSORS

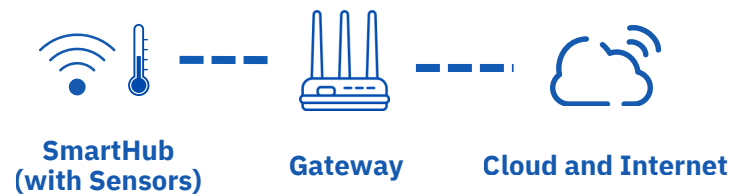
Sacrificial in concrete



Sensor Type	NTC Thermistor (PVC insulation)
Probe Protection at Tip	Stainless Steel
Cable Length	1.5m, 3m, 5m, 7m, 10m. With extension cable as an option
Diameter	6 to 8 mm

GATEWAY

Gateway acts as a wireless router, transmitting data from the SmartHub to the internet in real-time. Requires constant power to maintain live connectivity.



Connect to Site Power
Industrial or normal plug to connect to existing power lines



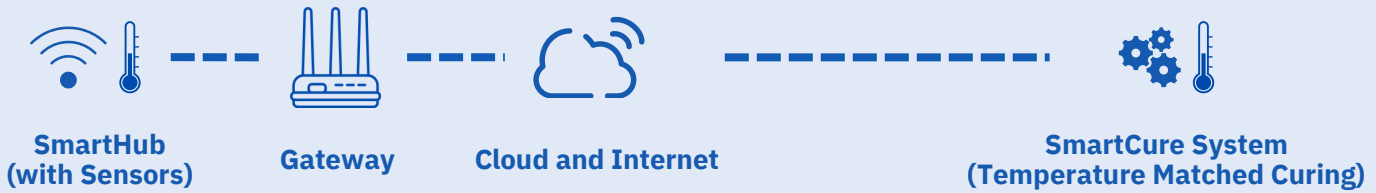
With Solar Power
Ideal for large sites — a semi-permanent setup that moves with casting sequence.



With Battery
Fully mobile and self-contained, for inaccessible areas or where temporary connectivity is needed.

Model	DLOS8N Outdoor LoRaWAN Gateway
Power Input	12v 300~500mA
Operating Temperature	-20~85°C
Communication Mode	2.4G WiFi, Ethernet, 3G or 4G cellular
Environment	Lighting Protection
LORAWAN Frequency	Customisable based on region
IP Rating	IP67
Wireless Signal Range	500m, subjected to surroundings
Dimension	260 x 90 x 85 mm, 450g (Body) 450 x 30 x 30 mm, 220g (Antenna) 450 x 300 x 170 mm, 2.8kg (Junction box: Opt)
Max No. of Connected Smarthub's	Up to 100

SmartCure for In-situ Concrete Strength Validation



If not ready to transition to a fully cube-less approach, SmartCure bridges the gap.

Validating in-situ concrete strength with the cube testing method the team already trusts. SmartCure match-cures concrete samples in real-time to the same temperature as the in-situ concrete, ensuring cubes accurately reflect real on-site strength development.



SPECIFICATIONS

Temperature Range	Room Temperature to 80 °C
Accuracy of Sensor	Accurate to ± 1 °C
Heating & Cooling System	Capable of heating at 10 °C /h. Capable of maintaining temperature of water bath to +/- 2 °C /h compare to in-situ concrete temperature.
Agitating Device	To ensure even temperature distribution
External Dimensions	1700mm (L) x 400mm (W) x 1000mm (H)
Mould Capacity	8x 150mm x 150mm cubes with mould 10x 100mm x 100mm cubes with mould Customisable
AC Input	220-240VAC 1PH
Power	2400 W
Weight	80 kg (without water)
Standard	Complies to BS 1881-130:2013

Step 1 – Match-Cure

The SmartHub sensor transmits live pour temperatures to the SmartCure tank, which automatically matches the water bath to the same conditions.

Step 2 – Monitor & Verify

Track strength gain in real-time and receive alerts the moment target strength is reached. (Optional) Break the samples to verify, then proceed to the next activity without delay.



Check out the 1-mins [youtube Link](#) for More Info

ConcreteAI's Platform



One platform. Complete visibility of concrete's temperature, maturity, strength, and performance — all in one place.

Overview Page

Get a summary of all active castings in one view, quickly see which casting is at which stage



Casting

Review individual casting activities and generate customizable reports in PDF for submission or Excel for analysis

Analysis

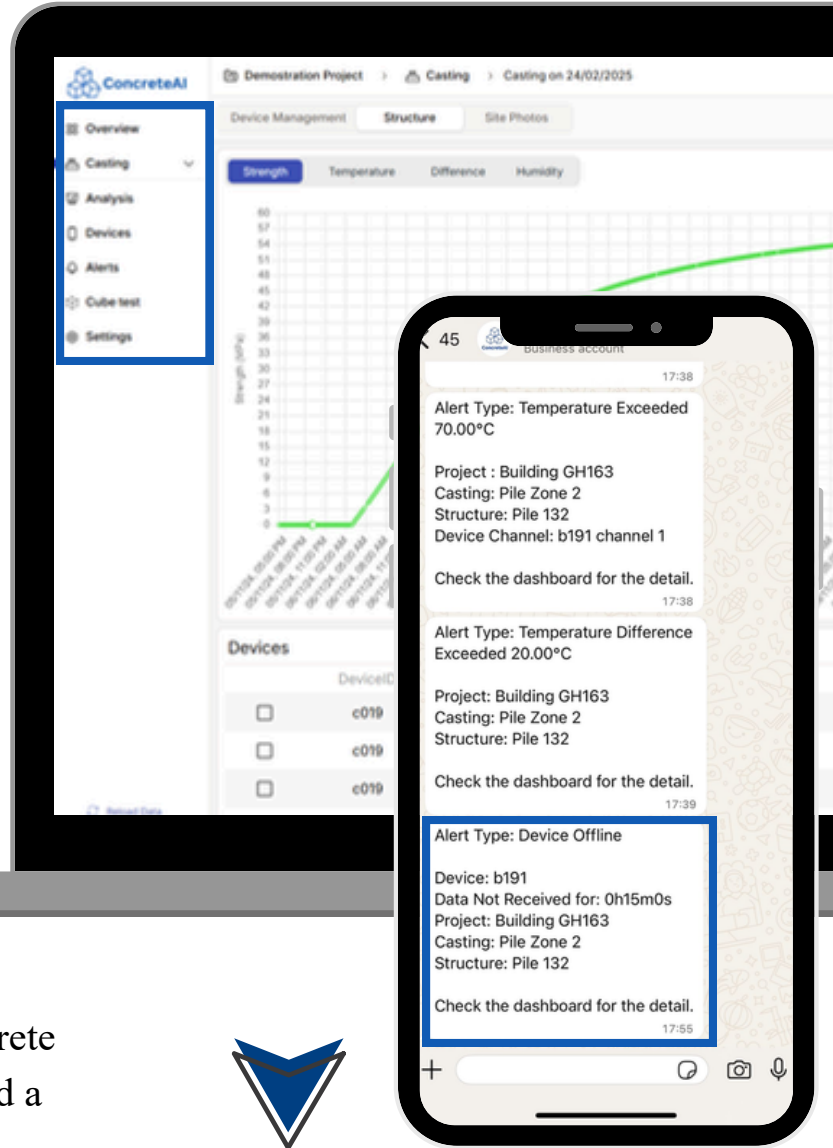
Overlay multiple castings using the same mix design to check consistency in performance and spot issues early

Cube/Cylinder Test Results

Automatically capture and consolidate all concrete sample data for streamlined quality analysis and a centralised project QC knowledge hub

API

Provides API integration with third-party platforms to centralise and streamline project data flows



Timely WhatsApp Alerts

Set customisable alerts on strength, temperature thresholds, and operational activities — receive timely notifications to proceed without delay