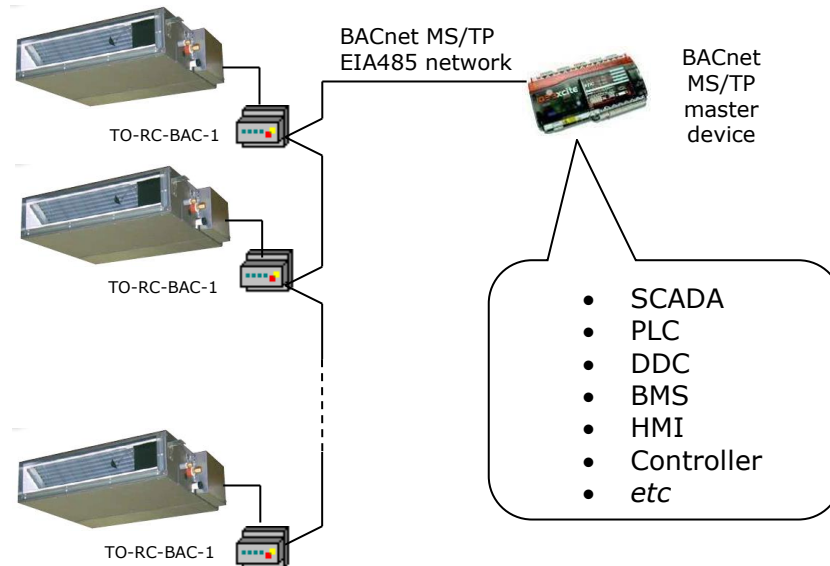




IntesisBox®

TO-RC-BAC-1

BACnet MS/TP & IP Interface for TOSHIBA Air Conditioners



The TO-RC-BAC-1 interface allows a complete and natural integration of **Toshiba** air conditioners into either BACnet IP or MS/TP networks. Compatible with the VRF line models commercialized by TOSHIBA

- Reduced dimensions. 93 x 53 x 58 mm.
- Quick and easy installation. *Mountable on DIN rail, wall, or even inside the indoor unit in some models of AC.*
- External power not required.
- Direct connection to BACnet networks. TO-RC-BAC-1 is a BACnet MS/TP master device or a BACnet IP server (depending on configuration).
- Direct connection to the AC indoor unit.
- Total Control and Supervision. Real states of the AC unit's internal variables.
- Allows using simultaneously the IR and wired remote controls and BACnet.

1. BACnet Interface (Member Objets)

| Object-name | Description | Object-type |
|----------------------------------|----------------------|-------------|
| TO-RC-BAC-1 | Toshiba RC Interface | Device |
| OnOff_status | | BI |
| OnOff_command | | BO |
| Mode_status | | MI |
| Mode_command | | MO |
| SetPoint_status | | AI |
| SetPoint_command | | AO |
| FanSpeed_status | | MI |
| FanSpeed_command | | MO |
| AirDirectionUD_status | | MI |
| AirDirctionUD_command | | MO |
| Room_Temperature | | AI |
| ErrorCode | | AI |
| ErrorCodeM | | MI |
| ErrorActive | | BI |
| ErrorCodeAdress | | AI |
| OnTimeCounter | | AV |
| FilterSign | | BI |
| FilterReset | | BO |
| Occupancy | | MV |
| OccupiedCoolSetPoint | | AV |
| OccupiedHeatSetPoint | | AV |
| UnoccupiedCoolSetPoint | | AV |
| UnoccupiedHeatSetPoint | | AV |
| OccupancyContinuousCheck | | BV |
| UnoccupiedDeadbandAction | | BV |
| RemoteControllerProhibit_status | | MI |
| RemoteControllerProhibit_command | | MO |
| RuntimeModeRestriction | | MI |

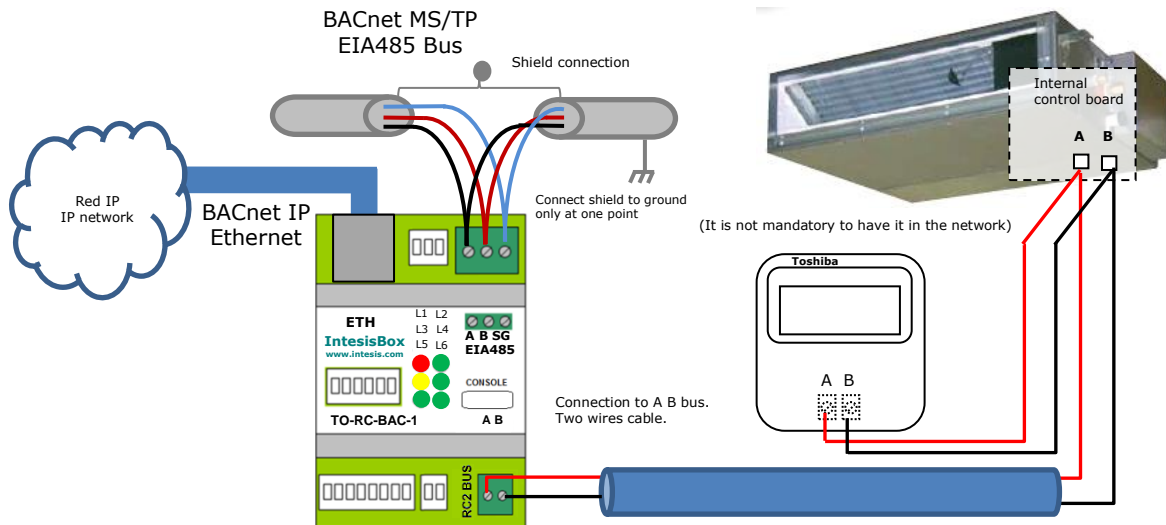
2. List of compatible Toshiba AC indoor units.

A list of Toshiba indoor unit model references compatible with TO-RC-BAC-1 and their available features can be found at:

http://intesis.com/pdf/IntesisBox_TO-RC-xxx-1_Toshiba_Compatibility.pdf

3. Connections

TO-RC-BAC-1 connects directly to the indoor unit connector using the **A B** connector and to the BACnet side using BACnet IP or BACnet MS/TP (See picture below).



4. Technical Specifications

| | |
|---|---|
| Enclosure | Plastic, type PC (UL 94 V-0). Dimensions: 93mm x 53mm x 58mm. Weight: 85 g |
| Color | Light Grey. RAL 7035. |
| Terminal wiring (for power supply and low-voltage signals) | Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5 ... 2.5mm ² 2 cores: 0.5 ... 1.5mm ² 3 cores: not permitted |
| Console Port | Mini USB port for console usage |
| Mounting | Wall. DIN rail EN60715 TH35. |
| BACnet MS/TP port | 1 x EIA485 Plug-in screw terminal block (2 poles + GND) |
| LED indicators | 6 x Gateway/Communication status |
| Operational temperature | 0°C to +40°C |
| Operational humidity | 5% to 95%, non-condensing |
| Isolation Voltage | 4000 VDC (between AC unit and EIA-485) 1000 VDC (between AC unit and console) |
| Protection | IP20 (IEC60529). |
| RoHS conformity | Compliant with RoHS directive (2002/95/CE). |
| Certifications | CE conformity to EMC directive (2004/108/EC) and Low-voltage directive (2006/95/EC) EN 61000-6-1 ;EN 61000-6-3; EN 60950-1; EN 50491-3 This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference 2) This device must accept any interference received, including interference that may cause undesired operation. |