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The purpose of this document is to provide the protocol that would be required of a “SAM” System Access Module or an equivalent device (e.g a Raspberry PI) to read and update certain Carrier and Bryant HVAC systems. Read and Write capability in the role of a SAM is required to add intelligence, and certain home-automation functions to an existing HVAC system.

The HVAC system protocol provides for broadcast of variable-length FRAMES that may range in size from 8 to 263 bytes. Each FRAME contains information on the Destination Device, the Requesting Device, the length of the payload, a function code, a variable length payload, and a suffix of 2 CRC16 bytes. The layout of each FRAME is shown below.

FRAMES are primarily broadcast on the 2-wire RS-485 network by a thermostat (Requesting Device) with the expectation that a specific target (Destination Device), will respond asynchronously with its own broadcast, similarly addressed to the requesting thermostat. The 2-wire protocol uses the terminals labeled “A” and “B”. Terminal “A” is also referred to as “Data+” or the “non-inverting” data line. Terminal “B” is referred to as Data-“ and is the “inverting” data line. Ground is found on “C” and 24v power from the furnace is commonly found on “D”. Access to “C” or “D” is not required to effectively monitor and control the HVAC system by a SAM type module.

For the purposes of remote control and monitoring, messages to and from the thermostat and an added “SAM” device used to interrogate and update the thermostat are the only messages of interest. The thermostat does actively poll for information from other devices on the HVAC network, including the furnace, blower, and external compressor and fan. However, these data do not add anything to what may be obtained from the thermostat directly.

Within each FRAME, there typically is a PAYLOAD string that conveys specific status, control, or information responsive to a prior message.

Typically, the network is fairly busy with messages of all types visible at a rate of several per second. Presumably collisions would be detected by CRC16 errors. However, because most of the traffic is responsive to thermostat messages, there are few collisions.

FRAME INFORMATION COMPONENTS

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| x40 | x01 | x20 | x01 | x03 | x0B | <string of LENGTH bytes> | x6E | x2E |
| DESTINATION DEVICE | REQUESTING DEVICE | **LENGTH of PAYLOAD** | R/W/ACKRESPONSE CODE | **VARIABLE LENGTH of PAYLOAD****INFORMATION COMPONENTS** | CRC16 |

**RESPONSE CODES:** READ=x0B; WRITE=x0C; ACK=x06; ERR=x15

**VARIABLE LENGTH OF PAYLOAD INFORMATION COMPONENTS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X00 | x02 | x01 | x00 | x21 |  |  |  |  |  |  |  | x20 | x00 | x19 | x03 | x13 | X01 | x03 | X03 | X03 | X03 |
| TABLE ID | ROW ID | UNK | TABLE NAME or CONTENT<variable> | SPACE | TOTAL NUMBER of MESSAGE BYTES | NUMof ROWS | NUM of MESSAGEBYTES in ROW 1 | UNK | NUM of MESSAGEBYTES in ROW 2 | UNK | NUM of MESSAGEBYTES in ROW 3 | UNK |
| REGISTER | TYPICAL ROW 1 MESSAGE |

|  |  |  |  |
| --- | --- | --- | --- |
| X00 | x02 | x02 |  |
| TABLE ID | ROW ID | <string LENGTH of NUM MESSAGE BYTES in ROW 2 above> |
| REGISTER | ROW 2 MESSAGE  |
| X00 | x02 | x03 |  |
| TABLE ID | ROW ID | <string LENGTH of NUM MESSAGE BYTES in ROW 2 above> |
| REGISTER | ROW 3 MESSAGE  |

Additional rows may be added, with a specific number for each TABLE ID type.

The thermostat is the source of most requests.

Only three of the many different messages defined need to be used and/or parsed. The main message of interest (for the non-touch models) is the inquiry to the thermostat for its current values and settings. The thermostat responds to this message with virtually all of the data needed in a single response message. In addition, by writing to the thermostat with this same message, important values may be adjusted.

It has learned that the older (“non-touch”) models of thermostats are principally using table “0x003B” and row “0x02” for the key thermostat parameters. Additional zone parameters are on the same table at row 0x03.

This contrasts with “touch” models of thermostats which is likely using other table and/or row addresses for this same data. Until this information is discovered, the existing solutions will not work with “touch” models.

Ongoing work to cover “touch” models, should probably focus on identifying which table and row are being used by SAM for the thermostat properties.

**Interesting and/or Useful Thermostat Values -- TStatCurrentParams**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Thermostat ADDRESS** | **TABLE ID** | **Row ID** | **Row Position** | **Interpretation** |
| x2001 | X003B | 0x02 | 1 | **Z1CurrentTem**p |
| x2001 | X003B | 0x02 | 2 | Z2CurrentTemp |
| x2001 | X003B | 0x02 | 3 | Z3CurrentTemp |
| x2001 | X003B | 0x02 | 4 | Z4CurrentTemp |
| x2001 | X003B | 0x02 | 5 | Z5CurrentTemp |
| x2001 | X003B | 0x02 | 6 | Z6CurrentTemp |
| x2001 | X003B | 0x02 | 7 | Z7CurrentTemp |
| x2001 | X003B | 0x02 | 8 | Z8CurrentTemp |
| x2001 | X003B | 0x02 | 9 | Z1CurrentHumidity |
| x2001 | X003B | 0x02 | 10 | Z2CurrentHumidity |
| x2001 | X003B | 0x02 | 11 | Z3CurrentHumidity |
| x2001 | X003B | 0x02 | 12 | Z4CurrentHumidity |
| x2001 | X003B | 0x02 | 13 | Z5CurrentHumidity |
| x2001 | X003B | 0x02 | 14 | Z6CurrentHumidity |
| x2001 | X003B | 0x02 | 15 | Z7CurrentHumidity |
| x2001 | X003B | 0x02 | 16 | Z8CurrentHumidity |
| x2001 | X003B | 0x02 | 17 | Unknown1 |
| **x2001** | **X003B** | **0x02** | **18** | **OutdoorAirTemp** |
| x2001 | X003B | 0x02 | 19 | ZoneUnocc |
| x2001 | X003B | 0x02 | 20 | Mode |
| x2001 | X003B | 0x02 | 21-26 | Unknown 2 |
| x2001 | X003B | 0x02 | 27 | DisplayedZone |

type TStatCurrentParams struct {

 Z1CurrentTemp uint8

 Z2CurrentTemp uint8

 Z3CurrentTemp uint8

 Z4CurrentTemp uint8

 Z5CurrentTemp uint8

 Z6CurrentTemp uint8

 Z7CurrentTemp uint8

 Z8CurrentTemp uint8

 Z1CurrentHumidity uint8

 Z2CurrentHumidity uint8

 Z3CurrentHumidity uint8

 Z4CurrentHumidity uint8

 Z5CurrentHumidity uint8

 Z6CurrentHumidity uint8

 Z7CurrentHumidity uint8

 Z8CurrentHumidity uint8

 Unknown1 uint8

 OutdoorAirTemp uint8

 ZoneUnocc uint8 // bitflags

 Mode uint8

 Unknown2 [5]uint8

 DisplayedZone uint8

}

**Interesting and/or Useful Thermostat Values -- TStatZoneParams**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Thermostat ADDRESS** | **TABLE ID** | **Row ID** | **Row Position** | **Interpretation** |
| x2001 | X003B | 0x03 | 1 | Z1FanMode |
| x2001 | X003B | 0x03 | 2 | Z2FanMode |
| x2001 | X003B | 0x03 | 3 | Z3FanMode |
| x2001 | X003B | 0x03 | 4 | Z4FanMode |
| x2001 | X003B | 0x03 | 5 | Z5FanMode |
| x2001 | X003B | 0x03 | 6 | Z6FanMode |
| x2001 | X003B | 0x03 | 7 | Z7FanMode |
| x2001 | X003B | 0x03 | 8 | Z8FanMode |
| x2001 | X003B | 0x03 | 9 | Z1HeatSetPoint |
| x2001 | X003B | 0x03 | 10 | Z2HeatSetPoint |
| x2001 | X003B | 0x03 | 11 | Z3HeatSetPoint |
| x2001 | X003B | 0x03 | 12 | Z4HeatSetPoint |
| x2001 | X003B | 0x03 | 13 | Z5HeatSetPoint |
| x2001 | X003B | 0x03 | 14 | Z6HeatSetPoint |
| x2001 | X003B | 0x03 | 15 | Z7HeatSetPoint |
| x2001 | X003B | 0x03 | 16 | Z8HeatSetPoint |
| x2001 | X003B | 0x03 | 17 | Z1CoolSetPoint |
| x2001 | X003B | 0x03 | 18 | Z2CoolSetPoint |
| x2001 | X003B | 0x03 | 19 | Z3CoolSetPoint |
| x2001 | X003B | 0x03 | 20 | Z4CoolSetPoint |
| x2001 | X003B | 0x03 | 21 | Z5CoolSetPoint |
| x2001 | X003B | 0x03 | 22 | Z6CoolSetPoint |
| x2001 | X003B | 0x03 | 23 | Z7CoolSetPoint |
| x2001 | X003B | 0x03 | 24 | Z8CoolSetPoint |
| x2001 | X003B | 0x03 | 25 | Z1TargetHumidity |
| x2001 | X003B | 0x03 | 26 | Z2TargetHumidity |
| x2001 | X003B | 0x03 | 27 | Z3TargetHumidity |
| x2001 | X003B | 0x03 | 28 | Z4TargetHumidity |
| x2001 | X003B | 0x03 | 29 | Z5TargetHumidity |
| x2001 | X003B | 0x03 | 30 | Z6TargetHumidity |
| x2001 | X003B | 0x03 | 31 | Z7TargetHumidity |
| x2001 | X003B | 0x03 | 32 | Z8TargetHumidity |
| x2001 | X003B | 0x03 | 33 | FanAutoCfg |
| x2001 | X003B | 0x03 | 34 | Unknown |
| x2001 | X003B | 0x03 | 35 | Z1HoldDuration |
| x2001 | X003B | 0x03 | 36 | Z2HoldDuration |
| x2001 | X003B | 0x03 | 37 | Z3HoldDuration |
| x2001 | X003B | 0x03 | 38 | Z4HoldDuration |
| x2001 | X003B | 0x03 | 39 | Z5HoldDuration |
| x2001 | X003B | 0x03 | 40 | Z6HoldDuration |
| x2001 | X003B | 0x03 | 41 | Z7HoldDuration |
| x2001 | X003B | 0x03 | 42 | Z8HoldDuration |
| x2001 | X003B | 0x03 | 43-55 | Z1Name (12 bytes) |
| x2001 | X003B | 0x03 | 56 - 68 | Z2Name (12 bytes) |
| x2001 | X003B | 0x03 | 69-81 | Z3Name (12 bytes) |
| x2001 | X003B | 0x03 | 82 - 94 | Z4Name (12 bytes) |
| x2001 | X003B | 0x03 | 95 - 107 | Z5Name (12 bytes) |
| x2001 | X003B | 0x03 | 108 - 120 | Z6Name (12 bytes) |
| x2001 | X003B | 0x03 | 121 - 133 | Z7Name (12 bytes) |
| x2001 | X003B | 0x03 | 134 - 146 | Z8Name |
|  |  |  |  |  |

type TStatZoneParams struct {

 Z1FanMode uint8

 Z2FanMode uint8

 Z3FanMode uint8

 Z4FanMode uint8

 Z5FanMode uint8

 Z6FanMode uint8

 Z7FanMode uint8

 Z8FanMode uint8

 ZoneHold uint8 // bitflags

 Z1HeatSetpoint uint8

 Z2HeatSetpoint uint8

 Z3HeatSetpoint uint8

 Z4HeatSetpoint uint8

 Z5HeatSetpoint uint8

 Z6HeatSetpoint uint8

 Z7HeatSetpoint uint8

 Z8HeatSetpoint uint8

 Z1CoolSetpoint uint8

 Z2CoolSetpoint uint8

 Z3CoolSetpoint uint8

 Z4CoolSetpoint uint8

 Z5CoolSetpoint uint8

 Z6CoolSetpoint uint8

 Z7CoolSetpoint uint8

 Z8CoolSetpoint uint8

 Z1TargetHumidity uint8

 Z2TargetHumidity uint8

 Z3TargetHumidity uint8

 Z4TargetHumidity uint8

 Z5TargetHumidity uint8

 Z6TargetHumidity uint8

 Z7TargetHumidity uint8

 Z8TargetHumidity uint8

 FanAutoCfg uint8

 Unknown uint8

 Z1HoldDuration uint16

 Z2HoldDuration uint16

 Z3HoldDuration uint16

 Z4HoldDuration uint16

 Z5HoldDuration uint16

 Z6HoldDuration uint16

 Z7HoldDuration uint16

 Z8HoldDuration uint16

 Z1Name [12]byte

 Z2Name [12]byte

 Z3Name [12]byte

 Z4Name [12]byte

 Z5Name [12]byte

 Z6Name [12]byte

 Z7Name [12]byte

 Z8Name [12]byte

}

**Interesting and/or Useful Thermostat Values -- TStatVacationParams**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Thermostat ADDRESS** | **TABLE ID** | **Row ID** | **Row Position** | **Interpretation** |
| x2001 | X003B | 0x04 | 1 | **Active** |
| x2001 | X003B | 0x04 | 2 | Hours |
| x2001 | X003B | 0x04 | 3 | MinTemperature |
| x2001 | X003B | 0x04 | 4 | MaxTemperature |
| x2001 | X003B | 0x04 | 5 | MinHumidity |
| x2001 | X003B | 0x04 | 6 | MaxHumidity |

type TStatVacationParams struct {

 Active uint8

 Hours uint16

 MinTemperature uint8

 MaxTemperature uint8

 MinHumidity uint8

 MaxHumidity uint8

 FanMode uint8 // matches fan mode from TStatZoneParams

}

Devices other than the thermostat have their own specific protocol addresses, and at each address several tables are available. While these messages may be used by the HVAC system, the details for what data is in these messages is unknown. Access to this data is interesting, but largely unnecessary in an environment where the thermostat is controlling everything.

**Thermostat Table of Known Table Names – little is known about the content of these tables (with the exception of table 0x003B used above.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Thermostat ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these thermostats (ref. index number)** |
| x2001 | X0001 | DEVCONFG | 4 |  |
| x2001 | X0002 | SYSTIME | 10 |  |
| x2001 | X0003 | INGUI | 10 |  |
| x2001 | X0004 | SSSBCAST | 32 |  |
| X2001 | X0005 | EVEREST |  |  |
| x2001 | X0006 | LINESET | 72 | 1 |
| x2001 | X002F | STARTUP | 29 |  |
| X2001 | X002F | EECONFIG |  | 7,9,10 |
| x2001 | X0031 | DUI DATA / INGDATA | 51 |  |
| x2001 | X0032 | LED CTRL |  |  |
| x2001 | X0034 | 4 ZONE |  |  |
| x2001 | X0039 | P MSCH |  |  |
| x2001 | X003B | AI PARMS / NVMINIT |  |  |
| x2001 | X003C | UI PARMS |  |  |
| x2001 | X003D | DISPDATA |  |  |
| x2001 | X003E | DCLEGACY |  |  |
| x2001 | X003F | WSAM CCN |  |  |

**Sensor Addresses and ASCII message content for Row 1.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sensor ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these sensors** |
| X2201 | X0001 | DEVCPONFG |  |  |
| X2201 | X0002 | SYSTIME |  |  |
| X2201 | X0003 | RLCS MAIN |  |  |
| X2201 | X0004 | SMT SNSR M |  |  |
| X2201 | X0030 | EECONFIG |  |  |
| X2201 | X0032 | SSSVCTL |  |  |
|  |  |  |  |  |

**Heat Pump Addresses and ASCII message content for Row 1.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sensor ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these sensors** |
| X5001 | X0001 | DEVCPONFG |  |  |
| X5001 | X0002 | SYSTIME |  |  |
| X5001 | X0003 | RLCS MAIN |  |  |
| X5001 | X0005 | TWOCACTY |  |  |
| X5001 | X003E | ?? |  |  |
| X5001 | X0032 | SSSVCTL |  |  |
|  |  |  |  |  |

**Furnace Addresses and ASCII message content for Row 1.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sensor ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these sensors** |
| X4001 | X0001 | DEVCONFG |  |  |
| X4001 | X0002 | SYSTIME |  |  |
| X4001 | X0003 | RLCS MAIN |  |  |
| X4001 | X0005 | VARSPEED |  |  |

**FAN COIL Addresses and ASCII message content for Row 1.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sensor ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these sensors** |
| X4201 | X0001 | DEVCONFG |  |  |
| X4201 | X0002 | SYSTIME |  |  |
| X4201 | X0003 | RLCS MAIN |  |  |
| X4201 | X0005 | VFANCOIL |  |  |

**Damper Devices Addresses and ASCII message content for Row 1.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sensor ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these sensors** |
| X6001 | X0001 | DEVCONFG |  |  |
| X6001 | X0002 | SYSTIME |  |  |
| X6001 | X0003 | RLCS MAIN |  |  |
| X6001 | X0005 | 04ZONE STL |  |  |

**SAM System Access Module SAM**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sensor ADDRESS** | **TABLE ID** | **TABLE NAME / FIRST ROW CONTENTS** | **MAX Number of ROWS in Table** | **Valid on these sensors** |
| 0x9201 | 0x0001 | DEVCONFG |  |  |

**Zone Sensor Controller – Device Address: 0x2201**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| **0x2201** | [SYSTXCCSMS01-B](http://www.carrierenterprise.com/carrier-infinity-smart-sensor-for-zoning-systxccsms01-b)SYSTXCCSMS01 | http://resource.carrierenterprise.com/is/image/Watscocom/Article_1410348560587_EN_Normal?wid=1600&hei=1600&fit=constrain,0&defaultImage=ce_image-coming-soon | Carrier® Infinity® - Smart Sensor for Zoning |

**Zone Sensors–**

**Device Address Follows Zone Number: 0x2301, 0x2401, 0x2501, 0x2601, 0x2701, 0x2801,**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| 0x2301, 0x2401, 0x2501, 0x2601, 0x2701, 0x2801, | [UI/SS](http://www.carrierenterprise.com/carrier-infinity-smart-sensor-for-zoning-systxccsms01-b) |  | Carrier® Infinity® - Smart Sensor for Zoning |

**Furnace Models**

**Device Address: 0x4001**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| 0x4001 | [355CAV042080](http://www.supplyhouse.com/Bryant-355CAV042080-355CAV-80000-BTU-95-Efficiency-Evolution-Multipoise-Gas-Furnace-3-1-2-Ton)[355CAV060120](http://www.supplyhouse.com/Bryant-355CAV060120-355CAV-120000-BTU-95-Efficiency-Evolution-Multipoise-Gas-Furnace)**“355CA” 3-stage heat** | 355CAV 80,000 BTU, 95% Efficiency Evolution Multipoise Gas Furnace, 3-1/2 Ton Product Image | 80,000 BTU, 95% Efficiency Evolution Multipurpose Gas Furnace, 3-1/2 Ton120,000 BTU, 95% Efficiency Evolution Multipurpose Gas Furnace |
| 0x4001 | [58MVC100-F-1--20](http://www.carrierenterprise.com/infinity-ics-model-58mvc-deluxe-4-way-multipoise-varaibale-speed-multi-stage-condensing-gas-furnace-58mvc100-f-1-20)“58MVC” variable speed | http://resource.carrierenterprise.com/is/image/Watscocom/article_1410348560325_en_normal?wid=1600&hei=1600&fit=constrain,0&defaultImage=ce_image-coming-soon | Carrier® Infinity™ 95% AFUE 100,000 Btuh Deluxe 4-Way Multipurpose Variable-Speed Multi-Stage Condensing Gas Furnace |

**Furnace Fan Coil – Device Address: 0x4101, 0x4201**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| 0x4101, 0x4201 | FE4ANF002T000 |  | FE4ANF002T000 10kW Electric Heat Package |

**Heat Pump Heat Pump – Device Address: 0x5001, 0x5101**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| 0x5001 | 25HNB530A003 (2.5 ton)25HNB624A003 (2 ton)25HNB5 | http://resource.carrierenterprise.com/is/image/Watscocom/article_1391689340820_en_normal?wid=1600&hei=1600&fit=constrain,0&defaultImage=ce_image-coming-soon | Carrier® Infinity™ - 2.5 Ton, 15 SEER, Residential Heat Pump Condensing Unit |
| 0x5101 | 25VNA0 | infinity 20 heat pump 25VNA0 | 25VNA infinity® 20 Heat Pump With Greenspeed® Intelligence20.5 seer; 13.0 hspfVariable speed compressor |

**Damper Controls – Device Address: 0x6001, 0x6101, 0x6501**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| 0x6001, 0x6101,  | [SYSTXCC4ZC01](http://www.carrierenterprise.com/carrier-infinity-damper-control-module-systxcc4zc01) | http://resource.carrierenterprise.com/is/image/Watscocom/Article_1410348560510_EN_Normal?wid=1600&hei=1600&fit=constrain,0&defaultImage=ce_image-coming-soon | Carrier® Infinity™ Damper Control Module |
| 0x6501 |  |  | Carrier® Infinity™ Damper Control Module – room sensor |

**Other Devices: 0x8001, 0x9201, 0xA001**

|  |  |  |  |
| --- | --- | --- | --- |
| Device Address | Device Model | Photo | Description |
| 0x6001, 0x6101,  | SYSTXCCRCT01SYSTX = Infinity System Product TypeCC = Carrier BrandRCT = CAT5 (Wired) Broadband Connection01 = Package Qty | http://resource.carrierenterprise.com/is/image/Watscocom/Article_1404816230203_EN_Normal?wid=1600&hei=1600&fit=constrain,0&defaultImage=ce_image-coming-soon | Carrier Infinity System Access Module SAM/RAMCarrier® Infinity™ Ethernet (CAT-5 Wired) Broadband Remote Access Module |
| 0x9601 |  |  | Carrier® Infinity™ Damper Control Module – room sensor |

The following thermostat models have been observed in the wild and generally would be expected to work with this protocol. These models vary principally on the wi-fi features and for the low end devices, the number of zones managed.

**Thermostats – Device Address: 0x2001**

|  |  |  |  |
| --- | --- | --- | --- |
| **Index** | **Thermostat Model** | **Photo** | **Description** |
| 1 | [SYSTXCCITW01-A](http://www.carrier.com/residential/en/ca/products/thermostats/wifi-thermostats/systxccitw01-a/) | default | Carrier INFINITY® REMOTE ACCESS TOUCH CONTROL WITH WIRELESS ROUTER |
| 2 | [SYSTXCCITC01-A](http://www.carrier.com/residential/en/ca/products/thermostats/wifi-thermostats/systxccitc01-a/) | default | Carrier INFINITY® REMOTE ACCESS TOUCH CONTROL |
| 3 | [SYSTXBBECC01-A](http://www.bryant.com/bryant/en/us/products/controls-thermostats/systxbbecc01-a/) | SYSTXBBECC01-A | Bryant Evolution® Connex™ Control  |
| 4 | SYSTXBBECW01-A | SYSTXVVECW01-A | Bryant Evolution® Connex™ Control |
| 5 | [SYSTXBBECN01-A](http://www.bryant.com/bryant/en/us/products/controls-thermostats/systxbbecn01-a/) | SYSTXBBECN01-A | Bryant Evolution® Connex™ Control  |
| 6 | [TP-WEM01](http://www.carrier.com/residential/en/ca/products/thermostats/wifi-thermostats/cor-wifi-thermostat/) | CON_SYSTXCCUIZ01-V_Medium | Carrier CÔR® WI-FI® THERMOSTAT |
| 7 | [SYSTXCCUIZ01-B](http://www.mmcomfortsystems.com/catalog/thermostats/carrier-systxccuiz01-b-infinity-control) | Carrier SYSTXCCUIZ01-B Infinity® Control | Carrier SYSTXCCUIZ01-B Infinity® Control |
| 8 | [TC-WHS01](http://www.carrier.com/residential/en/us/products/thermostats/wifi-thermostats/wifi-thermostat-tc-whs01/) | default | CARRIER® WI-FI® THERMOSTAT |
| 9 | [SYSTXBBUID01-B](http://www.eheatcool.com/heating-air/evolution-systxbbuid01-b-thermostat/)SYSTXBBUIZ01-B (8 zones) | http://www.eheatcool.com/media/bryant-evolution-control.jpg | Bryant Evolution SYSTXBBUID01-B Thermostat |
| 10 | [SYSTXBBUID01-B](http://www.carrier.com/residential/en/us/products/thermostats/wifi-thermostats/wifi-thermostat-tc-whs01/) | http://www.eheatcool.com/media/bryant-evolution-control.jpg | Bryant Evolution SYSTXBBUID01-B Thermostat |

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