Product Data

Tracer® SC+ System Controller
Data Sheet

Trademarks

All trademarks referenced in this document are the trademarks of their respective owners.

Revision History

- Updated Tracer SC+ Device Capability table.
- Updated Controller Specifications table.

Overview

The Tracer SC+ building automation system, along with the Tracer Synchrony user interface, is a complete building control solution that delivers high performance and efficiency with the reliability you would expect from Trane®. Tracer SC+ coordinates equipment from your building's HVAC, lighting, and other systems and offers control with a simplified, web-enabled user interface so you get easy and convenient access to your systems from virtually anywhere.

Feature	Benefit
Occupant comfort and energy savings	• Tracer SC+ includes several factory engineered HVAC applications that have been developed by HVAC system experts and tested on tens of thousands of facilities to ensure that your facility operates at its peak performance. These applications provide consistent comfort and improved indoor air quality, while reducing energy requirements. • For any building owner concerned with energy, indoor air quality, and the environment, Trane EarthWise™ Systems represent a design philosophy whose time has come. EarthWise Systems provide documented sustainability of high efficiency and low emissions over the entire lifetime of the building.
Access your facility from anywhere	• The Tracer Synchrony user interface is accessible from virtually any device with a web browser. Most popular device types, operating systems, and browsers are supported. • The Tracer BAS Operator Suite is a mobile app that allows you to monitor and manage buildings from virtually anywhere, giving you greater freedom and constant peace of mind. • Trane Connect Remote Access provides an easy, secure option to connect remotely to a Tracer SC+.
Support for open, standard protocols	• Open, standard protocols are the key to enabling communication among Trane and non-Trane HVAC equipment, as well as other complementary facility systems. These protocols enable communication across systems and vendors to ensure that your building operates at its best on day one and beyond. • Tracer SC+ natively communicates with BACnet®, Modbus®, and LonTalk® controllers and is listed as a BACnet Building Controller (B-BC) by BACnet Test Labs (BTL).
Support for Trane VRF XML/IP communications	Enables communication with Trane/Mitsubishi Electric VRF devices.
Support for Trane Air-Fi® wireless	Trane Air-Fi Wireless brings maximum flexibility to a building automation system. Trane technology helps prepare your facilities for the future of building information. Trane Air-Fi Wireless runs BACnet protocol over ZigBee building automation standards. **Note:** ZigBee is a registered trademark of the ZigBee Alliance.
Easy to use	The Tracer Synchrony user interface provides an easy way for building operators to set up, operate, and modify a building automation system.

Hardware Features

- Four USB ports for LON integration, Wi-Fi, Cellular Module, Isolated Comm 3 (CM3I), and USB memory sticks.
- Optional Wi-Fi module that can serve as an access point or a client.
- Support for XM30, XM32, XM70, and XM90 (32 terminations maximum).
- Three EIA-485 ports configurable for BACnet MS/TP , Comm 3/4, or Modbus® RTU.
- BACnet IP support on all ethernet ports (including Wi-Fi client).
- MicroSD card support for backups.
- Up to 2 Tracer USB LonTalk® modules to support up to 240 LonTalk devices.
- Optional battery (BR2032) to preserve regional settings.
- Power options: Supply power using a 24 Vac terminal block, Tracer® plugin power supply, or a PM014 power supply.
- Mounts easily onto a standard DIN rail.

Tracer SC+ Device Capability

A Tracer SC+ facility is defined as one Application Tracer SC+ and one or more associated Base Tracer SC+. A single building or site can contain more than one facility. See *Tracer® SC+ System Controller with the Tracer® Synchrony User Interface Installation, Operation, and Maintenance* (BAS-SVX077*-EN), for more details.

Communication Type	Single SC+	Multi SC+
Air-Fi® Wireless	Up to 120 devices	Up to 240 devices
BACnet MS/TP	Up to 180 devices	Up to 240 devices
BACnet IP	Up to 240 devices	Up to 240 devices
COMM 3/4[a]	Up to 240 devices	Up to 240 devices
LonTalk	Up to 240 devices (when using two Tracer USB LonTalk modules)	Up to 240 devices (when using two Tracer USB LonTalk modules)[b]
Trane® VRF (XML/IP)	Up to 240 devices	Up to 240 devices[b]
Modbus TCP	Up to 240 devices	Up to 240 devices[b]
Modbus RTU	Up to 90 devices	Up to 90 devices[b]

Note: LonTalk, Modbus TCP, and Modbus RTU devices must all be installed in the Application Tracer SC+.

(a) Prior to Tracer SC+ v6.0, a BMTB is required for communication to COMM 3/4.
(b) Must be installed on the Application SC+.
Note: See Tracer SC+ System Controller Installation, Operation, and Maintenance guide BAS-SVX077*-EN for point limits.

Controller Specifications

Client Software Requirements	
Web Browsers	The most recent version of web browsers are tested with each new firmware release and will provide the best user experience. Utilization of other operating systems and browsers may work given our adherence to web standards, but this is not recommended/supported. Microsoft® Windows 11: • Google Chrome • Mozilla Firefox • Microsoft Edge (chromium) Apple® Mac OS (most recent version) • Google Chrome • Mozilla Firefox

Mobile Devices	Apple iOS/iPadOS (most recent version): • Google Chrome • Mozilla Firefox • Safari Android (most recent version): • Google Chrome • Mozilla Firefox
Tracer SC+ System Controller	
Concurrent Users	Five
Supported Languages	Up to four languages are supported per Tracer SC+ • English • Chinese (Simplified/Traditional) • French • French Canadian • Portuguese (Brazil) • German • Indonesian • Japanese • Korean • Spanish (Latin America) • Thai • Polish • Arabic
Power requirements	24 Vac @ 30 VA Class 2 transformer- Output:600mA at 24 Vdc@ 50C, Tracer® Plugin power supply w/single barrel connector - Output: 0.75A maximum at 24 Vdc @50C. Polarity: outer ground, inner 24 Vdc, PM014power supply module through inter-module-communication bus (IMC) - Output: 1.4A maximum @ 24 Vdc @ 70C
Operating environment	• Temperature: From –40°F to 158°F (–40°C to 70°C) when powered by external 24Vdc PM024 power supply, 500 mA maximum USB power. 40°C to 50°C (-40°F to 122°F) up to 1000 mA maximum USB current for all other configurations • Relative humidity: From 10% to 90%, non-condensing
Storage environment	• Temperature: From –40°F to 158°F (–40°C to 70°C) • Relative humidity: From 5% to 95%, non-condensing
Agency Listings	UL: • UL-864/UUKL listed (when installed and programmed in accordance with the Engineered Smoke Control System Application Guide, BAS-APG019*-EN) • UL-916-PAZX – energy management • CUL-C22.2-signal devices – Canada FCC: FCC part 15, Class A CE CE: • Emissions EN61326:1998 Class B • Immunity EN61326:1998 ISO: 9001:2008
Processor	Arm A9 Cortex Dual Core
Memory	• FLASH 4 GB eMMC • SDRAM 1 GB DDR3
Battery	Optional BR2032 battery that preserves regional settings (including date/time) for up to 30 days.
BACnet®	Tracer building automation systems communicates with BACnet devices that support: • Communications based on the BACnet ASHRAE/ANSI 2012 standard • ENV-1805-1/ENV-13321-1 • 100BASE-TX dedicated Ethernet (ISO/IEC 8802-3) or Transmission Control Protocol/Internet Protocol (TCP/IP) compatible network Tracer SC+ is listed by BACnet Test Labs (BTL) as a BACnet Building Controller (B-BC). Listing information can be found at: http://www.bacnetinternational.net
LonTalk®	Tracer building automation systems communicates with LonTalk devices that support: • Communications based on the EIA-709.1 (LonTalk) standard • LonTalk standard network variable types (SNVTs) - *Note: this requires an external Echelon U60 module (part# X13651698001)* • FTT-10A or FT-X1 transceivers • Twisted-pair physical media (Level 4 wiring)
Modbus®	• Communications based on Modbus RTU defacto standard over EIA/TIA 485 (2-wire) • Communications based on Modbus TCP defacto standard over 100BASE-TX Transmission Control Protocol/Internet Protocol (TCP/IP) compatible network

Legacy Comm	• Comm 4 • Comm 3 • Isolated Comm 3 supported with optional CM3I adapter (part number X13651812001)
API Connections	• Supports API connections as a client • RESTful API with HTTP/HTTPS • JSON format

Medium Enclosure (optional)	
NEMA Type	NEMA-1
Weight	14 lb. (6.5 kg)
Mounting	Wall-mounted with #10 (5 mm) screws and #10 wall anchors. Mounting surface must be able to support 60 lb. (28 kg)

Large Enclosure (optional)	
NEMA Type	NEMA-1
Weight	50 lb (23.0 kg)
Mounting	Wall-mounted with #10 (5 mm) screws and #10 wall anchors. Mounting surface must be able to support 120 lb (56 kg).

Protocol Communication	
Device Limits	Tracer SC+ facility (Combination of all protocols) • Up to 240 devices **(Per link/Per facility)** BACnet • Tracer UC200/400/600/800/BCI Series – 60/240 • 30 non-Trane® per MS/TP link • Trane Communicating Thermostats – 60/240 • Air-Fi® BACnet Zigbee – 30/240 • Symbio™ 800 – 60/240 LonTalk® • AH/CH/VV/ZN Series – 120/240 • MP503 – 120/240 • MP580 – 20/40 • Trane Communicating Thermostats – 120/240 • Symbio 800 – 120/240 • Non-Trane LON – 120/240 Modbus® • TCP – 240/240 • RTU – 30/90 Trane VRF XML/IP – 240/240 Legacy Trane • Comm 2 - 240 through Comm 2 bridge • Comm 3 - 240 through BMTB or direct wired with Tracer SC+ v6.0 or greater • Comm 4 - 240 through BMTB or direct wired with Tracer SC+ v6.0 or greater

Trane - by Trane Technologies (NYSE: TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.