



HardTrack Wireless Concrete Temperature Monitoring Solution

Key Features

The HardTrack Solution is the most advanced, state of the art solution available today, for monitoring curing concrete temperatures.

Solution Components

HardTrack Wireless Sensors/Loggers – Sacrificial and ****Reusable**.

****Reusable** Wireless Sensors/Loggers are highly recommended

- Place the **Reusable Sensor/Logger** outside of the concrete pour and attach a relatively low-cost sacrificial temperature sensor probe in the concrete. When the concrete reaches maturity, you can cut the wire lead off at the surface of the concrete and detach the remaining portion of the wire lead from the temperature logger. This allows you to reuse the wireless temperature logger on your next pour or project. These temperature loggers will last 5+ years provided the temperature logger is stopped each time a pour's monitoring period has completed.



- The cable lengths for the sensor probes come in many lengths from 2-meters/6.56-feet to 100 meters/328-feet
 - The HardTrack Wireless Sensor devices are manufactured by internationally recognized leaders in wireless communications and IoT sensor technology. Each device comes with a 1-year manufacturer's warranty and each device is covered under the Wake's annual Customer Care maintenance plans.
 - Reusable Wireless Sensors/Loggers come with 5+ year battery life.
 - Using advanced UHF radio frequency technology, wireless sensors/loggers transmit and receive data at distances of up to 250 meters (820 feet). In addition
 - LED light in wireless sensors will blink for visual recognition and location. Using the HardTrack app, a Geiger counter like feature assists the user in locating sensors. The light is visible from almost every direction.
- **Recommended for special use, such as road paving.**
- Using **Sacrificial Wireless Sensors/Loggers**, it is recommended that you place the wireless temperature loggers in the concrete at no more than 5 to 7 inches below the surface of the concrete. If you would like to leave the temperature logger in the Concrete after it reaches maturity, this is the best choice:



- Read the Sensor/Logger right through the concrete! **Typically used on concrete road paving projects** as well as many other projects where the logger remains in the concrete after the concrete cures.



Technical Information

Wireless Temperature Logging RFID Tags

Operating Data

Operating frequency ILR-RFID 920 MHz (NA) or 868 MHz (EU), further frequencies on request

Maximum transmission power 0.75mW (EU / NA)

Standards/Certification FCC Part 15 (US), ETSI EN 300 220 (EU)

Communication Data Long-Range RFID (ILR, Response Technology)

Multiple tag handling Up to 2,000 tags in the read zone Read/write range

Response mode Up to 250 m (800 feet), free air*

Beacon mode Up to 500 m (1,600 feet) free air*

Data rate response 19.2 to 115.2 kbits/s

Electrical

Power source Lithium Metal battery (not replaceable)

Battery monitoring Yes

Temperature Logging

Number of samples 10,000

Logging interval User definable in intervals from 1 to 255 min

Measuring interval User definable in intervals from 0 s to 255 min

Metering range –40 °C to +85 °C (–40 °F to +176 °F) with std. internal sensor

–80 °C to 100 °C (–112 °F to +230 °F) with std. external sensor

Other metering ranges are available on request

Resolution 0.1 °C (0.2 °F)

Accuracy ±0.5 °C (1 °F) from -20 °C up to +50 °C,

±1 °C (2 °F) in the remaining temperature range

Data

Data retention > 10 years without power

Write cycles 100,000 writes to a tag/logger

Memory size 10,000 Bytes user definable

Identification code 48 bit fixed ID

Environmental Conditions

Operating temperature –40 °C to +85 °C (–40 °F to +185 °F)

Humidity 10 % to 95 % relative humidity @ 30 °C

Shock 50 G, 3 times DIN IEC 68-2-27

Multiple drops to concrete from 1 m (3 ft)

Vibration 3 G, 20 sine wave cycles, 5 Hz to 150 Hz, DIN IEC 68-2-6

5 G, noise 5 Hz to 1000 Hz, 30 minutes, DIN IEC 68-2-64

Physical

Enclosure Plastic (Qinnacryl)

Dimensions 131 mm × 28 mm × 21 mm (5.2 in. × 1.1 in. × 0.85 in.)

Weight 50 g (1.75 ounces)

Enclosure rating IP 65

Temperature Sensor Probes

The temperature sensors utilized with HardTrack are manufactured in an ISO 9001 certified facility, which has its calibration equipment checked frequently by independent calibration experts. The sensors are certified by the manufacturer to provide acute temperatures and they are manufactured following these standards:

- IEC 60751 Industrial platinum resistance thermometers and platinum sensors
- IEC 60584 Thermocouples
- ASTM E 230 Standard specification and Temperature-Electromotive force (EMF) Tables for standardized Thermocouples
- ANSI MC 96.1 Temperature Measurement Thermocouples

Armor Sheathing is available as needed to meet specifications and to add further protection to the temperature sensor cables.

Specifications for armor sheath:

- PVC Coated Galvanized Steel Conduit
- Single-buckle structure, spiral design, the galvanized steel conduit is coated in PVC
- Provides liquid-tight performance and protection against corrosion
- PVC Coated Galvanized Steel Conduit has good flexibility and is smooth internally to help wires pass-through easily.
 - Refined PVC Coating
 - Water-proof, Corrosion Resistant, UV Resistant
 - Flame Retardant (UL94-V2)
 - RoHS Compliant
 - Operating range: -10°C to +80°C



Plastic bushings are inserted into each end of the armor sheath, to prevent the wire from being cut by sharp edges on the armor sheath.

Adhesive Heat Shrink tubing is utilized to seal the cable ends to the armor sheath. Unless otherwise specified, 12" of wire will protrude from the armor sheath on the temperature sensor end with the stainless-steel tip for insertion into the concrete.



PVC Coated Galvanized Steel Flexible Conduit



Showing the PVC Coated over Galvanized Steel Flexible Conduit

HardTrack Cloud Gateway



- Remote monitoring of HardTrack Wireless Sensors/Loggers
- The cellular data plan is included with your initial purchase for 1 year and is included with the annual support and maintenance fees for the following years of your project.
- Data redundancy is provided at (3) points, the wireless logger level, the HardTrack Cloud Gateway and the HardTrack Cloud Database with daily data backups.
- Wireless Sensors/Loggers provide long range communication with the Gateway of up to 250 meters (850 ft), using advanced UHF radio frequency technology.
- Radio Frequency with Wireless Loggers: 920 MHz – NA / 868 – MHz International
- Power 12V 5 Amp 60W Max via AC/DC Power Adapter 100 – 240 VAC 50/60HZ 1.4A
- Cellular connectivity, 4G LTE or Wifi or Ethernet
- Easy to set up, easy to use
- Controlled via HardTrack Desktop app for Windows OS
- Monitor HardTrack Dashboard via any Browser on PC, Mac, iPhone, Android, etc.
- Self-Contained Cloud Gateway with (2) Elliptical Polarized Antennas with Mounting Arms
- Compliance: FCC ID OO4-ILR-IPM352UH, EU - CE

- USA Certification:

Radio Frequency (RF) Exposure Compliance of Radiocommunication for mobile Apparatus:

- To satisfy FCC and IC RF Exposure requirements for mobile devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- EU Declaration of Conformity according to RED Directive - the device is in conformity with the essential requirements of Directive 2014/53/EU
- ANATEL Certification - 09321-19-01650 -

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

- Complies with IMDA Standard DB106612
- Multiple gateway devices may be daisy chained providing both power and communications using a specialized Ethernet cable connection
- The Portable short-range HardTrack Cloud Gateway comes with **no external antennas**
 - You can add an optional Extended Battery Power Supply and a Solar Trickle Charger for job sites without AC Power. Connects to Cellular or Wifi,



Real-time Monitoring & Reporting

Real-time monitoring is provided via the online, secure: [HardTrack Dashboard](#) and HardTrack Summary. (Please accept the license agreement to gain access to the dashboard example)

- HardTrack Dashboard provides real-time view of each pour via a color chart, with mouse hover on data points, that displays the time and temperature of any point of data in a chart.
- Summary provides detailed, spreadsheet like, display of all temperature data collected.
 - o Optional Columns can be configured to display that are important to your thermal control plan, for example Delta T (MinT – MaxT):

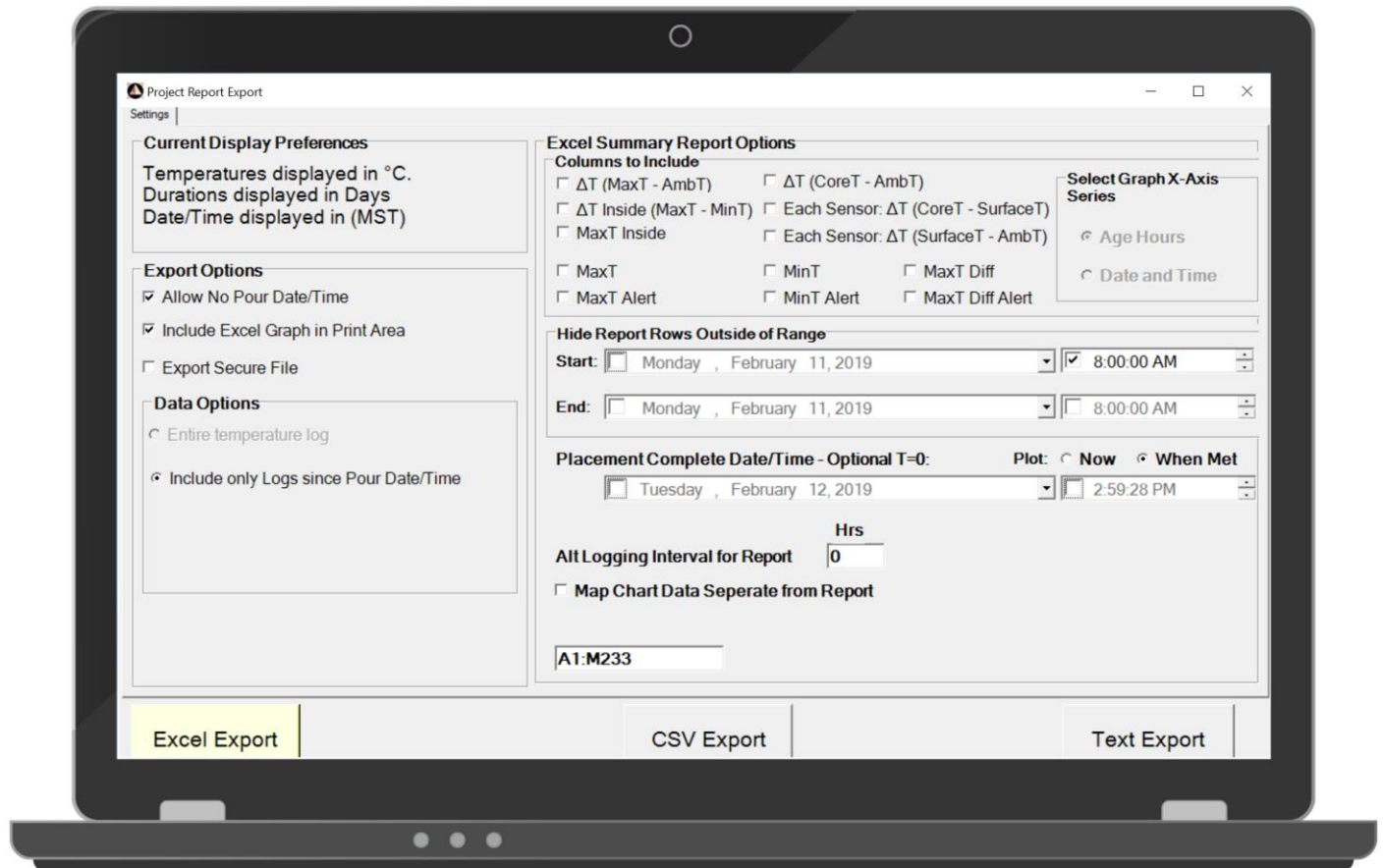
		Delta Temps		
Core - 03566100-70213547_cl4	Top - 03566100-70213547_cl1	ΔT (MaxT - AmbT)	ΔT Inside (MaxT - MinT)	Max T Inside
72.6	73.2	-22.2	3.1	75.7
73.2	73.3	-24.6	3.5	76.7
73.5	74.0	-24.6	3.3	76.8
74.6	74.8	-27.0	3.1	77.7

- Some users provide their Project Owner access to these online tools, reducing the need for some of the reporting requirements on a daily basis.
- View only access can be setup for users, so that projects that are in the process of being setup are only displayed to admin personal.
- You can use your iPhone or Android phone to access real-time information on your pours.
- For monitoring your pours in the office, you can **setup a large screen monitor and display real-time charts for all of your active pours** which will automatically refresh as the curing processing takes place.
- HardTrack can be setup to send you Alerts via text or email for any of your Thermal Control specifications, for example:
 - o Nearing Maximum Temperature,
 - o Nearing Minimum Temperature,
 - o Delta Temperature of Surface vs. Core/Center Nearing Out of Specification,
 - o Delta Temperature of Surface vs. Ambient Nearing Out of Specification,
 - o Thermal Shock Warning if Ambient Temperature Changes more than X degrees within X hours, etc.

HardTrack allows for generating, very detailed **Excel Workbooks for each Pour**, including a full summary worksheet, a detailed worksheet for each sensor with a chart and a summary chart

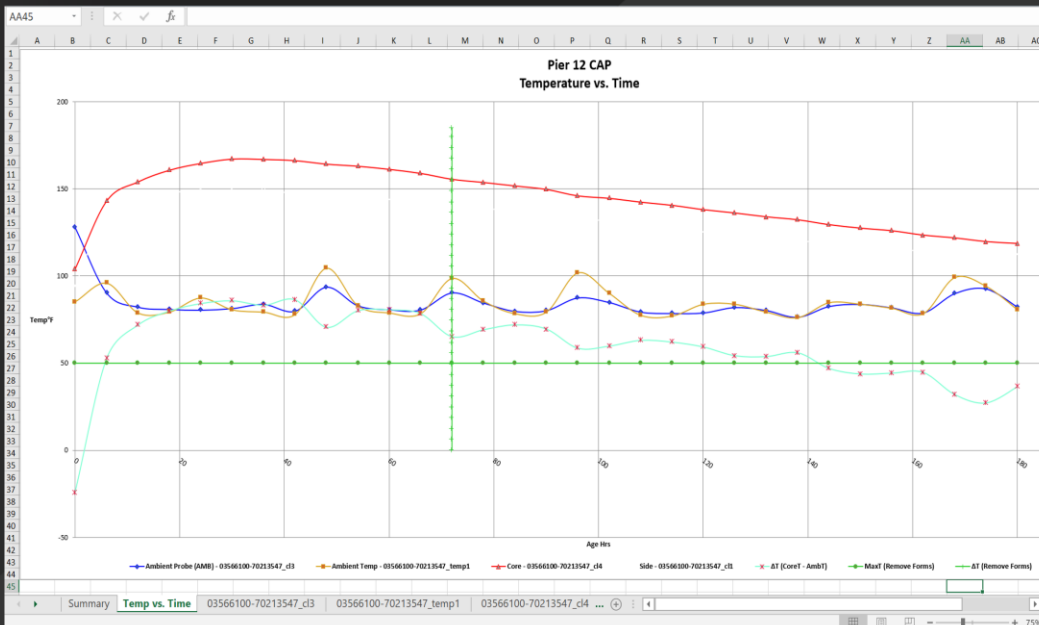
of all sensors in the pour. This feature will save you hours of work creating reports from your concrete pours.

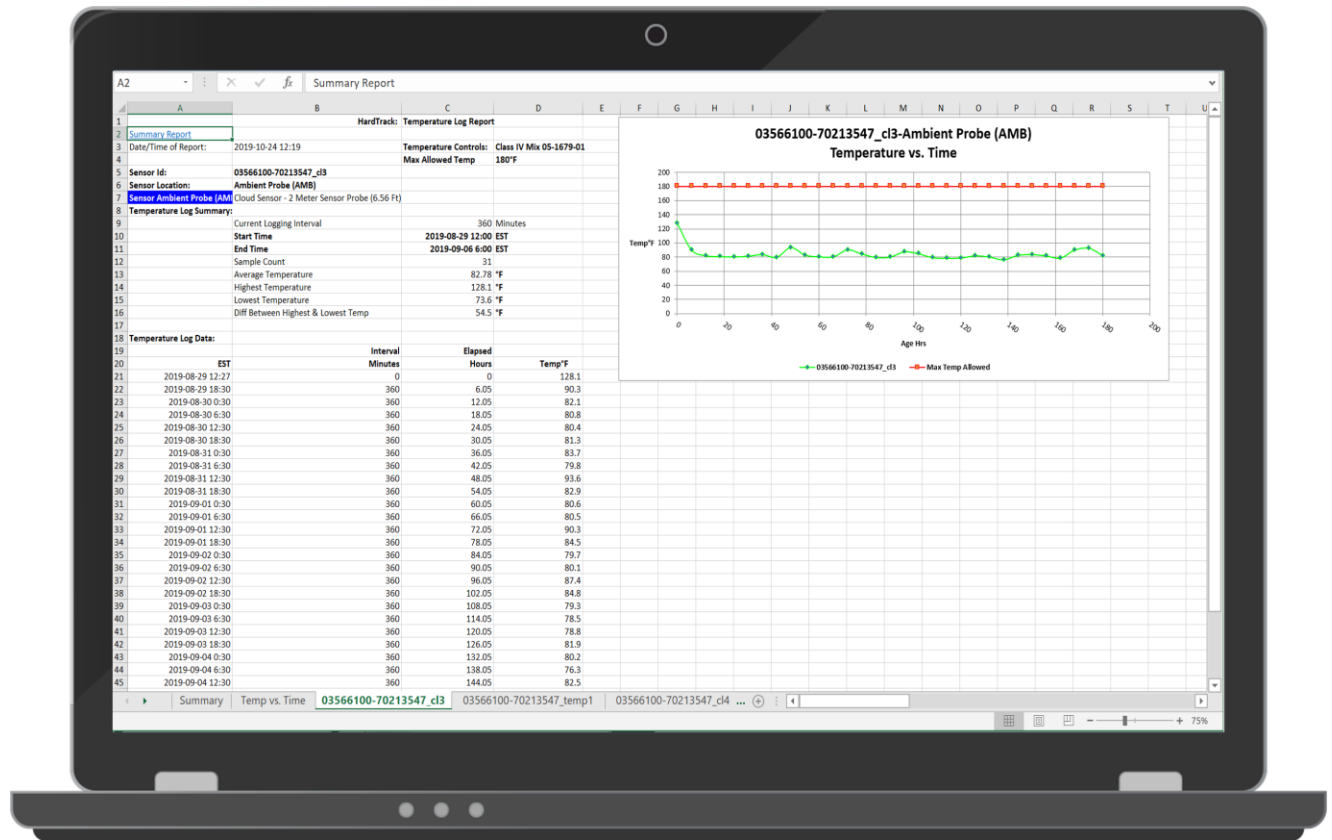
- There are many options that may be selected when generating the Excel Temperature Report (these settings can be saved, so that each time you run a report, they generate in the same manner):



HardTrack Pour Summary: Pier 12 CAP

A		D		E		F		H		I		J		K									
HardTrack Pour Summary: Pier 12 CAP																							
Date/Time of Report: 2019-10-24 12:19																							
Temp vs Time Graph		Sensor: 03566100-70213547_c3		Ambient Temp (AMB) 03566100-70213547_temp1		Core 03566100-70213547_c4		Side 03566100-70213547_c5															
		Mix Type: Class IV Mix 05-1679-01		Class IV Mix 05-1679-01		Class IV Mix 05-1679-01		Class IV Mix 05-1679-01															
Temperature Controls:		Max Allowed Temp		180°F		180°F		180°F															
Summary:		Tbd:		Average Temperature		82.78		84.75		144.53		131.59											
		Pour		Highest Temperature		128.1		107.2		167.7		150.1											
		Date & Time		Lowest Temperature		74.3		74.3		103.8		94.1											
		2019-08-29 12:27		Diff Highest & Lowest Temp		54.5		32.9		63.9		56											
Date		Time		Age (Days)		Elapsed (Hours)		Ambient Probe (AMB) 03566100-70213547_c3		Ambient Temp - 03566100-70213547_temp1		Core - 03566100-70213547_c4		Side - 03566100-70213547_c5		ΔT (CoreT - AmbT)		MaxT (Remove Forms)		ΔT (Remove Forms) X Values		T (Remove Forms) Y Values	
yyyy-MM-dd H:mm																							
2019-08-29 12:27				0		0		128.1		85.1		103.8		94.1		-24.3		50		72		0	
2019-08-29 18:30		0.25		0.05		90.3		95.9		90.3		143		138.1		52.7		50		72		6.2	
2019-08-30 0:30		0.5		12.05		82.1		78.8		154		145.8		71.9		50		72		72		12.4	
2019-08-30 6:30		0.75		18.05		80.8		79.3		160.7		147.7		79.9		50		72		72		18.6	
2019-08-30 12:30		1		24.05		80.4		87.4		164.6		149.4		84.2		50		72		72		24.8	
2019-08-30 18:30		1.25		30.05		81.3		80.6		167.1		149.5		85.8		50		72		72		31	
2019-08-31 0:30		1.5		36.05		83.7		79.3		166.9		149		83.2		50		72		72		37.2	
2019-08-31 6:30		1.75		42.05		79.8		77.9		166.2		147.5		86.4		50		72		72		43.4	
2019-08-31 12:30		2		48.05		93.6		104.5		164.2		146		70.6		50		72		72		49.6	
2019-08-31 18:30		2.25		54.05		82.9		82.9		163		146.2		80.1		50		72		72		55.8	
2019-09-01 0:30		2.5		60.05		80.6		80.6		161.2		145.9		80.6		50		72		72		62	
2019-09-01 6:30		2.75		66.05		80.5		78.4		158.9		141.6		78.4		50		72		72		68.2	
2019-09-01 12:30		3		72.05		90.3		98.6		155.5		139.9		65.2		50		72		72		74.4	
2019-09-01 18:30		3.25		78.05		84.5		85.6		153.7		139		69.2		50		72		72		80.6	
2019-09-02 0:30		3.5		84.05		79.7		78.4		151.7		136.7		72		50		72		72		86.8	
2019-09-02 6:30		3.75		90.05		80.1		79.3		149.7		134.3		69.6		50		72		72		93	
2019-09-02 12:30		4		96.05		87.4		101.8		146		132.4		58.6		50		72		72		99.2	
2019-09-02 18:30		4.25		102.05		84.8		90.1		144.6		131.8		59.8		50		72		72		105.4	
2019-09-03 0:30		4.5		108.05		79.3		77.5		142.5		129.5		63.1		50		72		72		111.6	
2019-09-03 6:30		4.75		114.05		78.5		77		140.6		127.1		62.1		50		72		72		117.8	
2019-09-03 12:30		5		120.05		78.8		83.8		138.1		125.3		59.3		50		72		72		124	
2019-09-03 18:30		5.25		126.05		81.9		83.8		136.2		124.6		54.3		50		72		72		130.2	
2019-09-04 0:30		5.5		132.05		80.2		79.3		134		122.5		53.8		50		72		72		136.4	
2019-09-04 6:30		5.75		138.05		76.3		76.1		132.3		120.8		56		50		72		72		142.6	
2019-09-04 12:30		6		144.05		82.5		84.7		129.5		117.8		47		50		72		72		148.8	
2019-09-04 18:30		6.25		150.05		83.7		83.8		127.5		116.6		43.8		50		72		72		155	
2019-09-05 0:30		6.5		156.05		81.7		81.5		126		115.7		44.3		50		72		72		161.2	
2019-09-05 6:30		6.75		162.05		78.8		78.4		123.5		114.2		44.7		50		72		72		167.4	
2019-09-05 12:30		7		168.05		89.9		99.1		121.9		112.8		32		50		72		72		173.6	
2019-09-05 18:30		7.25		174.05		92.6		94.1		119.8		113.5		27.2		50		72		72		179.8	
2019-09-06 0:30		7.5		180.05		82.1		80.6		118.7		112.4		36.6		50		72		72		185	





Wake is dedicated to your success. **If you need an additional reporting option to meet your reporting requirements, just let us know and we will add it for you at no charge!**

HardTrack Desktop

The HardTrack Solution includes the HardTrack Desktop app, which installs on your PC(s). It allows for setting up your projects, entering your concrete mixes and Alert Settings. The HardTrack Desktop app is very powerful. It will empower you to manage all of your pours from a single application, while being able to share information with your colleagues, since all of the information is stored both locally on your PC and on the HardTrack Cloud Database.

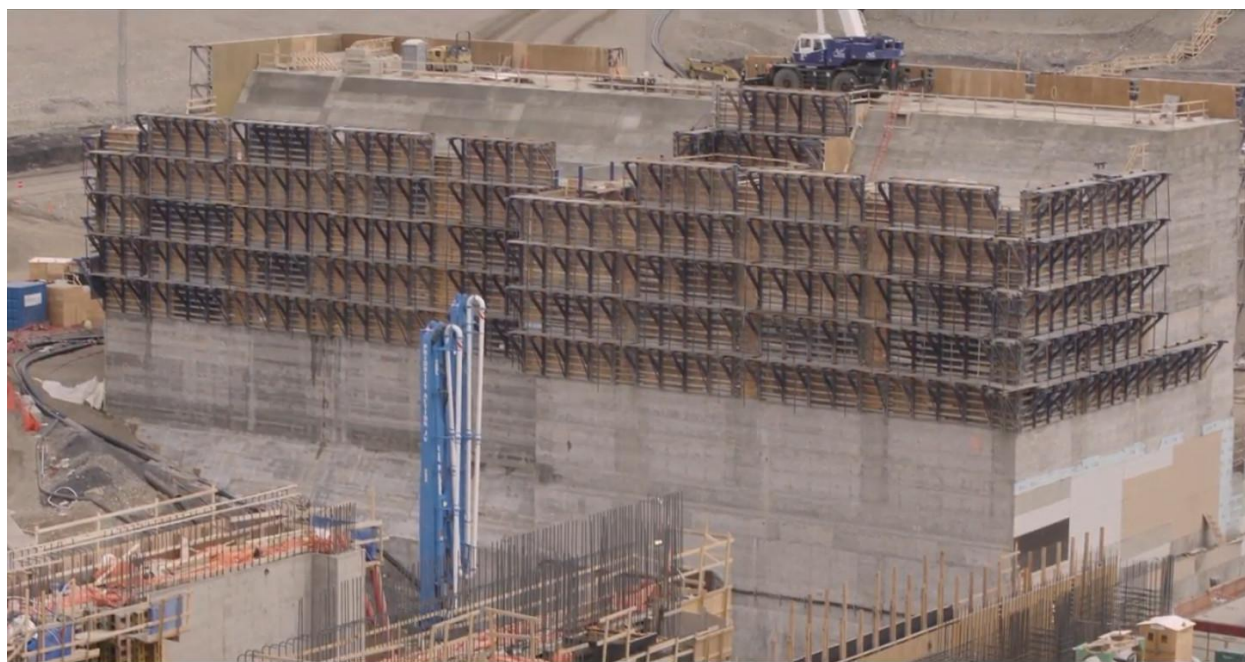
Full Concrete Maturity capability is provided within HardTrack. Sample results for each of your mixes can be entered and Maturity Targets monitored for your strength goals, so you know when post tensioning and form removal can occur and when the pour has reached full strength.

Reference Projects

<u>Project</u>	<u>Owner</u>	<u>Contractor</u>
<u>One World Trade Center</u>	Port Authority of NY & NJ	AECOM Tishman
<u>Pointe du Bois Spillway</u>	Manitoba Hydro	Kiewit
<u>Site C</u>	BC Hydro	AFDE GP – Aecon, Flatiron, Dragados, EBC
<u>Transbay Center</u>	Caltrans	Shimmick
<u>California HSR</u>	Caltrans	DFJV – Dragados & Flatiron

Heavy Civil Infrastructure

The HardTrack Solution is uniquely positioned to support the needs of large heavy civil infrastructure projects, that include mass concrete temperature monitoring, of either a single mass pour or hundreds of sensors in multiple pours, all curing at the same time.



[Site C](#) – AFDE (Aecon, Flatiron, Dragados, EBC) GP is placing approximately 700,000 cubic meters of mass and reinforced concrete for the spillways. Approximately, (1,280) Sensors reporting temperature data concurrently.

As a result of our experience, working with the leading international construction contracting firms on projects, that include, dams, spillways, bridges, airports, tunnels, transportation centers, raised railways, ports, etc. Wake has developed and grown the HardTrack Solution to meet the unique needs of projects that require simple methods of communicating critical information to a diverse audience, such as Project Engineers, Superintendents, Government Agency Project Owners, Inspectors, etc.



For example, a project that has multiple shifts of Field Engineers, Project Engineers and even Superintendents that change daily or weekly, the web based HardTrack Dashboard allows for user type configuration, so that when Project Owner personnel view concrete pours that are currently being monitored, they will only see the pours that are active and not pours that may have been activated in preparation for upcoming concrete pours.

Project Engineers and Field Engineers can view the same information. However, they may elect to view battery life and cellular signal strength of logging devices as well as additional delta temperature statistics that are not required by the project owner. Users can choose to view **HardTrack Dashboard** information using their iPhones, Tables, PC's or Mac's even when they are away from the job site.

The following is an example of the HardTrack Dashboard running on a large screen monitor on TV in a control room for a dam project site.

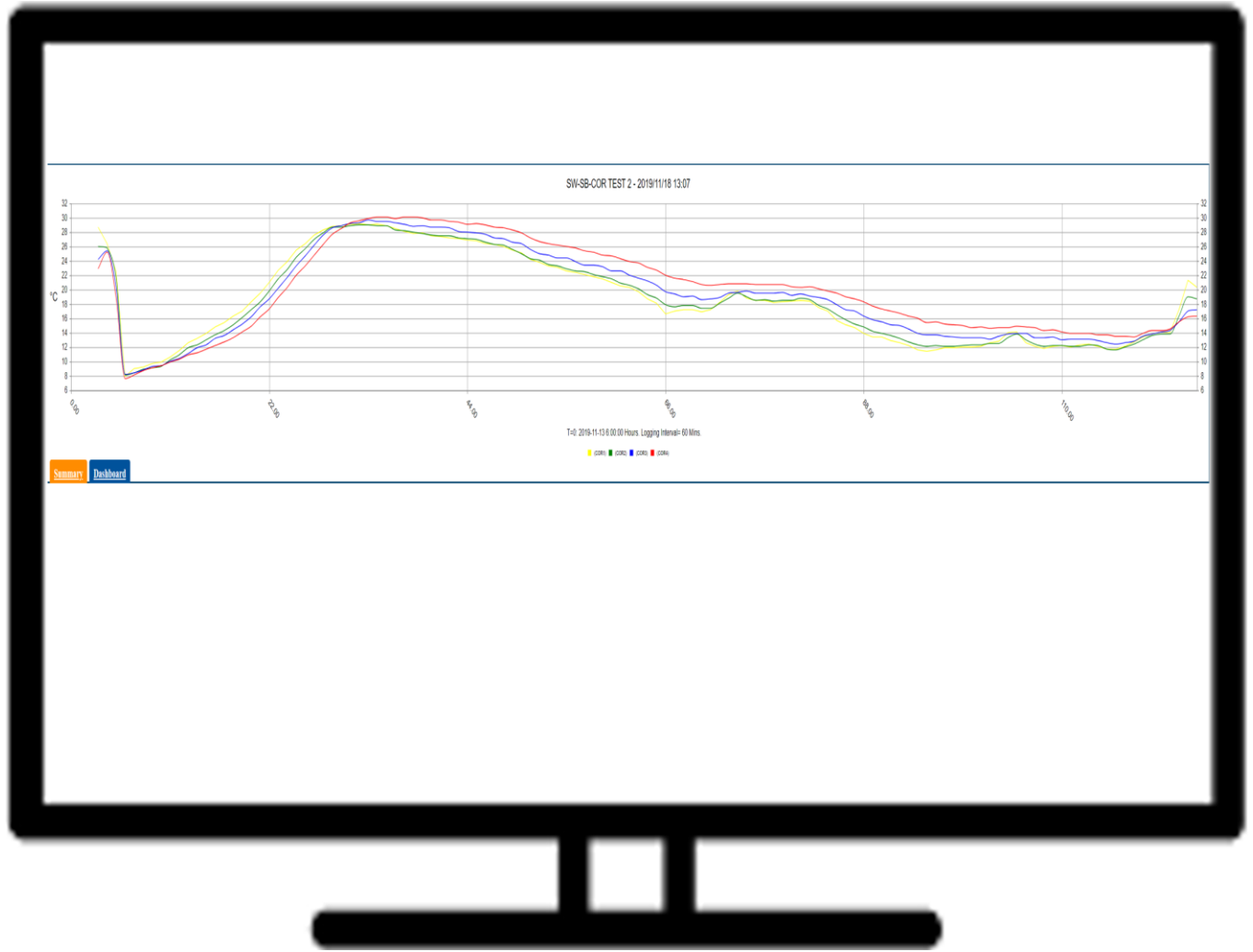
The Dashboard automatically refreshes itself every few minutes, so that a large screen can be left unattended and viewed by all personnel that need to see the progress of on-going concrete pours at your job site. Any authorized user can setup the Dashboard on one of the monitors in their office so that it works in this manner.

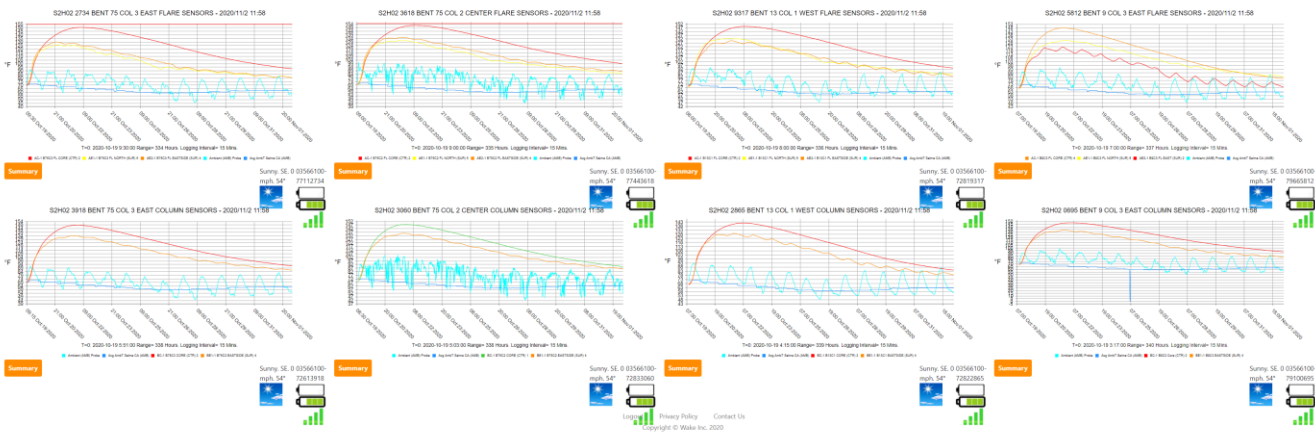
HardTrack works in both Fahrenheit and Celsius, to support the needs of users in the USA and Internationally.

HardTrack Dashboard on Large Screen showing all curing pours concurrently:



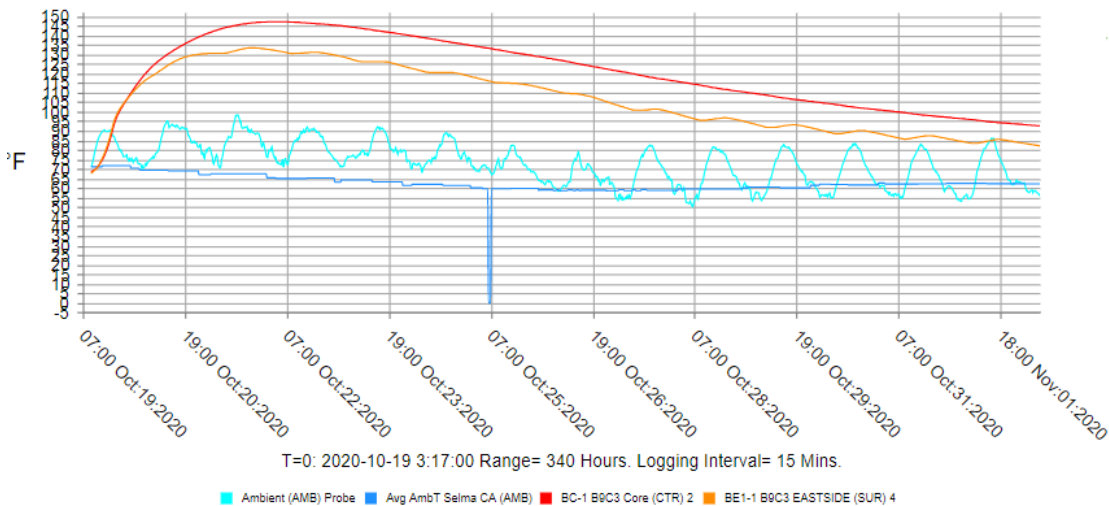
The user can click to view a pour's temperature chart individually:





Activate the HardTrack National Weather Service data stream interface and display current weather conditions at your project site in real-time with each pour. This includes the ability to use the forecast for meeting your thermal control plan specifications, such as average daily temperature.

S2H02 0695 BENT 9 COL 3 EAST COLUMN SENSORS - 2020/11/2 11:58



Summary

Sunny. SE. 0 03566100-
mph. 54° 79100695



The user can click to view all of the detailed temperature information for a given pour:



Menu

HardTrack Project Summary: SW-SB-S13-01C

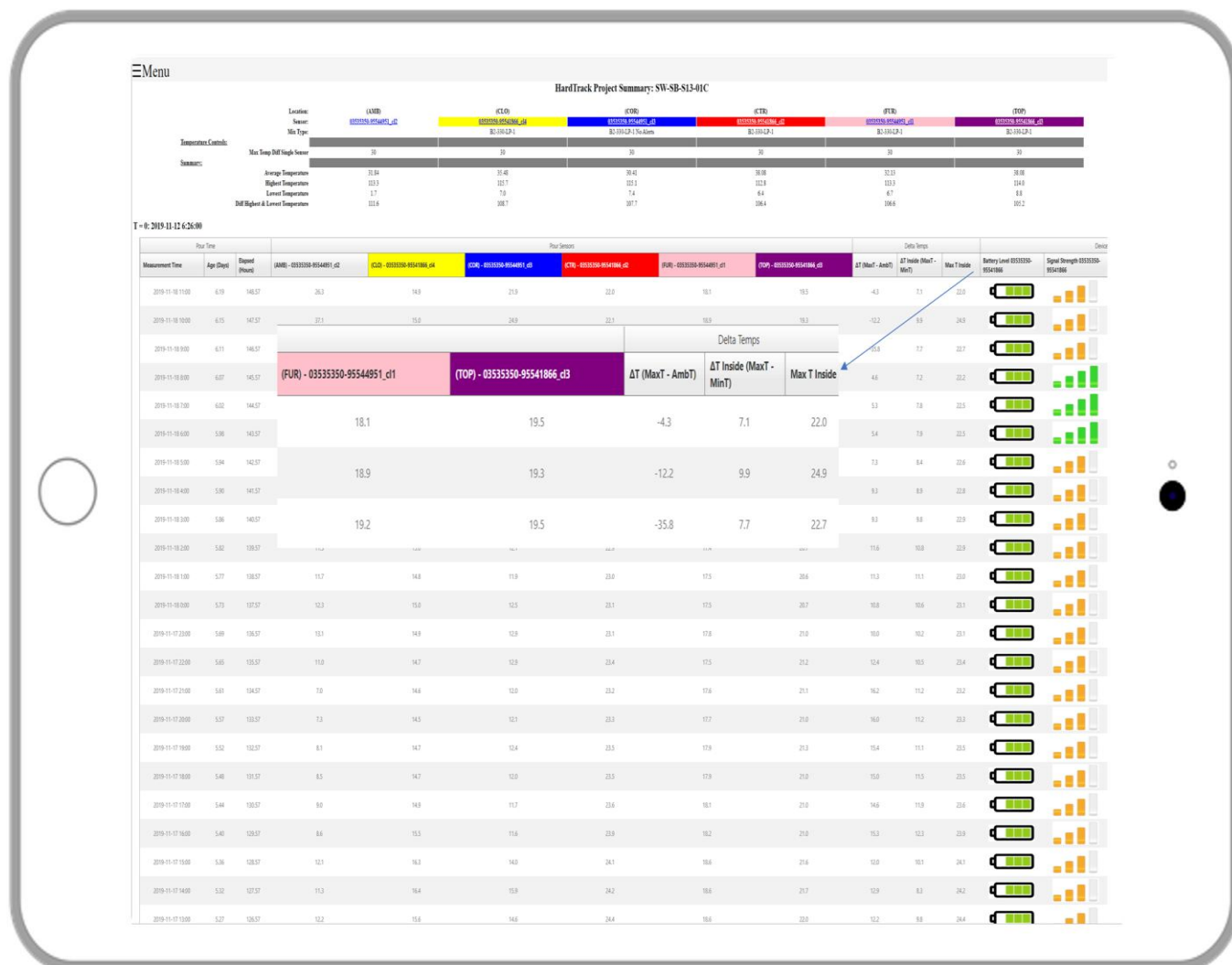
Location:	(AMB)	(CLO)	(COR)	(CTR)	(CTR)	(TOP)
Sensor:	03535350-95544951_c2	03535350-95541866_c4	03535350-95544951_c3	03535350-95541866_c2	03535350-95544951_c4	03535350-95541866_c2
Mix Type:	BC 119-LP-1	BC 119-LP-1	BC 119-LP-1 No-Air	BC 119-LP-1	BC 119-LP-1	BC 119-LP-1
Temperature Controls:						
Max Temp Diff Single Sensor	30	30	30	30	30	30
Summary:						
Average Temperature	21.84	21.48	20.42	20.08	21.23	20.08
Highest Temperature	22.3	22.7	22.1	22.3	22.3	22.9
Lowest Temperature	1.7	7.9	7.4	6.4	6.7	8.8
Diff Highest & Lowest Temperature	22.6	20.7	20.7	20.4	20.6	20.2

T = 0: 2019-11-12 6:26:00

Hour Tests		Hour Sensors							Data Temps		Dew	
Measurement Time	Age (Days)	Elapsed (Hours)	(AMB) - 03535350-95544951_c2	(CLO) - 03535350-95541866_c4	(COR) - 03535350-95544951_c3	(CTR) - 03535350-95541866_c2	(TOP) - 03535350-95544951_c4	AT (Wet - Ambient)	AT Inside (Max - Min)	Max T Inside	Battery Level 03535350-95544951	Signal Strength 03535350-95544951
2019-11-18 11:00	6.19	148.57	26.3	14.9	21.9	22.0	18.1	18.5	-4.3	7.1	22.0	
2019-11-18 10:00	6.15	147.57	37.1	15.0	24.9	22.1	18.9	19.3	-12.2	9.9	24.9	
2019-11-18 9:00	6.11	146.57	58.5	15.0	22.7	22.1	19.2	19.5	-15.8	7.7	22.7	
2019-11-18 8:00	6.07	145.57	17.6	15.3	15.0	22.2	17.4	20.1	4.6	7.2	22.2	

T = 0: 2019-11-12 6:26:00

Pour Time			Pour Sensors										
Measurement Time	Age (Days)	Elapsed (Hours)	(AMB) - 03535350-95544951_c12	(CLO) - 03535350-95541866_c14	(COR) - 03535350-95544951_c13	(CTR) - 03535350-95541866_c12							
2019-11-18 11:00	6.19	148.57	26.3	14.9	21.9	22.0							
2019-11-18 10:00	6.15	147.57	37.1	15.0	24.9	22.1							
2019-11-18 9:00	6.11	146.57	58.5	15.0	22.7	22.1							
2019-11-18 8:00	6.07	145.57	17.6	15.3	15.0	22.2							
2019-11-17 18:00	5.52	132.57	8.1	14.7	12.4	23.5	17.9	21.3	15.4	11.1	23.5		
2019-11-17 18:00	5.48	131.57	8.5	14.7	12.0	23.5	17.9	21.0	15.0	11.5	23.5		
2019-11-17 17:00	5.44	130.57	9.0	14.9	11.7	23.8	18.1	21.0	14.6	11.9	23.6		
2019-11-17 16:00	5.40	129.57	8.6	15.5	11.6	23.9	18.2	21.0	15.3	12.3	23.9		
2019-11-17 15:00	5.36	128.57	12.1	16.3	14.0	24.1	18.6	21.6	12.0	10.1	24.1		
2019-11-17 14:00	5.32	127.57	11.3	16.4	15.9	24.2	18.6	21.7	12.9	8.3	24.2		
2019-11-17 13:00	5.27	126.57	12.2	15.6	14.0	24.4	18.6	22.0	12.2	9.8	24.4		

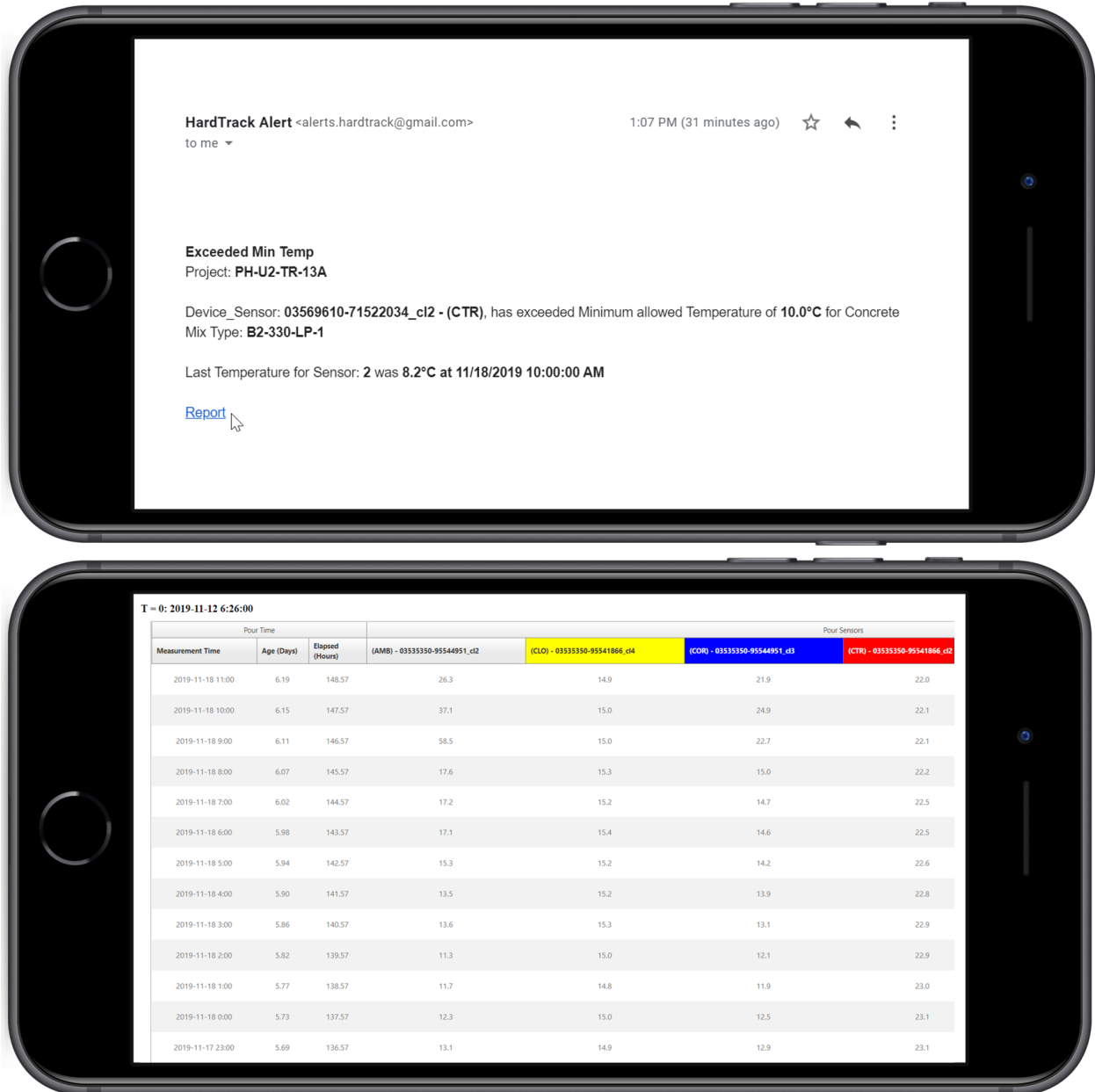


Wake, Inc. 2885 Sanford Ave SW #27245, Grandville, MI 49418-1342 US (800) 957-5606 CA (647) 931-6995 Fax (877) 900-0189 www.wakeinc.com



MaxT (Remove Forms) 50°F
Elapsed T (Remove Forms) 72

A link is provided with every Alert that will take the user directly to the detailed information regarding the particular pour.





Too much of a good thing, can be an issue when it comes to Alerts. With HardTrack, you can set how often a particular repeating alert is sent to your users, so that they do not become overwhelmed with too much granular information.

Pioneer in Wireless Concrete Temperature Monitoring

Wake, Inc. was founded in 1991, over 28 years ago. Wake has been exclusively providing wireless concrete temperature monitoring solutions to the construction industry for over 20 years. Wake was one of the 1st providers of this technology, going back to the late 1990's. Wake has years of experience working with technology and delivering solutions that work, the way you work.

Wake's easy to do business with approach, will make your job easy and your project owner happy with how quickly you can go from discussion to action.

Purchasing:

Purchase Orders or Contacts. The choice is yours.

Benefits to contracting with Wake.

With a commitment on quantity and on a schedule of release dates for devices built to your preferred configuration and for the sacrificial temperature sensors, Wake commits to maintaining an inventory to meet your exact needs, with easy order fulfillment.

- Fast, same day or next day shipment of orders for Wireless Loggers and Sacrificial Temperature Sensors
- Priority support
- Stocking of Hot-Spare devices, that meet your preferred device configuration
- Stocking of component parts for repairs for your preferred device configuration
- Stocking of component parts for fast build and shipment of additional devices for your preferred device configuration
- We accept email orders, telephone orders or with your contact on files, Wake will setup a simple website ordering portal that contains only your pre-approved items with establishing pricing, so all you have to do is enter the quantity you need and submit your order.

Support:

Pre-purchased multi-year support and maintenance programs, provides everything from telephone and electronic support to software updates as well as your cellular data plan for your devices to connect to the cloud. All in one, simple maintenance plan.



Devices under maintenance, get preferred repair processing and low-cost component replacement, which are damaged at the project site.

When you need help, just enter a Support Ticket in our online support website. If you need help immediately, call, text or email and we will assist you right away.

Wake will be with you every step of the way!

Interfacing with 3rd Party Software

HardTrack has a built-in interface to the National Weather Service, allowing for real-time weather to be displayed with each temperature log reading. HardTrack can be configured to use the National Weather Service's local weather forecast data for ambient temperature, rolling average ambient temperature, etc.

If you have a requirement for interfacing the concrete temperature data to a 3rd Party application, in many cases, Wake will provide the interface **free of charge**. Wake can completely automate the process of sending information to other online applications, such as 3D modeling software providers, so that the information required is automatically sent when available.