The Control Range

REGULATE AND MONITOR
THE SYSTEM OPERATIONS

CONTROLS

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LOCAL CONTROLS - INDIVIDUAL SETTINGS

TOSHIBA offer a number of Local Control products that can be used to control a single Indoor Unit, or group of up to 8 Indoor Units, from a position adjacent to that Indoor Unit or group.

It is possible to install these these Local Controllers up to 500m* from the connected Indoor Unit which allows greater flexibility when designing the installation. This also provides the opportunity to install the Local Controller in an area removed from the connected Indoor Unit, for example, common use areas where the Indoor Unit operation should not be changed by local users but may need to be monitored by a site engineer from a Control Room.

There are two different types of Local Remote Controller currently available from Toshiba, these are:
The Wired Remote Controller which is the standard local control device suitable for most applications, and the Wireless Remote Controller which consists of a universal Handset that can be purchased with a choice of 4 different Wireless Receiver Units that are specifically designed to suit different Indoor Unit model types.

The local network

There are three different methods that can be used to connect the Local Control Device to the Indoor Unit, or group of Indoor Units:
1 to 1 connection - This method is for the connection of a single Wired Remote Controller, or Wirless Receiver Unit, to a single Indoor Unit.
Group connection - This method enables the connection of up to 8 Indoor Units to a single Wired Remote Controller, or Wireless Receiver Unit. In this configuration, up to 8 Indoor Units can be controlled simultaneously (all Indoor Units follow the same setting parameters) from a single Local Control Device.
Multiple controller connection - This method enables the connection of up to 2 Local Control Devices
(Wireless Receiver Unit or Wired Controller) to a single Indoor Unit, or a group of up to 8 Indoor Units. In this configuration, Main/Sub settings must be configured for each of the connected Local Control Devices.
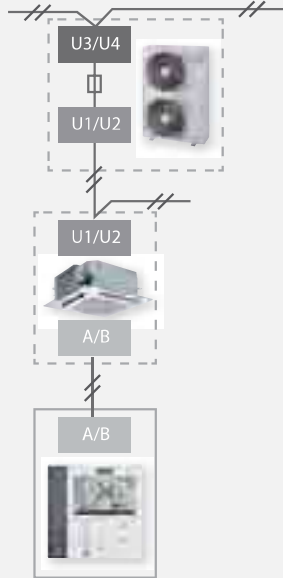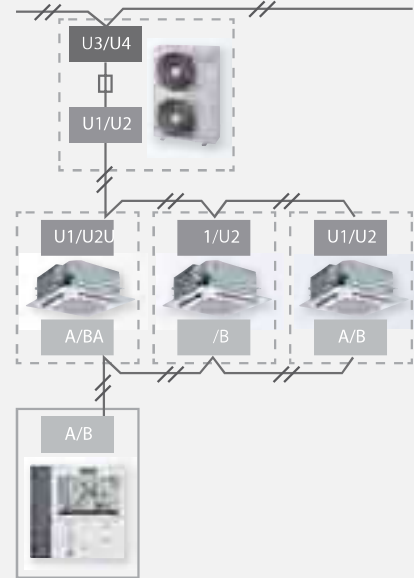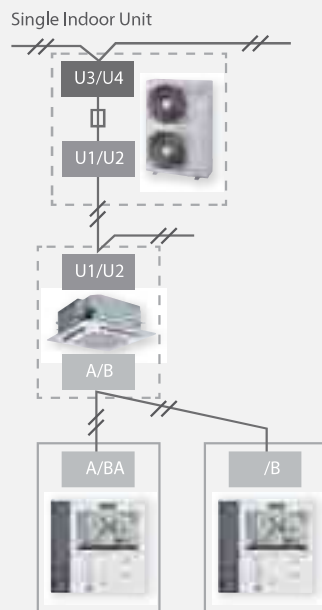
WIRELESS   WIRED

1 To 1 connection

| U3/U4 |
| U1/U2 |

| U1/U2 |
| A/B |

| A/B |

Group connection

| U3/U4 |
| U1/U2 |

| U1/U2U | 1/U2 | U1/U2 |
| A/BA | /B | A/B |

| A/B |

Multiple controller connection

Single Indoor Unit

| U3/U4 |
| U1/U2 |

| U1/U2 |
| A/B |

| A/BA | /B |

Group of Indoor Units

| U3/U4 |
| U1/U2 |

| U1/U2U | 1/U2 | U1/U2 |
| A/BA | /B | A/B |

| A/BA | /B |

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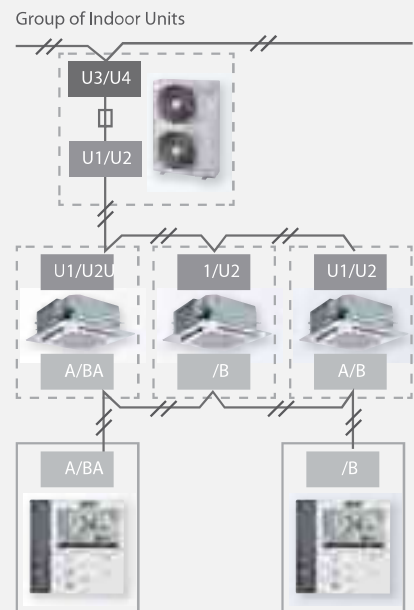
IR Remote Control

The wireless controller is available with a series of receiver unit designs. These receivers are specially designed to fit into different Indoor Unit models to provide a high standard of finish.

The wireless controller features an easy to use and compact button layout, standard control buttons immediately available and display screen to show all the main operating parameters.

Hi power mode

The high power operation mode automatically controls room temperature, airflow and operation mode so that the room is quickly cooled in summer and warmed in winter.

Quiet mode

The QUIET mode provides quiet operating status by automatically setting the fan speed to the lowest speed. It can be activated by a simple touch of the dedicated button and during operation an icon appear on the display.

Comfort sleep mode

This function is an OFF timer operation with automatic temperature and fan speed adjustment to gradually decrease the temperature during the night.
It is possible the selection of 1, 3, 5 or 9 hours for the OFF timer operation.

Wall or ceiling mountable receiver.
To be used with: all the indoor units, more specifically targeted to ducted units.

TCB-AX32E2	STAND ALONE RECEIVER

Mountable on the corner pocket of the cassette unit.
To be used with: new 4-Way cassette units.
W model is for white cassette panels.
WS model is for white/grey cassette panels.

RBC-AX32U(W)-E RBC-AX32U(WS)-E	PANEL CORNER RECEIVER

Receiver mountable in the frame of the front panel.
To be used with: Ceiling units, 1-way cassette units.

RBC-AX32CE2 RBC-AX33CE2	FRONT PANEL RECEIVER

Receiver mountable in the frame of the front panel.
To be used with: new 2-way cassette units.

RBC-AX23UW(W)-E	WIRELESS CONTROL KIT

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RBC - AMS54E - EN

Lite-Vision plus Remote Controller

This is the new local remote controller with a built in 7-Day Timer-featuring a new multi-language LCD display with backlight, Energy Saving Options and a Return back function.

Possibility to set and display the room name to easily set-up and monitor the working parameters.
New Modern and desirable controller design with menu driven display.
Save mode by schedule timer to optimize energy consumption.
Room temperature display always available.
Two "Hot Keys" (F1, F2) for easy operation of air conditioner functions.
Easy to read layout including display of Indoor Unit Model Name and serial number.
New temperature display that can show the Indoor Unit settings in increments of 0.5°C.
Built-in backup power. Settings are kept in memories up to 48 hours in case of power failure.
Remote TA sensor available in controller.
Can be connected to a single Indoor Unit or a group of up to 8 Indoor Units.

The standard remote controller can control an individual indoor unit or a group of 8 indoor units. The remote control allows the operating parameters to be set for the indoor unit. It also allows faults to be displayed and unit configurations to be set up. The weekly timer can be fitted to this remote control.

RCB-AMT32E	CLASSIC CONTROL

This is a simplified version of the standard wired remote controller and can be connected to a single Indoor Unit, or group of up to 8 Indoor Units.
The reduced function display and simplified button layout make this controller the ideal solution for hotel and office applications.

RBC-AS41E2	CLASSIC CONTROL

This controller is based on the standard wired controller but has the additional control provided by a built-in 7-day timer function making it an ideal solution for any light commercial or VRF application that requires schedule timer operations or Night set-back control.
The 7-Day timer function can set multiple Indoor Unit parameters and can control: Operation ON/OFF, Operation Mode, Set Temperature, Energy Saving Function*, Frost Protection Function*, button restrictions.
Restriction on button operation.

* Specific Unit Combinations only.

RBC-AMS41E	REMOTE CONTROLLER WITH WEEKLY TIMER (7-DAY TIMER FUNCTION)

The Schedule Timer is an advanced control device that can be used to control Indoor Unit parameters based on a timed schedule, and has two possible modes of operation to choose from, these are:
Weekly Timer Mode.
The timer is connected to an Indoor Unit via a local or central remote controller.
Schedule Timer Mode.
The timer is connected directly to the TCC Link Central Control network and can set timer functions for up to 64 Indoor Units in up to 8 programmable control groups.

TCB-EXS21TLE	SCHEDULE TIMER

CENTRAL CONTROL - GROUP SETTINGS

Toshiba offer a number of different central control solutions that can be used to control a large number of Indoor Units from a central location, such as a Reception Area, Engineering room or Office Space.
These Control devices are connected to the Air Conditioner side using Toshiba's dedicated Central Control Network, the TCC-Link , which can be used to directly connect SMMS, MiNi-SMMS, S-HRM, and SMMS-i equipment.
The TCC-Link also offers connection of Light Commercial split systems with the use of a specially designed low cost network adaptor (TCB-PCNT30TLE2)*.
* Excludes DI Flexi type Indoor Unit.

The Central Control network

The TCC-Link Central Control Network is used for communications from the Outdoor Unit to Indoor Units in VRF systems, and for connection of TOSHIBA's Central Control devices to the Air Conditioner product.

U1/U2 connection
This is is used for Outdoor to Indoor Unit connection.

U3/U4 connection
This is used for Outdoor Unit to Outdoor Unit connection when multiple refrigerant circuits are connected to the same.
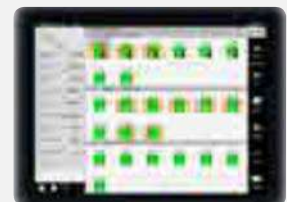TCC-Link Network.
NOTE: Increased Installation Flexibility is achieved as the TCC-Link allows Central Control Devices to be connected to either the Indoor Unit side (U1/U2) or the Outdoor Unit side (U3/U4).
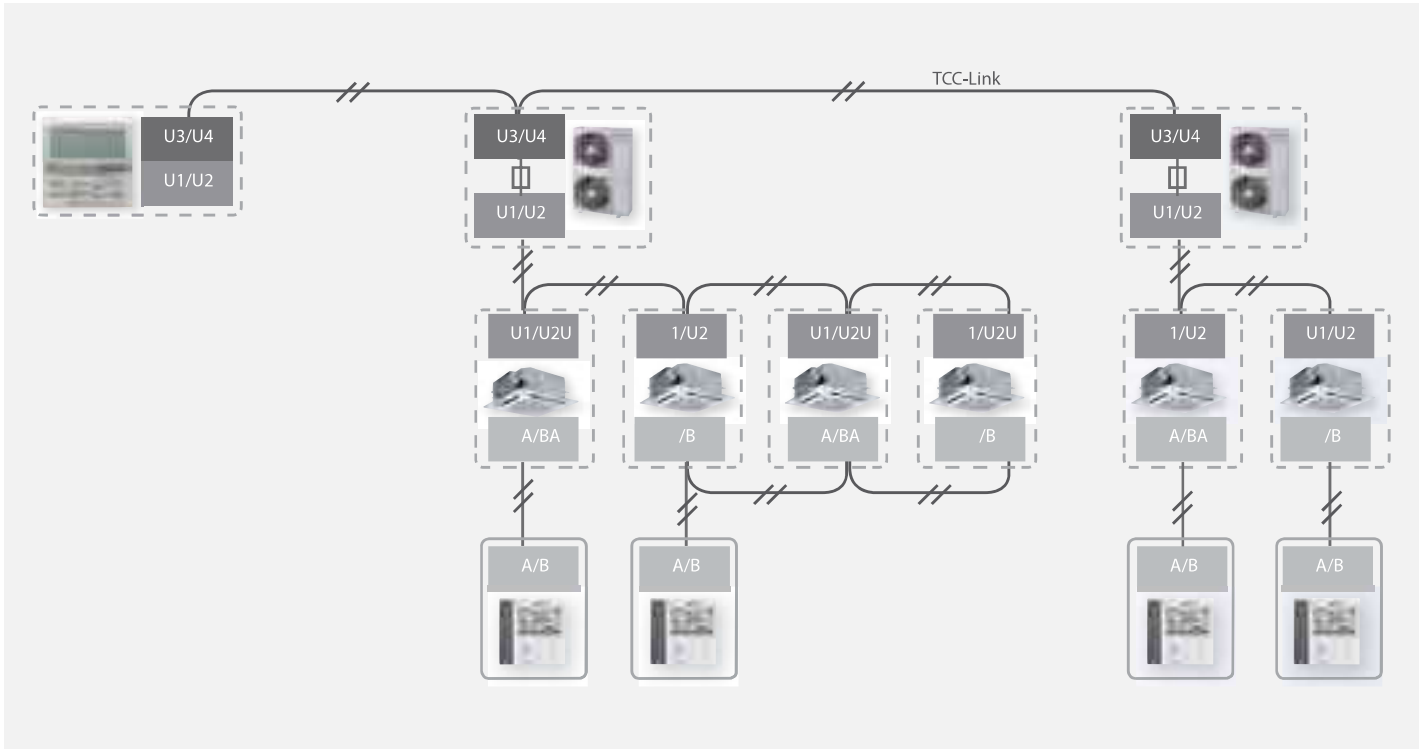
ON-OFF CONTROL   ADVANCED CENTRAL CONTROL

The TCB-CC163TLE2 is a 16-Way ON-OFF controller for use with VRF, DI and SDI equipment (excludes DI Flexi Type).
It is a simplified Central Control device that can be connected to up to 16 Indoor Units via the TCC-Link network to provide simple "1 touch" ON-OFF control and for all connected Indoor Units.

TCB-CC163TLE2 — ON-OFF CONTROLLER

This Controller is an advanced Central Control device that can be connected to up to 128 Indoor Units (2 x 64 IDU TCC-Link Connections). The High-Spec model has the same hardware control function as the standard version, but also has the ability of control from a Local Area Network and, with the addition of an additional Interface, is capable of Energy Monitoring and report creation functions. This controller is ideal where advanced control, Energy Monitoring, advanced scheduling or access to individual air Conditioners is required from networked computer systems.

BMS-CM1280TLE — CENTRAL REMOTE CONTROLLER

The Smart Manager has the same hardware Control Function as the Compliant Manager, but also has the ability of control from a Local Area Network and, with the use of an additional Interface, is capable of Energy Monitoring and Report Creation Functions.

BMS-S M1280HTLE — STANDARD SMART MANAGER

BMS-SM1280ETLE

The Smart Manager has the same hardware Control Function as the BMS-CM1280TLE Controller, but also has the ability of control from a Local Area Network and, with the use of an additional Interface, is capable of Energy Monitoring and Report Creation Functions.

This controller is ideal where advanced control, Energy Monitoring, advanced scheduling or access to individual Air Conditioners is required from networked computer systems.

Same Hardware control features as the BMS-CM1280TLE Controller.
Can be connected to a single PC or LAN to allow advanced control functions from a Multi-Language Web Browser Display Screen.
Energy Monitoring and report creation functions available.
Advanced operation & master schedules can be set on a calendar.
Additional Digital I/O Device Available.
Thin profile controller and separate power supply unit enables easy installation.

Data analyzer

On a connected local supplied personal computer is possible to view data analysis and energy monitoring.
Advanced operations and settings can be managed with this tool: Set temperature restrictions, save operation modes, peak cut controls on condensing unit.
A set of graphs and detailed reports will help to easily monitor the performance of the system.

Energy consumption history (days) Energy consumption comparison Alarm list Energy consumption history (hours)
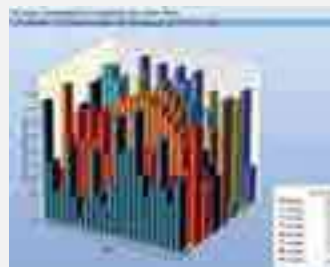
BMS-CT5121E   [NEW MODEL]

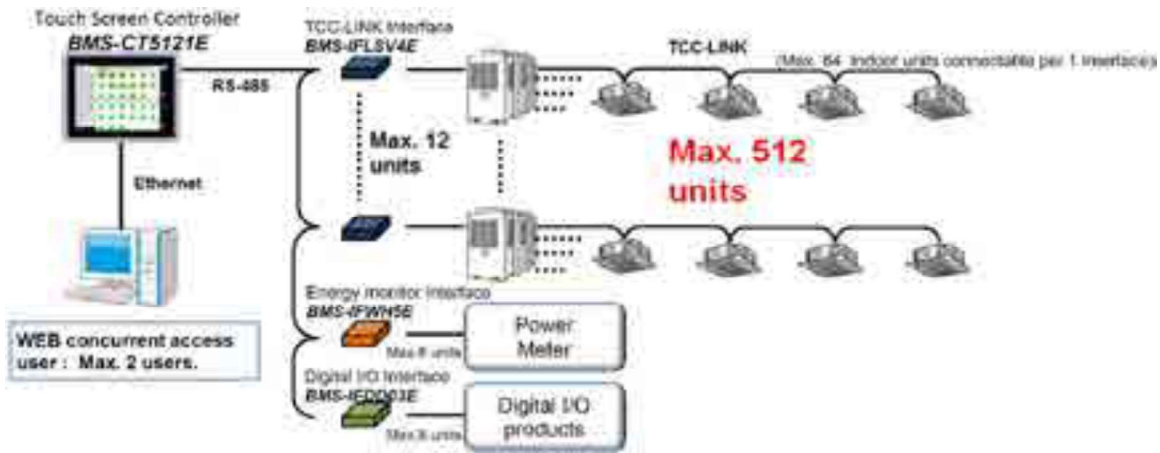The Touch Screen Controller can be connected to up 512 Indoor Units depending on model and offers Energy Monitoring and schedule program functions. This controller is ideally suited to any small or large installation where Energy Monitoring functions are required, or where a professional and highly presentable finish is required. It can control each of the individual indoor units and is capable of providing information from the indoor unit settings and malfunction check codes. The Touch Screen is connected to the air conditioner control network directly by relay interfaces.
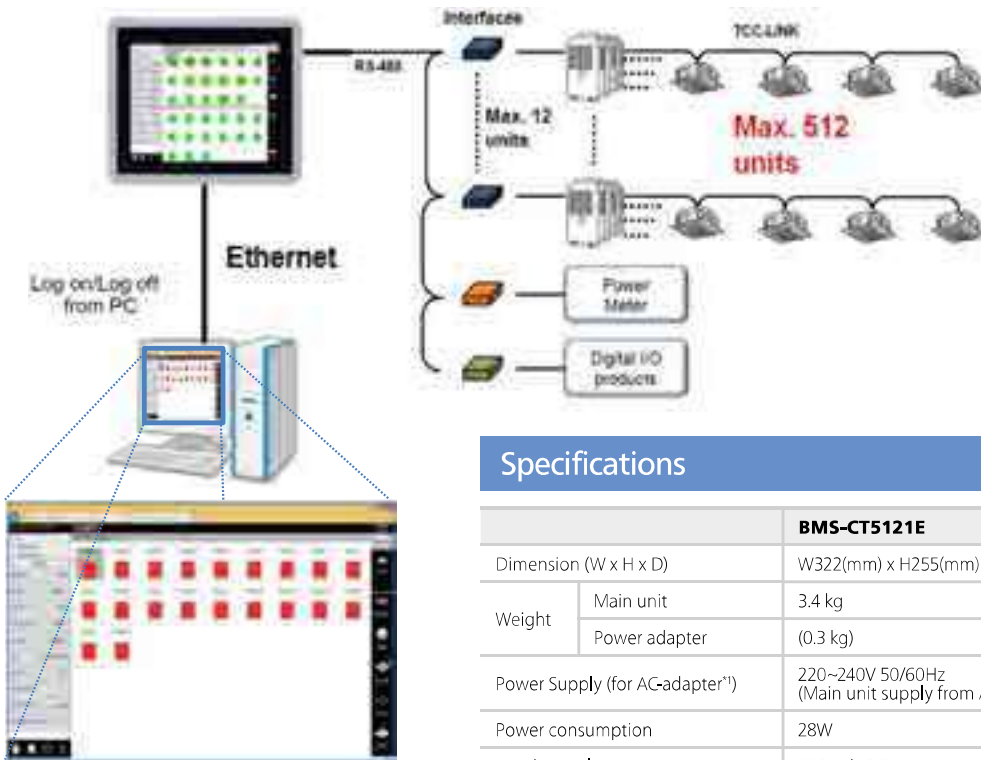
Requirements

OS: Windows8.1(R) or Windows10(R)
Web browser: Internet Explorer 11(R)

Specifications

	BMS-CT5121E
Dimension (W x H x D)	W322(mm) x H255(mm) x D49(mm)
Weight — Main unit	3.4 kg
Weight — Power adapter	(0.3 kg)
Power Supply (for AC-adapter*1)	220~240V 50/60Hz (Main unit supply from AC-adapter: 12V-DC)
Power consumption	28W
Touch panel	12.1inch / Capacitance touch panel method
Operating temp. range	0-40 degree C 10%-90% RH
Storage temp. range	-10 ºC -60 ºC
Display languages	14 languages English/ French/ German/ Italian/ Spanish/ Dutch/ Protugese/ Greel/ Turkish/ Russian/ Croatian/ Czech/ Chinese/ Polish

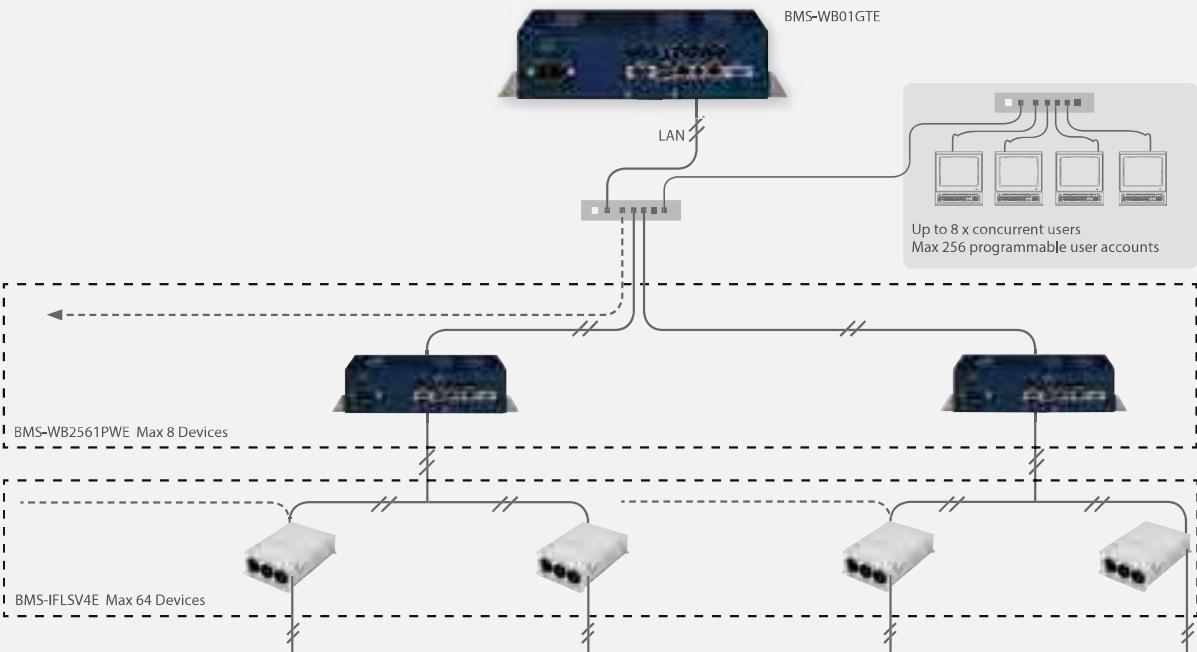*1: The power supply cord must be provided locally

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BMS-WB2561PWE

The Web Based Controller is an advanced Central Control device designed for use with large installations or where high-level control and/or Energy Monitoring Functions are required.

One Major benefit of the Web Based Controller over other Central Control systems is the ability to automatically retransmit system Alarms to up to 8 programmable Email Addresses. It is also possible to specify which Units will send alarms to each of the different Email Addresses.

Connection of up to 256 Indoor Units.

A single Web Based Controller can be connected to up to 256 Indoor Units on the TCC-Link Central Control Network via TCS-Net Relay Interfaces.

Connection of up to 2048 Indoor Units. With the use of an additional Web Based Controller Master - BMS-WB01GTE - device it is possible to connect up to 2,048 Indoor Units into this control system. This is carried out using the Master device as a hub for up to 8 multiple Web Based Controllers.

BMS-WB01GTE

LAN

Up to 8 x concurrent users
Max 256 programmable user accounts

BMS-WB2561PWE Max 8 Devices

BMS-IFLSV4E Max 64 Devices

Toshiba offer a range of control Interfaces that can be used to Integrate the control of our Air Conditioner products in to local Building Management Systems.

Our Building Management controls currently offer easy integration with the following protocols:

Lonworks®.
Modbus.
BACnet®.
Open Ended system using Digital Analogue Inputs & Outputs.

Building Management Systems

A Building Management System (BMS) is a computer based control system that is installed in buildings to control and monitor mechanical and electrical equipment, such as ventilation, lighting, power systems, fire systems and security for that building.
The core function of most BMS systems is to manage the environment within the building and can be used to control heating and cooling equipment and manage the systems that distribute treated air throughout the building.

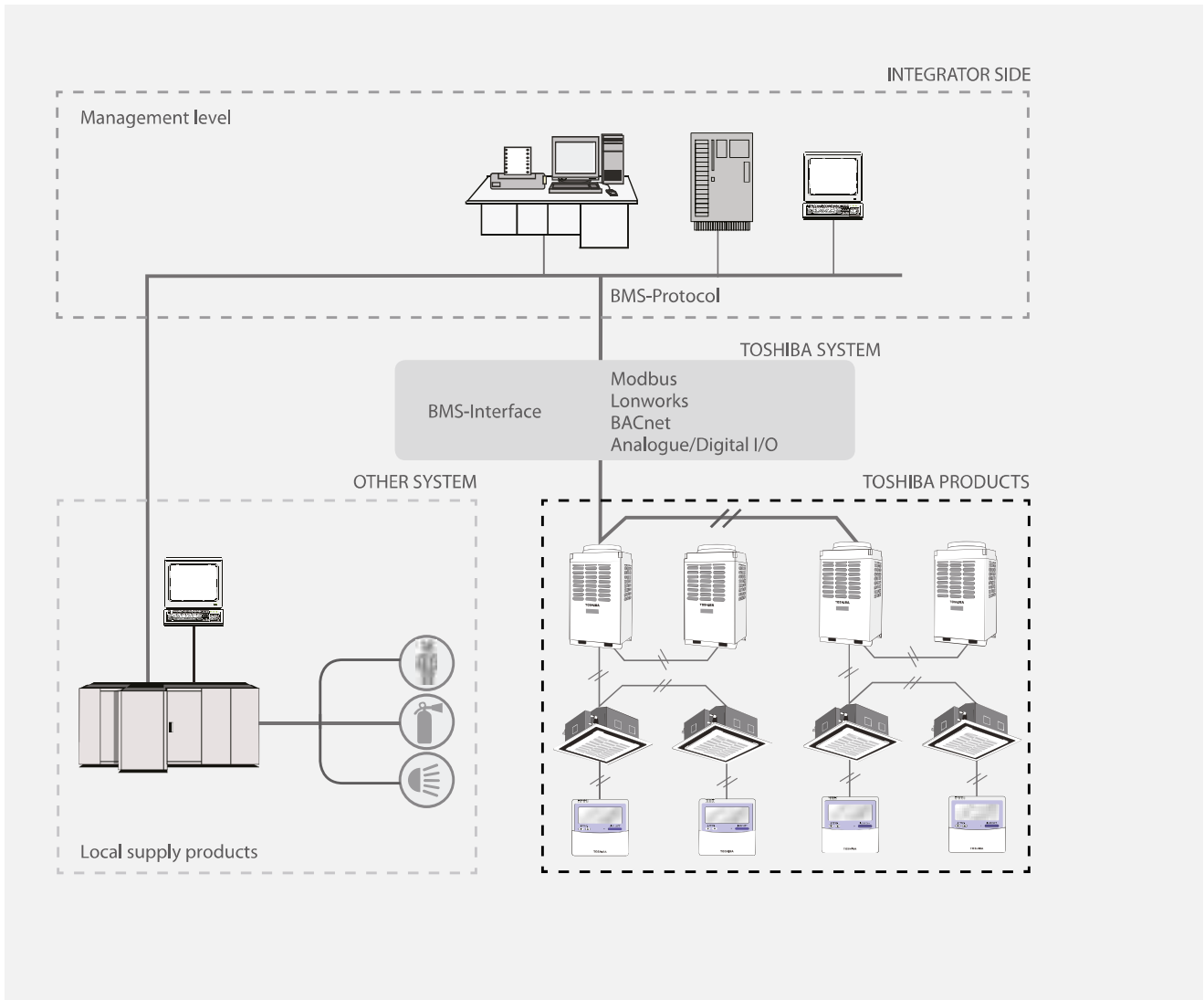BACnet® GATEWAY   LonWorks® INTERFACE   ANALOGUE INTERFACE

INTEGRATOR SIDE

Management level

BMS-Protocol

TOSHIBA SYSTEM

BMS-Interface
Modbus
Lonworks
BACnet
Analogue/Digital I/O

OTHER SYSTEM

TOSHIBA PRODUCTS

Local supply products
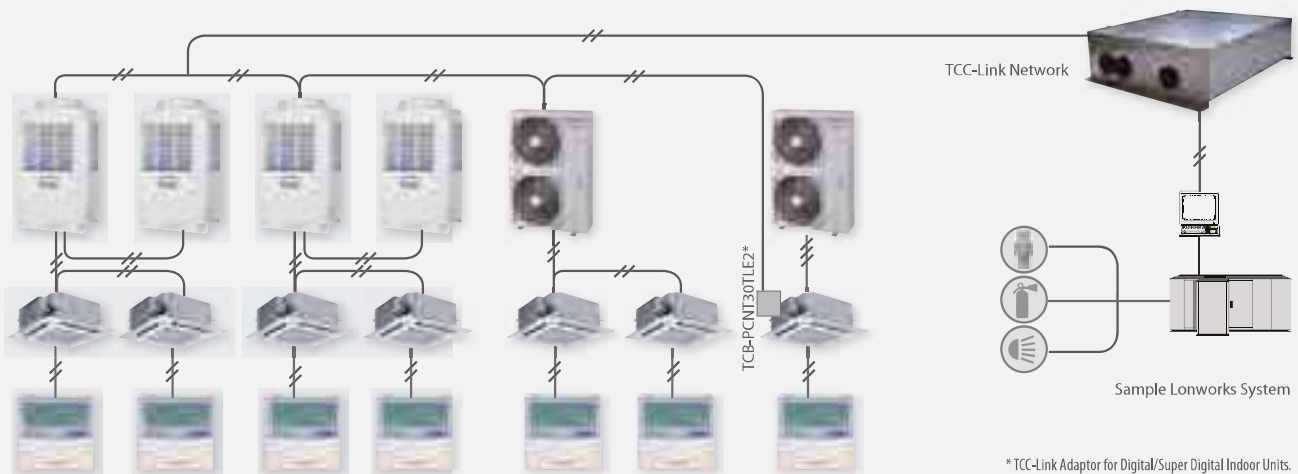
TCB-IFLN642TLE

LONWORKS INTERFACE

The Toshiba Lonworks interface 100% LonMark Compliant and is designed to connect the Toshiba Air Conditioning system to a Lonworks Building Management Control System.

This Interface connects directly to the Toshiba TCC-Link Central Control Network on the Air Conditioner side and can be wired on the Indoor or outdoor side depending on preference.

The Interface is then connected to the Lonworks Building Management Control system where it provides 28 Network variables for the sending of Control Commands and receiving unit information.

Multiple Toshiba Lonworks Interfaces can be connected to a single TCC-Link Network and addressed using simple switches provided on the device. This is to enable ease of installation, especially in buildings with separate areas where 1 Interface may be used for each area/floor.

TCC-Link Network

TCB-PCNT30TLE2*

Sample Lonworks System

* TCC-Link Adaptor for Digital/Super Digital Indoor Units.

Lonworks is a control system platform built on the LonTalk Communications Protocol created by the Echelon Corporation, and is used for the networking of equipment over media such as Twisted Pair, Power lines, fibre optics and Radio Frequency.

The Lonworks platform has been adopted as the basis for product and service offers in many different industries including the Building industry where it is widely used for control of Lighting and HVAC systems.

TCB-IFMB640TLE / TCB-IFMB641TLE

The Toshiba Modbus® interface is designed to connect the Toshiba Air Conditioning system to a Modbus Building Management System.
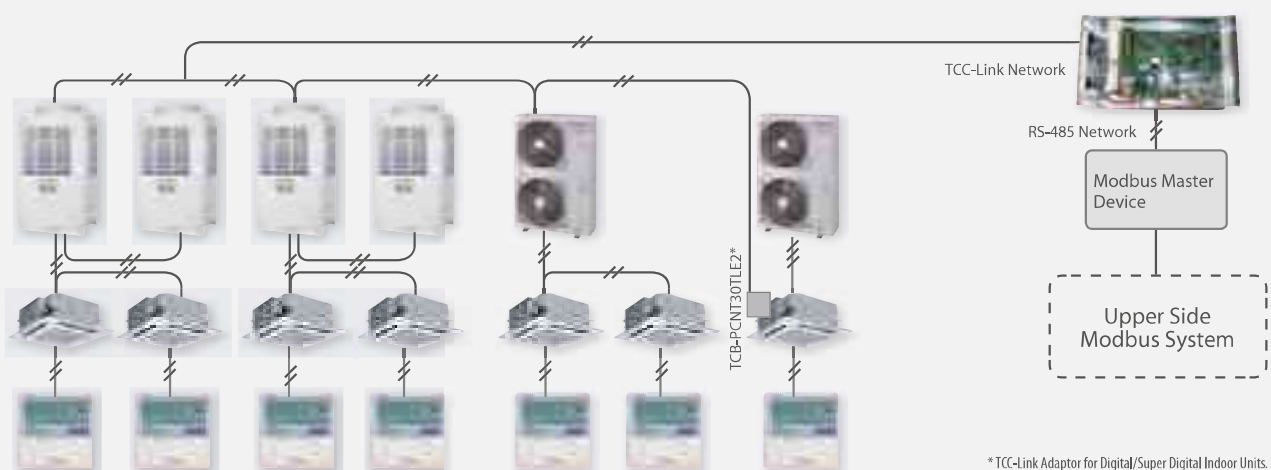
The Toshiba Interface connects directly to the Toshiba TCC-Link Central Control Network on the Air Conditioner and can be wired on the Indoor or outdoor side depending on preference.

The Interface then uses the Modbus RTU protocol based on the RS-485 type serial communications protocol to connect to a suitable Modbus Master device.

Finally, this Modbus Master device is connected to the BMS control system and allows control of all connected Toshiba Air Conditioner equipment from that BMS control system.

Multiple Toshiba Modbus Interfaces can be connected to a single TCC-Link Network and addressed using simple switches provided on the device.

This is to enable ease of installation, especially in buildings with separate areas where 1 Interface may be used for each area/floor.

TCC-Link Network

RS-485 Network

Modbus Master Device

Upper Side Modbus System

TCB-PCNT30TLE2*

* TCC-Link Adaptor for Digital/Super Digital Indoor Units.

Modbus is a serial Communications protocol that was first published in 1979 for use with programmable logic controllers, and has now become the most commonly available means of connecting industrial electronic devices to a computer control system.
There are many different versions of Modbus currently used in building management systems including Modbus RTU, Modbus ASCII and Modbus TCP.

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BMS-LSV9E

A Building Management System (BMS) is a computer based control system that is installed in buildings to control and monitor mechanical and electrical equipment, such as Ventilation, lighting, power systems, fire systems and security for that building.

The core function of most BMS systems is to manage the environment within the building and can be used to control heating and cooling equipment and manage the systems that distribute the treated air throughout the building.

The Toshiba BACnet® control system consists the BMS-LSV9E Intelligent server and the BMS-STBN10E BACnet server software, and can be connected to the TCC-Link Central Control Network via a TCS-Net Relay Interface to enable control of up to 128 Indoor Units from a BACnet® building management system.
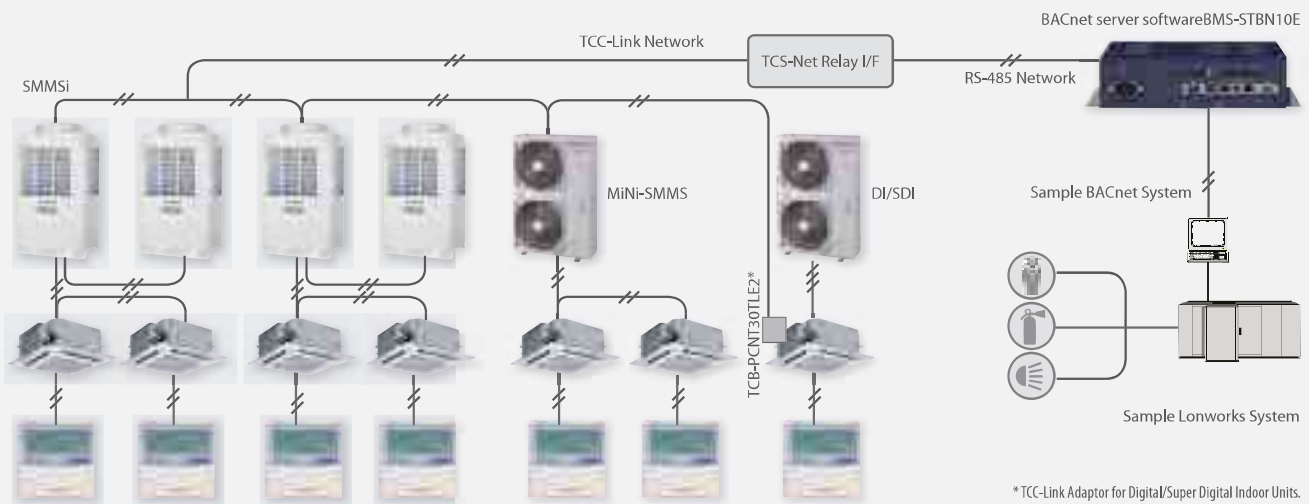
BACnet® was designed to allow communication of building automation and control systems for applications such as heating, ventilation air-conditioning control, lighting control, access control, and fire detection systems and their associated equipment. The BACnet® protocol provides mechanisms for computerized building automation devices to exchange information, regardless of the particular building service they perform.

Please note that Lonworks® and BACnet® are registered trademarks, however these symbols have been omitted in the text.

BMS-IFBN640TLE

The BN interface refers to equipment used for controlling Building Management Systems (Procured locally) and air conditioners (TCC-LINK compatible models) through communications via a network to enable centralized control.

Features

- Relay I/F (BMS-IFLSV4E) is not necessary
- Up to 64 indoor units connection
- DIN-rail installation (Attachment)
- BTL certification*

*It will be certified in November on BACnet international website.

Specifications

		BMS-IFBN640TLE
Dimension (W x H x D) *1		W140(mm) x H45(mm) x D90(mm)
Weight	Main unit	260 g
	Power adapter	(130 g)
Power Supply (for AC-adapter*2)		220~240V 50/60Hz (Main unit supply: 5V-DC)
Power consumption		3 W
Body Material		ABS (Flame retardant grade: 94-HB)
Temperature / Humidity		0~40 ºC 10%~80% RH

*1: DIN-rail attatchment not included in unit dimensions
*2: The power supply cord must be supplied locally
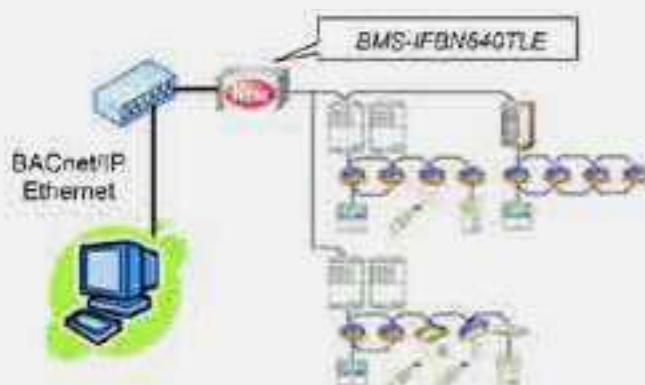
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TCB-IFCB641TLE

That Analogue Relay Interface is a device that can be connected directly to the TCC-Link Central Control network to provide Analogue & Digital Inputs & Outputs for control over Toshiba Air Conditioner products from non-Toshiba Control systems.

This Interface is ideal for Integrating the Toshiba Air Conditioner product into basic or PLC BMS control systems, such as may be found in older controls systems.

SMMSi

TCC-Link Network

MiNi-SMMS

DI/SDI

TCB-PCNT30TLE2*

0-10VDV
Local Supply

Rotary Switch

Example Analogue Controller

* TCC-Link Adaptor for Digital/Super Digital Indoor Units.
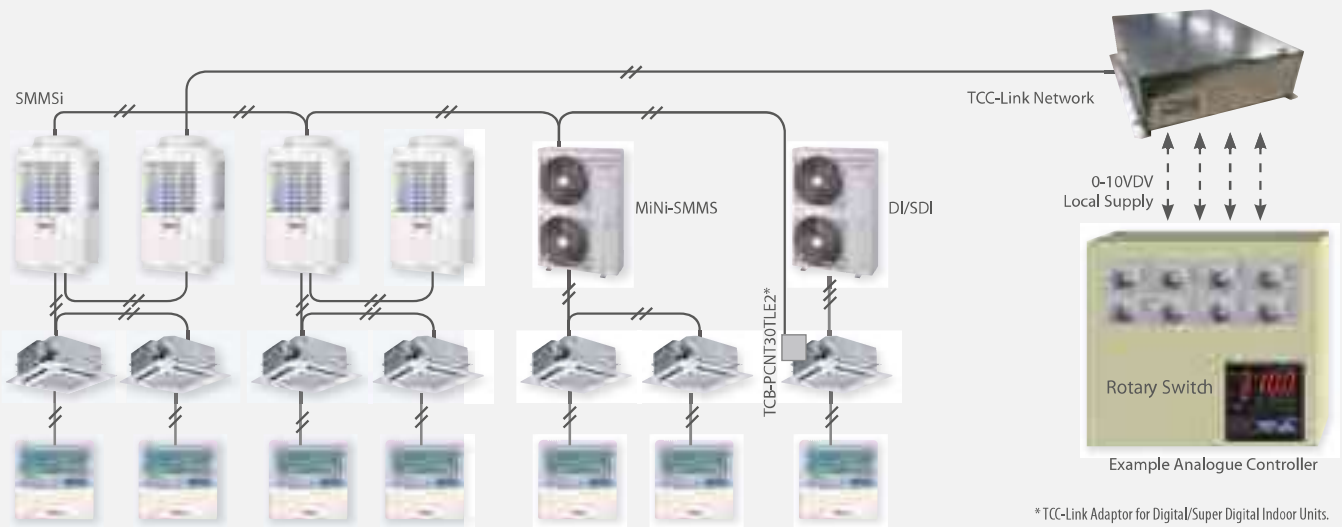
The TCB-IFGSM1E Interface is a device that allows control of the Toshiba Air Conditioner Equipment from a remote location using standard GSM (Global system for Mobile communications) Mobile phone SMS text messages.

Device connects to CN61 on DI/SDI & VRF Indoor Units (excludes DI Flexi Type). Daiseikai Residential & DI Flexi units can be connected via HA connector on Indoor Unit.
Control Functions vary depending on HA/CN61 Connection used.

TCB-IFGSM1E	GSM INTERFACE

The General Purpose Relay Interface is a device that can be connected directly to the TCC-Link Central Control Network and addressed on the TCC-Link Network in order to provide control of non-Toshiba equipment from a Toshiba control system, and control of the Toshiba Air Conditioner from digital & Analogue Inputs.

TCB-IFCG1TLE is given a Central Control address (similar to an Indoor Unit) and can then be controlled from a central control device.
Only On/Off Input/Output available from Central Controllers.
Full Control Available From Modbus Interface Only.
Can be used to allow On/Off control and monitoring of Residential Indoor Units from TCC-Link Central Control devices (selected models only).

TCB-IFCG1TLE	GENERAL PURPOSE RELAY INTERFACE

Controls

Model number	Reference	Description	Used with
RBC-AMT32E	Wired Remote Controller	Main wired remote controller	VRF, DI,SDI indoor units (except DI flexi and VRF Air-to-air heat exchagers with DX coil)
RBC-AS41E	Simplified Wired Remote Controller	As above but designed for hotel and domestic applications	VRF, DI,SDI indoor units (except DI flexi and VRF Air-to-air heat exchagers with DX coil)
NRC-01HE	Wired Remote Controller	Air-to-air heat exchanger remote controller, including with DX coil and humidifiers models	Air-to-air heat exchangers and Air-to-air heat exchangers with DX coil
HWS-AMS11E	Room temperature remote controller	Wired Estia Room temperature remote controller including schedule timer	Estia
TCB-EXS21TLE	Schedule timer	Operating in weekly timer mode or schedule timer mode	VRF, DI,SDI indoor units (except DI flexi and VRF Air-to-air heat exchagers with DX coil)
RBC-AMS41E	Remote controller with schedule timer	Indoor unit operation with schedule timer (7-days) allowing to program 8 functions/day + clock display	VRF, DI,SDI indoor units (except DI flexi and VRF Air-to-air heat exchagers with DX coil)
RBC-AMS51E-EN RBC-AMS51E-ES	Design remote Controller with schedule timer	Multi-Language LCD display, a built-in 7-Day timer, Energy Saving options and return back function. EN = English, Italian, Polish, Greek, Russian, Turkish. ES = English, Spanish, Portuguese, French, Dutch, German	VRF, DI,SDI indoor units (except DI flexi and VRF Air-to-air heat exchagers with DX coil)
RBC-AMS54E-EN RBC-AMS54E-ES	Design remote Controller with schedule timer	Multi-Language LCD display, a built-in 7-Day timer, Energy Saving options and return back function,Dual set points,and Soft cooling. EN = English, Italian, Polish, Greek, Russian, Turkish. ES = English, Spanish, Portuguese, French, Dutch, German	VRF, DI,SDI indoor units (except DI flexi and VRF Air-to-air heat exchagers with DX coil)
RBC-AX32CE2	Infra-red Remote Kit	Wireless remote controller	All ceiling units and one-way cassettes (SH series)
TCB-AX32E2	Infra-red Remote Kit	Wireless remote controller	All other units (including compact 4-way cassette, except for DI Flexi type)
RBC-AX23UW(W)-E	Wireless remote unit kit	Wireless remote unit kit for 2-way cassette	2-way-cassette MMU-AP***2WH
RBC-AX32UW(W)-E	Wireless remote unit kit	Wireless remote unit kit for 2-way cassette	2-way-cassette MMU-AP***2WH
RBC-AX32U(W)-E	Wireless remote unit kit	Wireless remote unit kit for 4-way cassette	RAV-SM***4UT-E with RBC-U31PG(W)-E & RBC-U31PGS(W)-E panels
RBC-AX32U(WS)-E	Wireless remote unit kit	Wireless remote unit kit for 4-way cassette	RAV-SM***4UT-E with RBC-U31PGS(WS)-E panels
RB-RXS30-E	Wireless Controller with a Weekly Timer Program	Wireless Controller with a Weekly Timer Program	RAS Single Split
RB-RXS31-E	Wireless Controller with a Weekly Timer Program	Wireless Controller with a Weekly Timer Program	RAS Multi Split (IMS)
WH-L17SE	Infra-red Remote Controller	Wireless remote unit kit for Flexi units	DI Flexi
WH-H2UE	Infra-red Remote Controller	Wireless remote unit kit for Flexi units	DI Flexi
TCB-TC21LE2	Remote temperature sensor	Remote temperature sensor for cassette & duct	DI, SDI, VRF
TCB-TC41LE	Remote temperature sensor	Remote temperature sensor for cassette & duct	DI, SDI, VRF
TCB-SC642TLE2	Central Remote Controller	Enables the control of up to 64 individual units	VRF, 1:1 model connection interface required for DI/SDI (Excluding high-wall type)
TCB-CC163TLE2	On / Off Controller	Enables On/Off control (Max. 16 units)	VRF, 1:1 model connection interface required for DI/SDI (Excluding high-wall type)
TCB-IFCB-4E2	Remote location On/Off Control Box	Enables remote location On/Off control	All indoor units (Excluding DI Flexi type)
TCB-IFCB5-PE	Window Switch & Remote on/off	Ensure the indoor unit not operate when outside window is open or for Door Entry systems	RAS, RAV & VRF (RAS units must have HA connection and is not compatible with GDV duct)
TCB-PX100-PE	Enclosure for the Window Switch / Remote On/Off	For use when the Window Switch / Remote On/Off Accessory cannot fit within the AC unit, eg. High Walls	For use with TCB-IFCB5-PE and TCB-PCNT30TLE2
BMS-CM1280TLE	Compliant Manager	Enables full control of up to 128 indoor units	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-SM1280HTLE	Smart BMS Manager	Enables full control of up to 128 indoor units with Energy Monitoring and Advanced Control Options.	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-SM1280ETLE	Smart BMS Manager with data analyzer	Enables full control of up to 128 indoor units with Energy Monitoring and Advanced Control Options.	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.

Controls

Model number	Reference	Description	Used with
BMS-CT5120E	Touch Screen Controller	Enables full control of up to 512 indoor units with electric billing, ML	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-TP0641ACE	Touch Screen Controller	Enables full control of up to 64 indoor units, ML	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-TP5121ACE	Touch Screen Controller	Enables full control of up to 512 indoor units, ML	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-TP0641PWE	Touch Screen Controller	Enables full control of up to 64 indoor units with electric billing, ML	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-TP5121PWE	Touch Screen Controller	Enables full control of up to 512 indoor units with electric billing, ML	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
BMS-IFLSV4E	TCS-Net Relay Interface	Relay for integration to TCS-Net	Bacnet gateway, Touch-screens & Web based controller
BMS-IFWH5E	Energy monitoring relay interface	Energy monitoring relay interface	Touch screen controller, Compliant manager, Web based controller, Smart Manager
BMS-IFDD03E	Digital I/O relay interface	Digital I/O relay interface	Touch screen controller, Compliant manager, Web based controller, Smart Manager
BMS-IFBN640TLE	BN Interface	BACnet Interface for LC & VRF	Enables integration with BACnet
BMS-LSV9E	Intelligent Server	Bacnet Gateway	Requires software BMS-STBN08E & Interface BMS-IFLSV3E
BMS-STBN10E	Software for BACnet	Those are based on ANSI/ASHRAE Standard 135-2008 and get BTL(BACnet Testing Laboratories) certification*.	Enables integration with BACnet
BMS-WB2561PWE	WEB Based Controller	Web Server/Gateway Server	
BMS-WB01GTE	WEB Based Controller	Master Server	
TCB-IFLN642TLE	LN interface	Allows control of 64 indoor units from a Lonworks based BMS	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
TCB-IFMB641TLE	Modbus interface box	Connect the system to a Modbus Building Management System.	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type) DI Flexi type cannot be connected.
TCB-IFCG1TLE	General purpose interface	enables control of A/C by the DI/DO and AI/AO	DI, SDI. Combination with TCB-IFCB640TLE
TCB-IFCB640TLE	Analog interface	Control & monitoring up to 64 IU on TCC-link	Combination with TCB-IFCG1TLE
TCB-IFGSM1E	GSM control interface	Allows ON/OFF control, operation status monitoring & alarm monitoring of A/C	DI, SDI (using CN61)
NRB-1HE	Remote ON/OFF adapter	Allows ON/OFF control	All Air-to-air heat exchangers
TCB-PCNT30TLE2	1:1 model connection interface	Integration with DI, SDI, AHU DX Kits	Allows DI/SDI indoor units& AHU DX kits to be connected toTCC link network (except for DI Flexi type)
TCB-PX30MUE	E-Box Extension Enclosure	For 1:1 Model connection I/F and Window Switch / Remote On/Off PCB	4-Way Cassettes / Compact 4-Way Cassettes only & TCB-PCNT30TLE2 & TCB-IFCB5-PE
TCB-PCOS1E2	Application control kit	Enables night operation control, demand control, operation monitoring	DI / SDI Compact 4way cassette with All DI 3 outdoor unit, SDI(RAV-SP404/454/564AT-E)
TCB-KBOS1E	Optional connector kit	Connector kit	SDI 4 outdoor units (Except for SDI (RAV-SP404/454/564AT-E))
TCB-PCM03E	Input Signal PC Board	Room thermostat, Emergency stop input signal	Estia
TCB-PCIN3E	Output Signal PC Board	Boiler operation, alarm, defrost and compressor operation output signal	Estia
TCB-PCDM4E	Application Control PC Board	Power Peak Cut Control	SMMS, SMMS-i, SHRM, SHRM-i and Mini-SMMS Outdoor Units
TCB-PCMO4E	Application Control PC Board	External Master ON/OFF Control Board	SMMS, SMMS-i, SHRM, SHRM-i and Mini-SMMS Outdoor Units
TCB-PCIN4E	Application Control PC Board	Error/Individual compressor Operation Output Control Board	SMMS, SMMS-i, SHRM, SHRM-i and Mini-SMMS Outdoor Units
TCB-KBCN32VEE	Connectors	For CN32	VRF,DI, SDI, except Flexi DI
TCB-KBCN60OPE	Connectors	For CN60	VRF,DI, SDI, except Flexi DI
TCB-KBCN61HAE	Connectors	For CN61	VRF,DI, SDI, except Flexi DI
TCB-KBCN70OAE	Connectors	For CN70	VRF,DI, SDI, except Flexi DI
TCB-KBCN73DEE	Connectors	For CN73	VRF,DI, SDI, except Flexi DI
TCB-KBCN80EXE	Connectors	For CN80	VRF,DI, SDI, except Flexi DI
TCB-PSMT1E	Optional connector kit	Multi-Tenant Kit for VRF Systems	SMMS, SMMS-i, SMMSe, SHRM, SHRM-i , SHRMe and Mini-SMMS Indoor Units

TOSHIBA
Leading Innovation >>>

Dedicated Software

SYSTEM SELECTION & DIAGNOSTIC

SOFTWARE

With Toshiba Everything is Easier

Toshiba's commitment to the development of technological and innovative products with improved performances is complemented by a responsibility to supply more sophisticated and functional tools for the design, installation and control of these systems.

Everything at the click of a button »»

Sophisticated system software has been developed for the Light commercial and VRF ranges and are a useful and irreplaceable support tool for engineers, architects, installers and, in general, for anyone who wants to apply innovative Toshiba solutions.
With Toshiba software, the user can create a complete systems, estimate in advance energy consumptions or perform diagnostic checks of the systems.

Diagnostic software »»

The correct operation of sophisticated systems such as VRF is important to the long-term reliability of the system. In order to assist with the correct commissioning of all VRF systems, Toshiba has developed a diagnostic software programme - a valuable tool for the commissioning and service engineer. The engineer can connect to the VRF system using a dedicated interface - enabling the download of all operating parameters and providing the engineer with detailed information for instant analysis or record.
Diagnostic software (Dyna-Doctor) is distributed exclusively by the Toshiba EMEA RLC Technical Department.

Selection software

With this software, the user can create a complete VRF system by simply clicking on the icons for the indoor units and the other connection components. It is also possible to define, in advance, relevant parameters such as outside and inside temperatures, fan speed, pipe system length and routing etc. The software automatically manages all the parameters entered, and the actual system capacity for the conditions required can be quickly calculated and simulated during the design stage. Using this software, the design of VRF systems is guaranteed for the project at the given conditions. The software constantly monitors possible design errors and warns the user, when it reaches the system limits.

AIRS selection software

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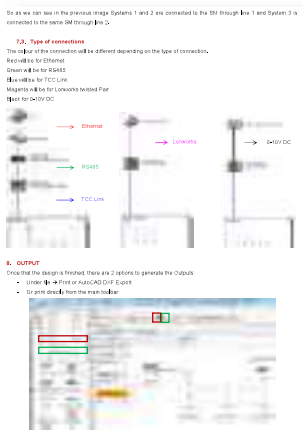
Wide Range of Options

**FACTORY
OF FIELD INSTALLED
SOLUTIONS**

ACCESSORIES

VRF Indoor Units Accessories

Indoor unit type	Parts name	Model name	Comply with VRF FCU	Notes	Remarks
4-way Air Discharge cassette type	Standard panel	RBC-U31PGP(W)-E	"MMU-AP***4H-E/ MMU-AP***4HP-E"	Required accessory	
	MTO straight, white color panel	RBC-U31PGSP(W)-E			
	MTO straight, grey panel	RBC-U31PGSP(WS)-E			
	Fresh air and filter chamber	TCB-GFC1602UE	"MMU-AP***4H/ MMU-AP***4HP"	For fresh air inlet box	
	Fresh air inlet box	TCB-GB1602UE		For fresh air intake by using the knockout hole of Fresh air and filter chamber. (dia.=100 mm)	Use with TCB-GFC1602UE
	Auxiliary fresh air flange	TCB-FF101URE2	MMU-AP***4H,4HP, 1MH, 4MH-E, 2SH, 4SH-E, 1SPH, 4SPH-E	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
	Spacer for height adjustment	TCB-SP1602UE		height 50 mm	
	Air discharge direction kit	TCB-BC1602UE	MMU-AP***2H,4H-E,4HP-E	Air direction change by cutting off air discharge port (3 pcs.)	
Compact 4-way cassette type	Decoration panel	RBC-UM11PG(W)E	MMU-AP***1MH, 4MH-E	Required accessory	
2-way cassette type	Decoration panel	RBC-UW283PG(W)-E	MMU-AP0072/0092/0122/0152WH	Required accessory	
		RBC-UW803PG(W)-E	MMU-AP0182/0242/0272/0302WH		
		RBC-UW1403PG(W)-E	MMU-AP0362/0484/0562WH		
	Auxiliary fresh air flange	TCB-FF151US-E	MMU-AP***2WH	For easy fresh air intake by using the knockout hole of indoor unit	
	Filter chamber	TCB-FC283UW-E	MMU-AP0072/0092/0122/0152WH		
		TCB-FC803UW-E	MMU-AP0182/0242/0272/0302WH		
		TCB-FC1403UW-E	MMU-AP0362/0484/0562WH		
	Super Long life filter	TCB-LF283UW-E	MMU-AP0072/0092/0122/0152WH	For use with filter chamber	Use with TCB-FC283UW-E
		TCB-LF803UW-E	MMU-AP0182/0242/0272/0302WH		Use with TCB-FC803UW-E
		TCB-LF1403UW-E	MMU-AP0362/0484/0562WH		Use with TCB-LF1403UW-E
1-way cassette type	Decoration panel	RBC-UY136PG	MMU-AP0071/0091/0121YH, 4YH-E	Required accessory	
		RBC-US21PGE	MMU-AP0152/0182/0242SH, 4SH-E		
	Front air discharge unit	TCB-BUS21WHE			
	Auxiliary fresh air flange	TCB-FF101URE2		For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
Slim duct type	Auxiliary fresh air flange	TCB-FF101URE2	MMU-AP***2H, 1MH, 4MH-E, 2SH, 4SH-E, 1SPH, 4SPH-E	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
Concealed duct type	Spigot shaped flange	TCB-SF56C6BE	MMD-AP0076/0096/0126/0156/0186BHP-E		
		TCB-SF80C6BE	MMD-AP0246/0276/0306BHP-E		
		TCB-SF160C6BE	MMD-AP0366/0486/0566BHP-E		

Indoor unit type	Parts name	Model name	Comply with VRF FCU	Notes	Remarks
Concealed Duct high static pressure type and fresh air intake unit type	High efficiency filter 65	TCB-UFM1D-1E	MMD-AP0181H, 4H-E	Dust collecting effect: 65% (NBS Colorimetric method)	Use with TCB-FCY21DE
			MMD-AP0481H, 4H-E (2 pcs.)		Use with TCB-FCY51DE
		TCB-UFM2D-1E	MMD-AP0241/0271/0361H, 4H-E (2 pcs.)		Use with TCB-FCY31DE
		TCB-UFM3DE	MMD-AP0721/0961H, 4H-E & MMD-AP0721/0961HFE		Use with TCB-FCY100DE or TCB-PF3DE (HFE)
	High efficiency filter 90	TCB-UFH5D-1E	MMD-AP0181H, 4H-E	Dust collecting effect: 90% (NBS Colorimetric method)	Use with TCB-FCY21DE
			MMD-AP0481H, 4H-E (2 pcs.)		Use with TCB-FCY51DE
		TCB-UFH6D-1E	MMD-AP0241/0271/0361H, 4H-E (2 pcs.)		Use with TCB-FCY31DE
		TCB-UFH7DE	MMD-AP0721/0961H, 4H-E & MMD-AP0721/0961HFE		Use with TCB-FCY100DE or TCB-PF3DE (HFE)
	Long life pre-filter	TCB-PF1D-1E	MMD-AP0181H, 4H-E	Dust collecting effect: 50% (NBS Colorimetric method)	Use with TCB-FCY21DE
			MMD-AP0481H, 4H-E (2 pcs.)		Use with TCB-FCY51DE
		TCB-PF2D-1E	MMD-AP0241/0271/0361H, 4H-E (2 pcs.)		Use with TCB-FCY31DE
		TCB-PF3DE	MMD-AP0721/0961H, 4H-E & MMD-AP0721/0961HFE		Use with TCB-FCY100DE or TCB-PF3DE (HFE)
	Filter chamber	TCB-FCY21DE	MMD-AP0181H, 4H-E	For high efficiency filter or long life prefilter	
		TCB-FCY31DE	MMD-AP0481H, 4H-E (2 pcs.)		
		TCB-FCY51DE	MMD-AP0241/0271/0361H, 4H-E (2 pcs.)		
		TCB-FCY100DE	MMD-AP0721/0961H, 4H-E & MMD-AP0721/0961HFE		
	Drain pump kit	TCB-DP31DE	MMD-AP0181H to AP0481H, 4H-E	Lift up to 330 mm	
		TCB-DP32DE	MMD-AP0721/0961H, 4H-E		
Concealed Duct high static pressure type	Long life filter kit	TCB-LK801D-E	MMD-AP0186/0246/0276HP-E		
		TCB-LK1401D-E	MMD-AP0366/0466/0566HP-E		
	Spigot shaped flange	TCB-SF80C6BE	MMD-AP0186/0246/0276HP-E		
		TCB-SF160C6BE	MMD-AP0366/0466/0566HP-E		
	Auxiliary fresh air flange	TCB-FF151US-E	MMD-AP***6HP-E		
High Wall 3-4 series without PMV	PMV Kit 3-Series	RBM-PMV0363E		For FCU capacity 0.8-1.3HP	
		RBM-PMV0903E		For FCU capacity 1.7-2.5HP	
Fresh air intake type	High efficiency filter 65	TCB-UFM4D-1E	MMD-AP0481HFE	Dust collecting effect: 65% (NBS Colorimetric method)	Use with TCB-PF4D-1E
	High efficiency filter 90	TCB-UFH8D-1E	MMD-AP0481HFE	Dust collecting effect: 90% (NBS Colorimetric method)	
	Long life filter	TCB-PF4D-1E	MMD-AP0481HFE	Dust collecting effect: 50% (NBS Colorimetric method)	Use with TCB-FCY51DFE
	Filter chamber	TCB-FCY51DFE	MMD-AP0481HFE	For high efficiency filter or long life prefilter	
	Drain pump kit	TCB-DP32DFE	MMD-AP0481/0721/0961HFE	Lift up to 330 mm	
Air-to-air heat exchanger with DX coil	Drain pump kit	TCB-DP31HEXE	MMD-VN502/802/1002HEXE & MMD-VNK502/802/1002HEXE	Lift up to 330 mm	
Ceiling-suspended type	Drain pump kit	TCB-DP22CE2	MMC-AP0151/0181H, 4H-E	Lift up to 600 mm	Use TCB-KP12CE2
			MMC-AP0241-0481H, 4H-E		Use TCB-KP22CE2
	Elbow Piping Kit	TCB-KP12CE2	MMC-AP0151/0181H, 4H-E	Needed when drain pump kit is used	
		TCB-KP22CE2	MMC-AP0241-0481H, 4H-E		

VRF Indoor Units Accessories

Model Name	Specification	Total capacity codes	To be used with
RBM-BY55E	Branching joint	< 6.4 HP	SMMS-i and MiNi-SMMS and MiNi-SMMSe and SMMSe
RBM-BY105E	Branching joint	< 6.4 - 14.2 HP	SMMS-i, SMMSe
RBM-BY205E		< 14.2 - 25.2 HP	
RBM-BY305E		25.2 HP	
RBM-BY55FE	Branching joint	< 6.4HP	SHRM, SHRM-I,SHRMe
RBM-BY105FE		< 6.4 - 14.2 HP	
RBM-BY205FE		< 14.2 - 25.2 HP	
RBM-BY305FE		25.2 HP	
RBM-HY1043E	Headers branching four-way	< 14.2 HP	SMMS-i, SMMSe
RBM-HY2043E		< 14.2 - 25.2 HP	
RBM-HY1083E	Headers branching eight-way	< 14.2 HP	
RBM-HY2083E		< 14.2 - 25.2 HP	
RBM-HY1043FE	Headers branching four-way	< 14.2 HP	SHRM, SHRM-i,SHRMe
RBM-HY2043FE		< 14.2 - 25.2 HP	
RBM-HY1083FE	Headers branching eight-way	< 14.2 HP	
RBM-HY2083FE		< 14.2 - 25.2 HP	
RBM-Y1123FE	Flow switch selector	< 4.0 HP indoor units	SHRM, SHRM-i,SHRMe
RBM-Y1803FE		< 4.0 - 6.4 HP indoor units	
RBM-Y2803FE		< 6.4 - 10.0 HP indoor units	
RBM-Y1801F4PE	Multi-port flow switch selector	< 6.4 HP indoor units x 4 port	SHRMe
RBM-Y1801F6PE		< 6.4 HP indoor units x 6 port	
RBM-BT14E	Joints for connection of outdoor units	< 26 HP system capacity	SMMS-i, SMMSe
RBM-BT24E		>26 HP system capacity	
RBM-BT14FE		< 26 HP system capacity	SHRM, SHRM-i, SHRMe
RBM-BT24FE		>26 HP system capacity	

Branching joints

Appearance	Y-shape branching joint				Branch headers				Outdoor unit connection piping kit	
							(4-branch headers)			
Model name	RBM-BY55E	RBM-BY105E	RBM-BY205E	RBM-BY305E	RBM-HY1043E	RBM-HY2043E	RBM-HY1083E	RBM-HY2083E	RBM-BT14E	RBM-BT24E
					Max. 4 branches		Max. 8 branches			
Usage (HP) (Classification according to Indoor unit capacity code)	Total below 6.4	Total 6.4 or more and below 14.2	Total 14.2 or more and below 25.2	Total 25.2 or more	Total below 14.2	Total 14.2 or more and below 25.2	Total below 14.2	Total 14.2 or more and below 25.2	Total below 26.0	Total 26.0 or more