

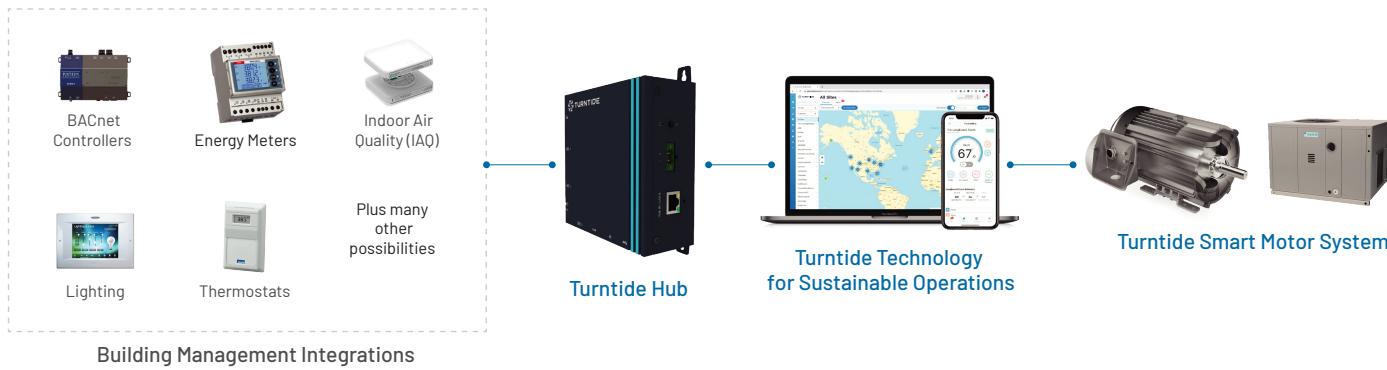
# Turntide Hub 6

Turntide Technology  
for Sustainable Operations™

Turntide's breakthrough sustainability technology is a complete platform for energy optimization that drives down energy consumption and operating costs in buildings, agriculture and electric transport. With Turntide's Smart Motor System™ and Technology for Sustainable Operations™, organizations can attack energy waste at every level, through optimal device physics, intelligent automation, and seamless integration with other systems.

Integrating devices and sensors, Turntide Hub 6 makes building management effortless, with real-time data and insights available on demand anytime, anywhere with the Turntide app. Best of all, unlike most existing systems, Turntide Hub 6 helps integrate everything into one unifying, easy-to-use platform, so facilities managers can take a holistic approach to building management, which unlocks a deeper layer of insights that drive operational excellence, optimal occupant health and safety, and an improved overall bottom line.

## TURNTIDE HUB: ENABLING AN OPEN, UNIFIED ARCHITECTURE



## Key Benefits

### EASY, COMPLETE DEVICE INTEGRATION

Turntide Hub 6 communicates seamlessly with a wide range of equipment, sensors, and Building Management Systems, enabling you to fully optimize energy use throughout your building.

### CONTINUOUS IMPROVEMENTS

With automatic software and security updates, Snap software architecture, and AppArmour for protection against day-zero attacks, Turntide Hub is your secure demarcation line between the outside world and your building system.

### NETWORK SECURITY

Distributed edge computing architecture brings cloud level computing to building management while ensuring continuous operation with edge-initiated commands.

# Features & Specifications

## PROTOCOLS SUPPORTED

- BACnet MSTP
- BACnet IP
- Daikin DIII-Net
- Lennox Sysbus
- Modbus RTU
- Trane Comm4
- Modbus TCP
- OpenADR
- NOAA Weather
- Generic REST
- iButton Link
- Green Button

## POINT CAPACITY

- Manages ~5000 system points\*

\*Capacity adjusts with BACnet Server

## BACNET SERVICES

- BACnet Client
- BACnet Server
- BACnet Router
- BBMD



### Secure, remote access to Turntide web and mobile applications

Ability to manage buildings securely and conveniently anywhere, anytime



### All point history stored forever in the cloud\*

Ability to leverage data to generate insights for optimal building control settings

\* All history is stored locally for up to two weeks



### Local scheduling, alarming, and logic control

Additional layer of security for critical controls information



### Multi-protocol auto discovery

One simple interface to access information across a complex assortment of protocols and systems

## CORE HARDWARE SPECIFICATIONS

Item	Specification
Model	Advantech UNO-420
Dimensions	125mm x 125mm x 50 mm (4.9" x 4.9" x 2.0")
Form Factor	Fanless design, optimized for wall mounting
Weight	1.5 kg
Processor	Intel® Atom™ E815 1.46GHz
Operating System	Ubuntu Core 20 Linux OS
Memory	DDR3L type @ 1066 MHz: 2GB
Drive / Storage	32GB eMMC
I/O	LAN Ports: 2x GbE RJ-45 Ethernet (1x PoE) USB Port: 1x USB 3.0 Serial Ports: 2x RS-232   1x RS-485 RS485 Baud Rates: 9600, 19200, 38400, 57600, 115200 bps
Video	1x HDMI port
Power Input	Nominal input 10-30VDC 12W (Typical), 20W (Max)

## ENVIRONMENTAL AND OTHER SPECIFICATIONS

Item	Specification
Storage Temperature	-40° C to 80° C
Operating Temperature with 0.7 m/s airflow	-20° C to 60° C @ ~85% RH
Relative Humidity	Operating: 10% @ 95% RH @ 40° C (non-condensing)
Vibration Protection	2 Grms, random, 5-500 Hz, 1 hr / axis
Shock Protection	50G, half sine, 11ms
EMC	CE, FCC, CB, UL, CCC
Ingress Protection	IIEC 60068
Security	Secure Boot, BIOS password, I/O port disablement
Warranty	2 year limited hardware warranty

# Turntide Technology for Sustainable Operations

## A Modern Approach to Building Management



FOR WEB	FOR MOBILE
<a href="http://app.turntide.com">app.turntide.com</a>	Download on the App Store
	GET IT ON Google Play

Turntide Web and Mobile Applications make remote management of all your systems, equipment, and devices easy and intuitive. Stay connected to your building's health and status so you can take corrective action no matter where you are, anytime.

### APPLICATION FEATURES

#### USER-CENTRIC DESIGN

##### CENTRALIZED NAVIGATION

Navigate directly on the app, filter to building and assets, or go directly to a critical alert.

##### EQUIPMENT DETAILS

Access equipment data without a site visit so you can verify hot/cold issues, validate repairs, or troubleshoot issues.

##### DATA MANAGEMENT

Access multifunction codes, system faults, and point data. Data is "tagged" for easy charting and analysis.

#### EASY EVERYDAY USE

##### SCHEDULES

Run equipment on schedules – set for individual equipment, groups, or across buildings. Make changes with one click.

##### NOTIFICATIONS

Get important equipment diagnostics or warnings delivered via email or text so you can quickly act.

##### CENTRALIZED NAVIGATION

Control and monitor sites remotely at the touch of a button, assuring your customers and employees are comfortable.

##### USER MANAGEMENT

Role-based permission and authentication allow different levels of access for different users.

#### SAFETY, QUALITY, AND COMPLIANCE MANAGEMENT

##### ANALYTICS AND KPI'S

Develop customized dashboards to analyze the data that you care about most.

##### REPORTS

Generate dashboards and reports via the tool builder in the application to generate digital audits.

##### GRAPHICS

Generate graphics that make technical reports easy to understand for all relevant audiences.

#### PROACTIVE BUILDING MANAGEMENT

##### TROUBLESHOOTING TOOLS

Ongoing diagnostics running across your equipment data sniffing out problems before they get bigger.

##### SERVICE REQUESTS

The smart service call: Address issues faster by requesting service directly from the app. Linked to your provider.

#### TURNTIDE TECHNOLOGY FOR SUSTAINABLE OPERATIONS

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries.