TOSHIBA offer different control solution to meet users and designer expectations.

From local individual control and settings to computer based TCC link network, all indoor units can be programmed and set to suit the operational needs.

Remote control systems offer a wide range of features including schedule timers, diagnostic functions, power meter, input output signal only to name a few.

Toshiba VRF units are compatible with the industry standard and are connectable to the major Building Management software systems in use.

TCC-link is the Toshiba's dedicated Central Control Network which can be used with the VRF units and the Light commercial units either directly or by means by specially designed network adapters.
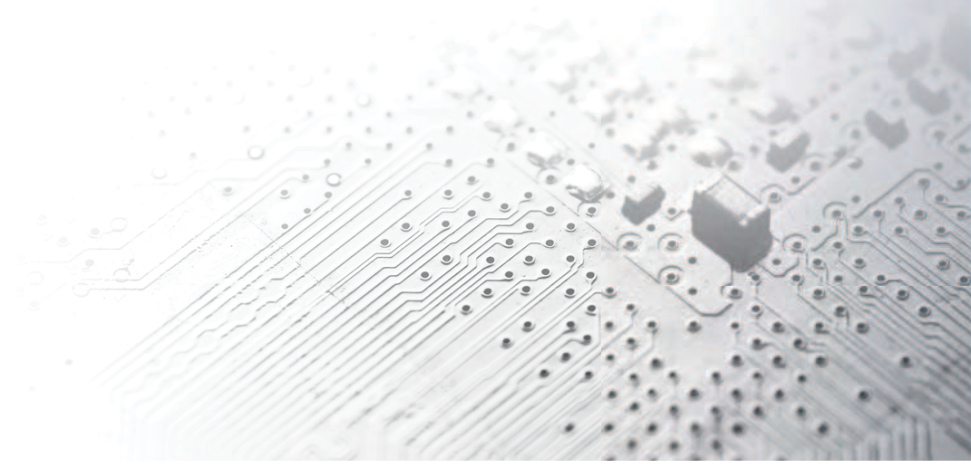
# Controls

THE CONTROL RANGE

REGULATE AND MONITOR THE SYSTEM OPERATIONS

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 Wireless 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.
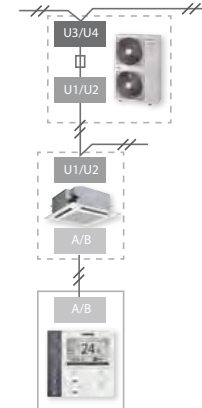
**Multiple controller connection** - This method enables the connection of up to 2 Local Control Devices (Wireless Receiver Unit or Wired Controller) to a single Indoor Unit, or a group of up to 8 Indoor Units. In this configuration, Main/Sub settings must be configured for each of the connected Local Control Devices.
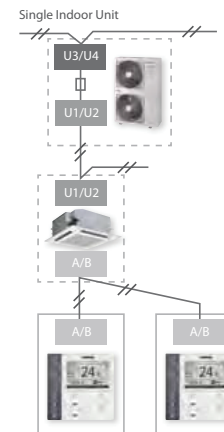
1 To 1 connection
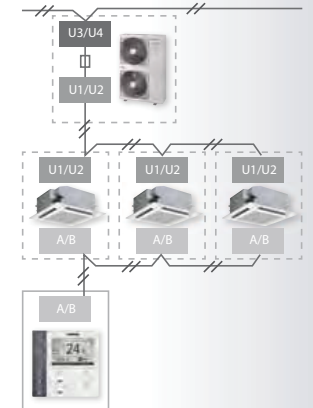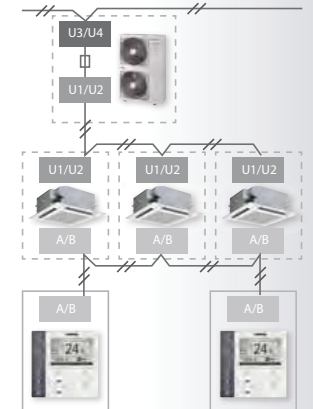
Group connection

Multiple controller connection

Single Indoor Unit

Group of Indoor Units

WIRELESS

WIRED

C o n t r o l s

### 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

WIRELESS REMOTE CONTROLLER

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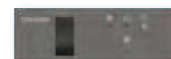
| RBC-AX32U(W)-E RBC-AX32U(WS)-E | PANEL CORNER RECEIVER |

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

| RBC-AX32CE2 | 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 |

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.

## RMC-AMS51E-EN
## RMC-AMS51E-ES

WIRED REMOTE CONTROLLER

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.

| RBC-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-AS21E2 | 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 |

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).

TCC-Link
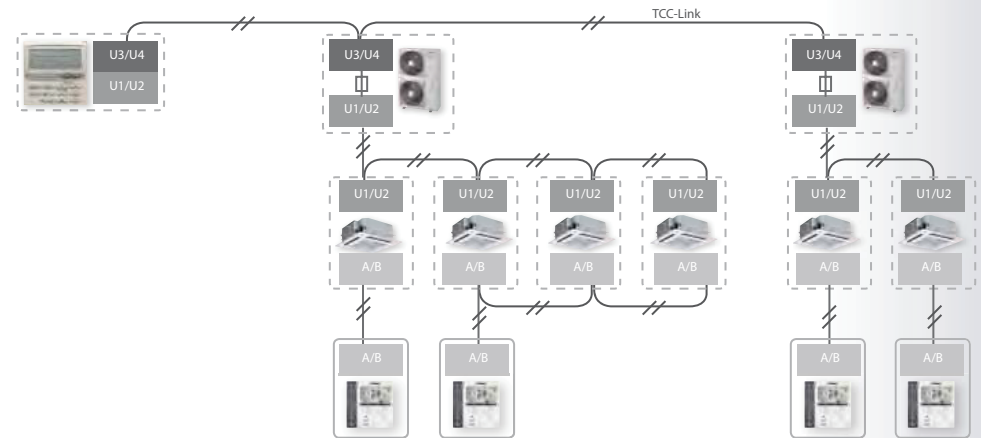
STANDARD CENTRAL CONTROL

ADVANCED CENTRAL CONTROL

Controls

CENTRAL CONTROL

GROUP SETTINGS

The TCB-SC642TLE2 64-Way central controller is TOSHIBA's standard central control solution and can be connected to up to 64 Indoor Units via the TCC-Link Central Control network. Indoor Units can be controlled in terms of: Individual Indoor Unit/Group, all Units in a Zone, and all Units connected. Additional features include 4-levels of remote controller permit/prohibit functions and the option of connecting an additional Schedule Timer.

| TCB-SC642TLE2 | CENTRAL CONTROLLER |

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 | COMPLIANT MANAGER |

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-SM1280HTLE | STANDARD SMART MANAGER |

**The Touch Screen Controller can be connected to 64 or 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.

\* Available with BMSTP\*\*\*PWE Models only and requires an additional relay Interface.

RS-485

TCS-Net Relay I/F
BMS-IFLSV4E

TCC-Link  TCC-Link

Touch-screen controller

SMMS  MiNi-SMMS
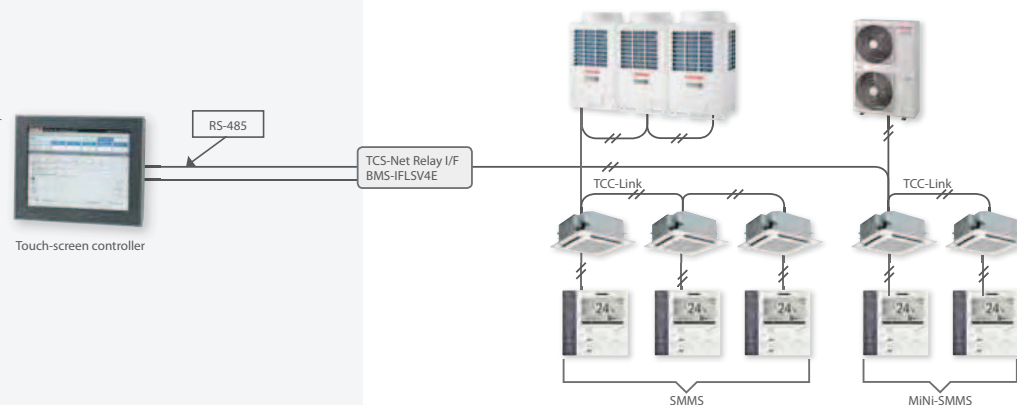
| B M S - T P | TOUCH SCREEN CONTROLLER |

TOUCH SCREEN

BMS-TP0641ACE    BMS-TP0641PWE
BMS-TP5121ACE    BMS-TP5121PWE

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.

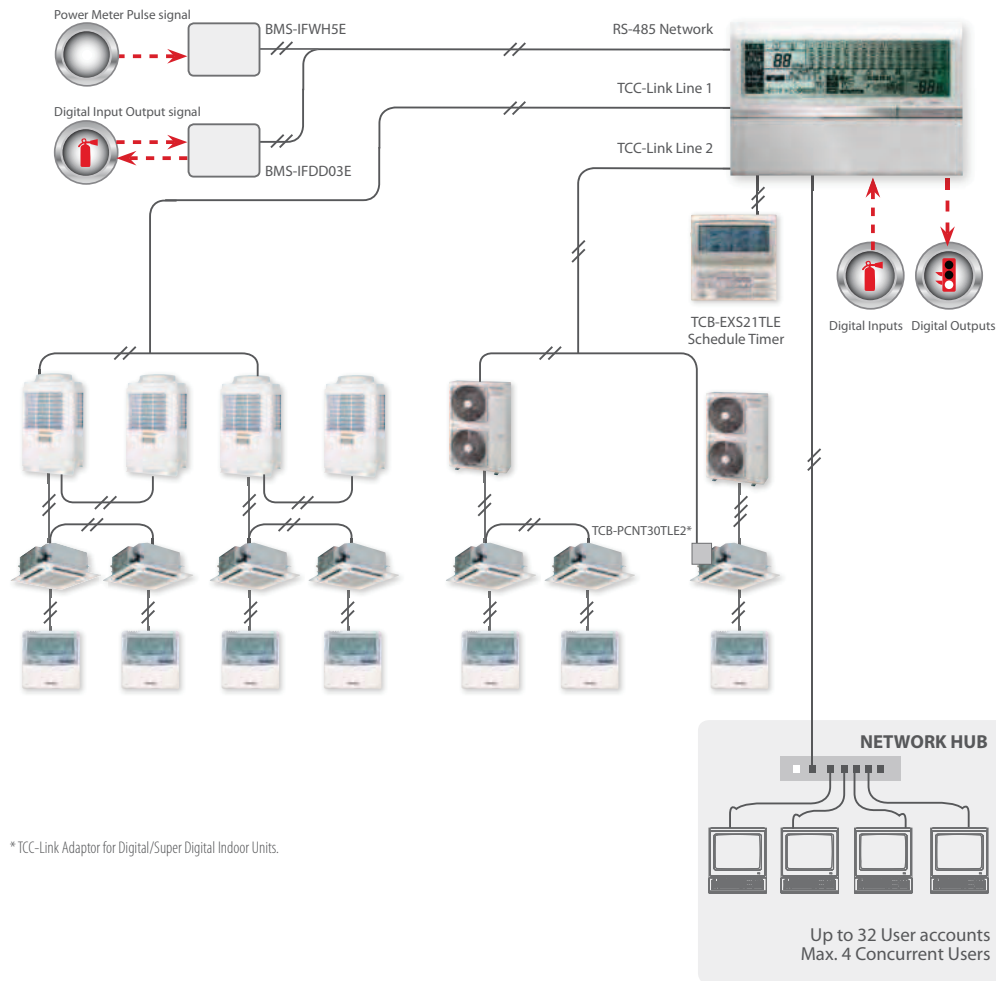Thin profile controller and separate power supply unit enables easy installation.
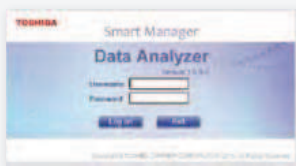
## Data analyzer

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.

Power Meter Pulse signal
BMS-IFWH5E
RS-485 Network
Digital Input Output signal
TCC-Link Line 1
BMS-IFDD03E
TCC-Link Line 2
TCB-EXS21TLE Schedule Timer
Digital Inputs  Digital Outputs
TCB-PCNT30TLE2*

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

NETWORK HUB

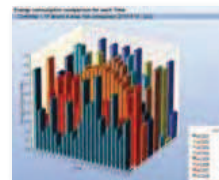Up to 32 User accounts
Max. 4 Concurrent Users

BMS-SM1280ETLE

SMART MANAGER

WEB BROWSER CONTROL SOFTWARE
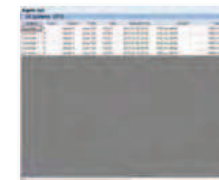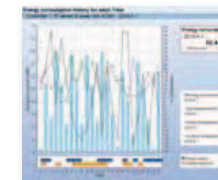
Energy consumption history (days)     Energy consumption comparison     Alarm list     Energy consumption history (hours)

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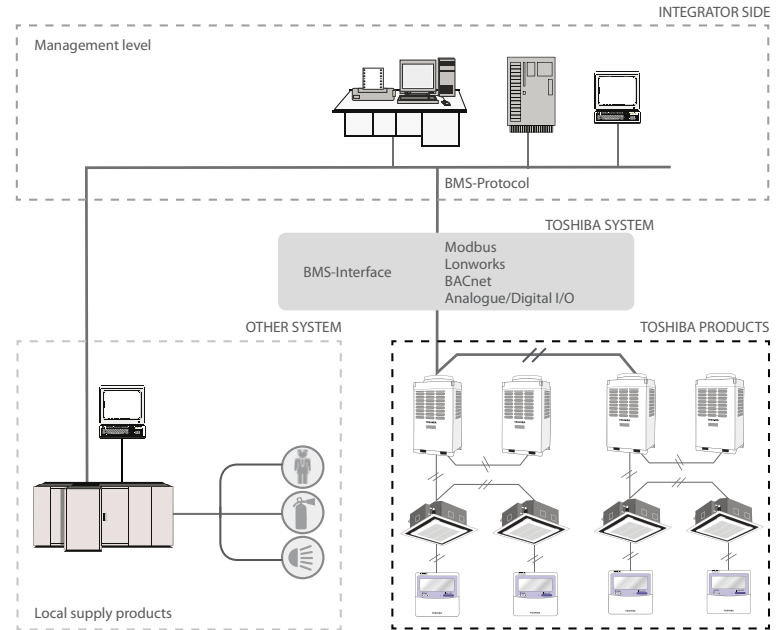
Our Building Management controls currently offer easy integration with the following protocols:

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.

INTEGRATOR SIDE

Management level

BMS-Protocol

TOSHIBA SYSTEM

BMS-Interface

Modbus
Lonworks
BACnet
Analogue/Digital I/O

OTHER SYSTEM

TOSHIBA PRODUCTS

Local supply products

BMS interface products are not compatible with each other across protocols, only one protocol can be used per installation.

BACnet® Gateway
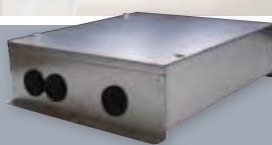
LonWorks® interface
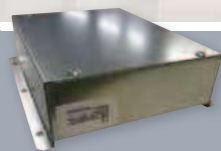
analogue interface

Controls
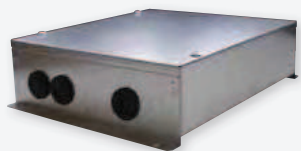
TCB-IFLN642TLE

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.

TCB-IFMB640TLE

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

TCB-PCNT30TLE2*

Sample Lonworks System

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

TCC-Link Network

RS-485 Network

Modbus Master Device

Upper Side Modbus System

TCB-PCNT30TLE2*

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

## TCB-IFLN642TLE

### LONWORKS INTERFACE

## TCB-IFMB640TLE

### MODBUS INTERFACE

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.

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.
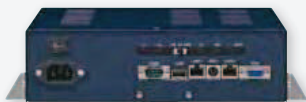
BMS-LSV6E

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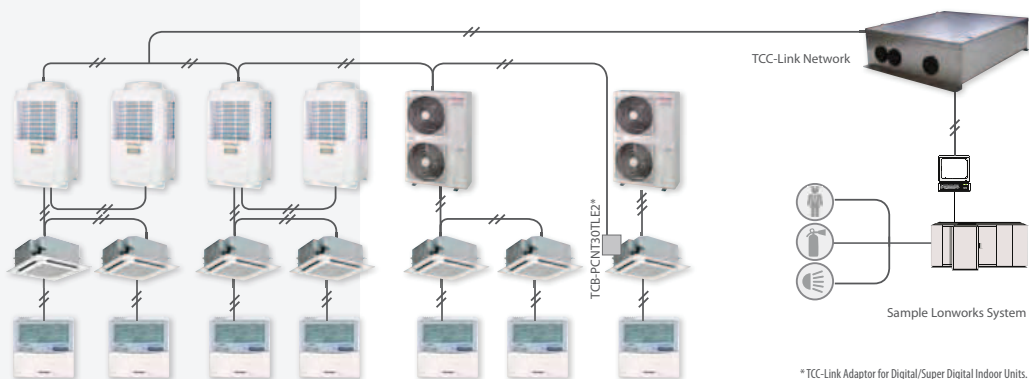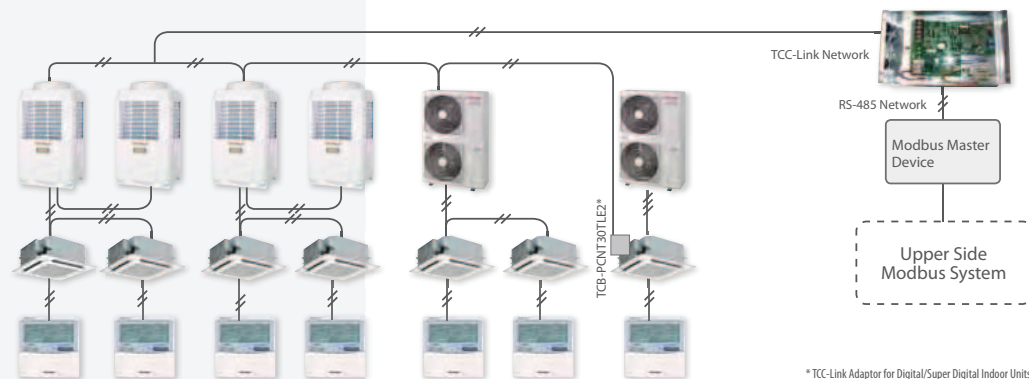
The core function of most BMS systems is to manage the environment within the building and can be used to control heating and cooling equipment and manage the systems that distribute the treated air throughout the building.

The Toshiba BACnet® control system consists the BMS-LSV6E Intelligent server and the BMS-STBN08E BACnet server software, and can be connecte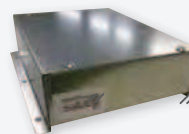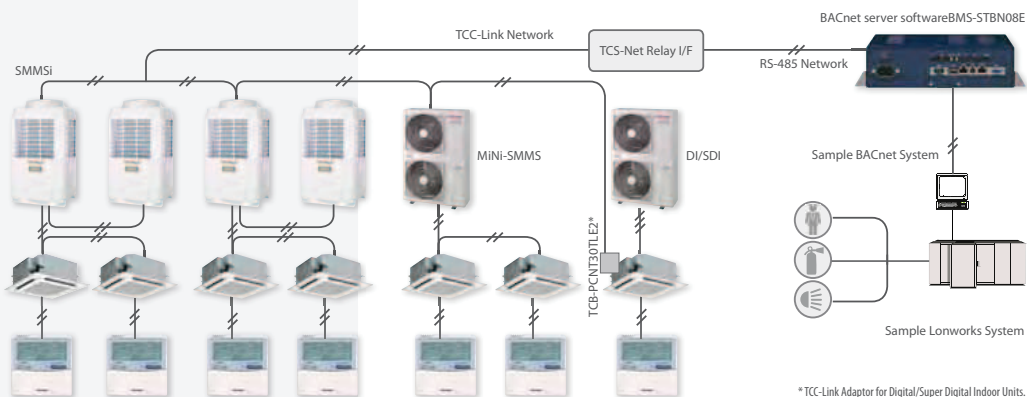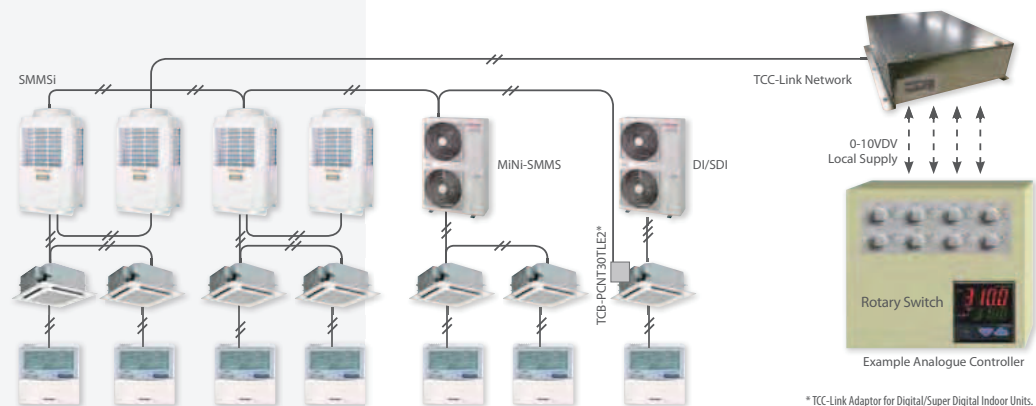d to the TCC-Link Central Control Network via a TCS-Net Relay Interface to enable control of up to 128 Indoor Units from a BACnet® building management system.


TCB-IFCB640TLE

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
TCS-Net Relay I/F
BACnet server softwareBMS-STBN08E
RS-485 Network
MiNi-SMMS
DI/SDI
TCB-PCNT30TLE2*
Sample BACnet System
Sample Lonworks System

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



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.

# BMS-LSV6E

## BACNET GATEWAY

# TCB-IFCB640TLE

## ANALOGUE INTERFACE

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.

The Interactive Intelligence software tool is a Building Management control software designed for use on the Lonworks Network protocol and can not only be used to control Toshiba Air Conditioner systems, but also any building systems (i.e. Lighting, security, etc. . . )

Can connect up to 1024 Indoor Units.
3 levels of control schematic automatically created during commissioning.
Advanced scheduling and alarm retransmission via Email.
Remote access available with RBC-IK1-PE Add-On.
Schematics can be fully customised to suit the site (building schematics from AutoCAD can be used).
Energy Monitoring and report creation functions available.
Can also be used to integrate other site equipment using RBC-DI1-PE Digital I/O Device.

**RBC-WP1-PE    INTERACTIVE INTELLIGENCE**

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.
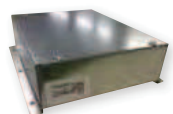
TCB-IFCG1TLE is given a Central Control address (similar to an Indoor Unit) and can then be controlled from a central control device.
Only On/Off Input/Output available from Central Controllers.
Full Control Available From Modbus Interface Only
Can be used to allow On/Off control and monitoring of Residential 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-AS21E2 | SimplifiedWired 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-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-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 |
| 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-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 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 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. |
| 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-IFDD03E2 | Digital I/O relay interface | Digital I/O relay interface | Touch screen controller, Compliant manager, Web based controller, Smart Manager |
| BMS-LSV6E | Intelligent Server | Bacnet Gateway | Requires software BMS-STBN08E & Interface BMS-IFLSV3E |
| BMS-STBN08E | BACnet | Server Software | Enables integration with BACnet |
| BMS-STCC06E | Intelligent Server Software | Software package for the intelligent server | |
| TCB-IFLN642TLE | Lonworks® Gateway | 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-IFMB640TLE | Modbus® Gateway | 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 | Terminal box | Terminal box to connect to | TCB-PCNT30TLE2 |
| 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 | Output Signal PC Board | Boiler operation, alarm, defrost and compressor operation output signal | Estia |
| TCB-PCIN3E | Input Signal PC Board | Room thermostat, Emergency stop input signal | Estia |
| TCB-PCDM4E | Application Control PC Board | Power Peak Cut Control | SMMS, SMMS-i, SHRM and Mini-SMMS Outdoor Units |
| TCB-PCMO4E | Application Control PC Board | External Master ON/OFF Control Board | SMMS, SMMS-i, SHRM and Mini-SMMS Outdoor Units |
| TCB-PCIN4E | Application Control PC Board | Error/Individual compressor Operation Output Control Board | SMMS, SMMS-i, SHRM and Mini-SMMS Outdoor Units |
| TCB-KBCN32VEE | | For CN32 | VRF,DI, SDI, except Flexi DI |
| TCB-KBCN600PE | | For CN60 | VRF,DI, SDI, except Flexi DI |
| TCB-KBCN61HAE | | For CN61 | VRF,DI, SDI, except Flexi DI |
| TCB-KBCN700AE | Connectors | For CN70 | VRF,DI, SDI, except Flexi DI |
| TCB-KBCN73DEE | | For CN73 | VRF,DI, SDI, except Flexi DI |
| TCB-KBCN80EXE | | For CN80 | VRF,DI, SDI, except Flexi DI |

## 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.
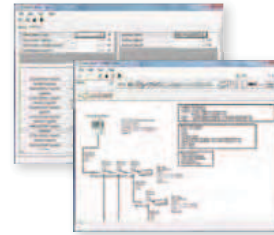


### Selection software

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.



### 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.

# Software

DEDICATED SOFTWARE

SYSTEM SELECTION AND DIAGNOSTIC