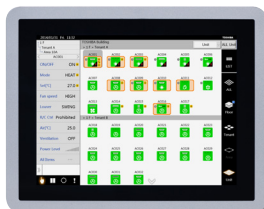


TOSHIBA

EXPERIENCE
THE FUTURE

Controls



MODERN CONTROLS SOLUTIONS

Toshiba Air Conditioning's dedicated suite of controls allow full customer control across a variety of scenarios and applications.

The need for control within the built environment is a challenge that we consider to be critical to the conservation of energy, reduction in cost and the application of our air conditioning products.

Controls form part of our everyday lives, from simple time clocking applications, wi-fi connectivity, night set back / noise reduction, to full BMS interface and energy monitoring solutions in every air-conditioned space in the modern world.

By applying Toshiba air conditioning products with complementary purpose designed controls we can provide compliance with the latest energy legislation such as part L and the drive toward improved EPC ratings. Ensuring better and more energy efficient building performance in a host of market sectors.



REMOTE CONTROL

We offer a range of standard wired remote controllers, from simplified menu driven and controllers suitable for hotel or meeting room applications, to the latest advanced schedule controllers with added Bluetooth® connectivity.

RBC-AMSU52E SCHEDULE REMOTE CONTROLLER



Features:

- Group control of up to 16 indoor units
- Bluetooth version also available
- Control of VN Units via dedicated menu
- Duty Share – backup configuration
- LC Easy Monitor (this allows easy checking of the system temperatures and pressures)
- Easy I.D.N (this allows a quick access to the setting of the most used configuration items)
- Energy consumption data (depending on units / configuration)
- Control via Bluetooth® is only available via the RBC-AWSU52-E this allows a local connection to the installed app on your device

RBC-ASCU11E-SIMPLIFIED REMOTE CONTROLLER



Features:

- Group control of up to 16 indoor units
- Menu driven operation
- Simplified control with a basic off timer
- Remote sensor option and a backlit display
- Full access to the engineer setting and configuration menu
- Compact design

RBC-AMTU31-E STANDARD REMOTE CONTROLLER



Features:

- Group control of up to 16 indoor units
- Simple button operation
- The controller offers a basic sleep timer
- Full access to the engineer setting, configuration, and monitoring functions
- The controller offers access to the setting of configuration items

** Groups of 16 indoor units are only available in the latest U series TU2C Link units

NETWORK CONTROL

TCB-SC640U STANDARD CENTRAL CONTROLLER

The TCB-SC640U 64-Way Central Controller is our standard central control device for use with DI, SDI and VRF equipment (excludes DI Flexi) and can be connected to up to 64 indoor units for individual, zone and all unit control. In addition to the standard control function, this central controller provides 4 levels of local controller permit, prohibit functions that can be used to restrict the available operations from a Local controller.



Features:

- Can be connected to up to 64 Indoor Units and multiple refrigerant systems on the TCC / TU2C-link central control network
- Schedule timer is contained within the controller
- 10-Zone controllable classification (10 fixed zones with possible setting to enable/disable control from central controller)
- 4-pattern permit/prohibit control for restriction of local remote controller setting functions
- Up to 10 central controllers can be connected to a single TCC-link line network for control of indoor units. If the network is TU2C throughout this can be extended to 20 central control devices
- External digital input/output connections for on-off control and operation and alarm status output
- Control of indoor units can be carried out separately, as all units in a Zone or as all units connected to the central controller

BMS-CT2560U-E Standard Touchscreen Controller

The Touchscreen is a product that is capable of controlling up to 256 indoor units from a single location. The device has the facility to set all of the operating parameters for individual or zoned indoor units, whether they are VRF or individual split systems. It is also capable of displaying individual fault codes for any units on the network. The Touchscreen can be remotely connected to via a PC and all functions can be controlled via Internet Explorer. If energy monitoring is required up to 8 pulse power meters can be connected to the controller. This controller can also be linked to energy monitoring relay interfaces if the power meters are not located adjacent to the controller. The controller can also be linked to the digital input/output module for the interface to other systems.

The Touchscreen has some advanced functions different users can be configured to give restricted access. The controller has an advanced time clocking function to give the building owner flexibility. The controller has a return back function, which returns the units setting to a predetermined setting after an amount of time. All of those functions are accessed via the touch screen or web interface.



Features:

- Advanced Zone Configuration available (up to 256 programmable Zones)
- External input for simultaneous indoor unit on/off control and external alarm input
- External output for operation status and alarm status
- Permit/prohibit functions for mode, on-off and set point
- Return back function available
- 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

TOUCHSCREEN CONTROLLERS

RBC-MTSCU1 & RBC-MTSCU2

Toshiba Air Conditioning offer a number of Touchscreen controller options, all of which are designed and built to the highest standard. Touchscreen controllers are available for local network or central network connection.



The RBC-MTSCU1 breaks all boundaries in its design and functionality. Having originally been designed primarily for the hospitality market, it has now become the go to controller for many installers. The stylish form factor is packed with features designed to enhance the user experience and to set it apart from the competition.



Features:

- High resolution capacitive Touchscreen
- Fully customisable icon menu system
- Simple two wire connection to the indoor unit
- Can easily be retrofitted to existing indoor units
- Group control of up to 8 indoor units
- Can store up to 30 images/screensavers or logos
- Can store up to 30 images/screensavers or logos
- Images and software updates can be loaded via a micro USB connection

RBC-TBTPTS

The RBC-MTSCU2 offers the same cutting edge design and functionality but introduces the additional functionality of a scheduled timer backed up by an auxiliary power supply.

The range of Touchscreen central controllers are designed to be connected via the central BUS network and are capable of controlling multiple indoor units across multiple systems. This includes combinations of Light Commercial split type units, VRF units and Air-to-Air heat exchangers. Some of the features offered across the range include:



Features:

- High resolution capacitive Touchscreen
- Intuitive easily configured graphics
- Simple setup procedures
- 64/128 indoor unit connection capacity
- Remote access
- In-built web browser
- Ethernet connection
- Fire alarm shutdown
- Optimisation
- Full alarm history
- Configurable digital inputs/outputs
- Connection to control third party equipment via interfaces
- Time scheduling
- Multiple security levels
- USB connection to enable back-up, restore and firmware upgrades

BMS INTERFACES

We provide a comprehensive range of controls options designed to enable our equipment to be interfaced with and controlled by a Building Management System (BMS), the purpose of which is to enable the operator to access, control and monitor all connected systems from a remote location. All industry standard BMS protocols can be connected to Toshiba equipment by selecting the appropriate BMS interface. The purpose of the interface is to convert the third party BMS protocol (Modbus, Trend, BACnet, etc) to Toshiba TCC-Link & TU2C protocols.

Toshiba's BMS controls range from the simplest analogue interfaces designed to remotely enable or disable a system through to a full specification building management system. Whatever the application might be Toshiba have a cost-effective solution.

RBC-TSI1 Interface

A cost effective and versatile single unit interface enabling the operator to control and monitor a single indoor unit via six analogue inputs. The inputs can be configured to be either resistive or 0-10VDC as required. There is also an option for Modbus control via the RS-485 serial port.

Features:

- Connects directly to the 15VDC A+B indoor BUS network
- Control groups of up to 16 Air-to-Air heat exchangers
- Form groups of up to 16 indoor units
- ECO-1 Mode (timed fan operation)
- ECO-2 Mode (fan band control)
- Preset mode operation
- Hotel room operation
- Duty standby mode
- AHU mode



Single Protocol BMS Interfaces



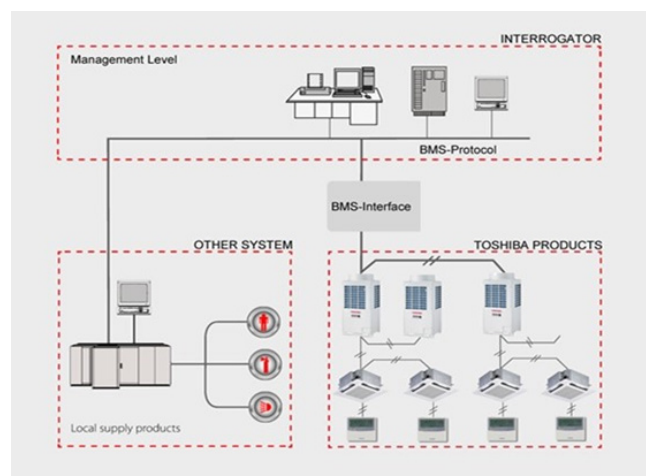
It is possible to control Toshiba Light Commercial, VRF & Air-to-Water heat pump systems by interfacing via the central control BUS network (U3+U4/UH+UH) or the local BUS network (A+B) depending on the model type.

RBC-BP2 Multi-protocol BMS Interface Control BMS Interface

The Black Pear 2 is an advanced full specification, multi-protocol BMS interface that also incorporates a standalone Touchscreen central controller. The standalone touch screen control feature allows the connected units to function as normal when disconnected from the building management system. It is possible to configure and control any connected units independently of the BMS system. This includes setting up time schedules to provide backup control should the BMS system suffer a fault.

Features:

- BACnet, Trend & Modbus protocols in a single interface
- High resolution 7" capacitive Touchscreen user interface
- Built-in web server for remote configuration and full control
- Configuration via the Touchscreen
- Standalone time scheduling feature
- Intuitive graphics
- Controls up to 64 indoor units
- Connects directly to the U3-U4 central network



VRF & LIGHT COMMERCIAL

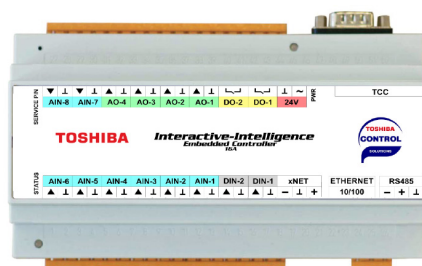
WEB BASED SYSTEM SUPERVISOR

The Embedded-Interactive-Intelligence building management controller incorporates a TCC-LINK for direct communication with Toshiba units, and provides the latest advancement in building controls technology to deliver a complete, open solution for today's building control applications.

Controllers are freely programmable, and support multiple protocols, allowing for a fully open and integrated system to be implemented in the easiest and most cost-efficient manner. Additional I/O is provided by using optional expansion modules, which are available in various configurations.

Features:

- Fully Programmable
- HTML5 Graphics
- Alarm Handling
- Logging
- PID Loops
- Function Modules
- Logic Modules
- Time Scheduling
- Optimiser
- Flexible I/O
- Direct TCC-LINK 64 (TU2C 128)
- Multi-Protocol
- BACnet, TREND, Modbus, MQTT
- User Definable Interface
- Cost Effective



PROFILE

RETAIL UNIT CONTROL & MONITORING

MAIN SITE CONTROL & MONITORING

ALARM HANDLING

DATA LOGGING

REFRIGERATION CONTROL & MONITORING

LIGHTING CONTROL

MULTIPLE FAN COIL/ VAV CONTROL

GRAPHICAL SCADA INTERFACE

Flexible I/O

- 8 UI: 0-10V, 0-20mA, thermistor, dry contact, TTL
- AO: 0-10V
- 2 DI: dry contact, TTL, pulse counter
- 2 DO: 1 A 24VAC relay contact

Engineering

Configuration of both user application and graphics could not be easier. The downloadable engineering tool allows the creation of simple or complex strategies, using drag and drop modules and wiring techniques, so there is no need to program in 'C', or other complex languages.

Multi-Protocol

Supporting the Toshiba TCC-LINK, BACnet, TREND, Modbus, Crestron, MQTT and many other protocols straight out of the box, it is easy to integrate between systems, without the added expense and time of having to call in a third party programmer, along with the associated extra hardware costs.

VRF & LIGHT COMMERCIAL

CPU

216 MHz ARM Technology

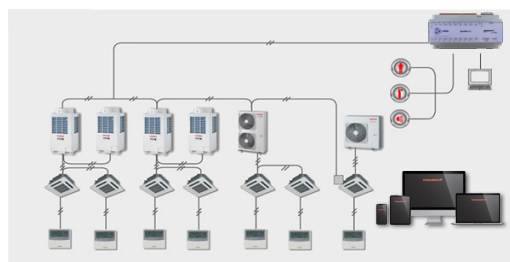
Embedded-II®

Memory

8 MB RAM (user application space)
2 GB Nonvolatile data storage (graphics, logs, alarms)
NO maximum point limit

Supply Voltage

24V AC (+/-10%)
36V DC
2 VA: Typical (no outputs on)
6 VA: Typical (relays on, AO driving 50052)



Connectivity

TCC-LINK: Direct TOSHIBA unit control
RS485 Modbus, BACnet & other protocols
Ethernet: Graphics, Logs, Alarms, Display, SNMP, TREND, BACnet, Modbus.

I/O

8 UI: 0-10V, 0-20mA, Thermistor, Resistive, Dry Contact, TTL Open Drain
4 AO: 0-10V @ 20mA
2 DI: Dry Contact, TTL Open Drain, Pulse Counter
2 DO: 1 A 24VAC Relay Contact
AtoD: 16 Bit Resolution



Smart Phone / Tablet / Desktop / Laptop

Physical

Enclosure: Din rail mounted UL94-V1 Plastic
Weight: 0.485 kg
Dimension: L:157mm W:98mm D:59mm (ex. Connectors)
Mount: TS35 DIN Rail (Len: 155mm)



REFRIGERANT LEAK DETECTION & MANAGEMENT

Toshiba have consistently led the way by providing innovative and practical solutions to manage the impact of accidental refrigerant loss. Room concentration sensors have been available since the introduction of the Modular Multi System in 2000 and have since been continually developed to meet the changing requirements of EN378. Full refrigerant leak management and automatic containment systems were introduced in 2012 and have been a key feature of the Toshiba VRF portfolio right up to and including the introduction of the R32 SHRMa system in 2023.

> MINI SMMS-E, SMMS-E AND SHRM-E

R410A refrigerant

> Make your choice between 3 possibilities to manage toxicity constraints:

A - Leak detection only

B - Leak detection
+ indoor unit isolation

C - Leak detection
+ isolation
+ refrigerant pump down (SMMS-e & SHRM-e)

> SHRM ADVANCE












R32 refrigerant

> With SHRM-Advance, Toshiba has developed different solutions to comply with the European safety regulation, related to toxicity and flammability limitations:

A - Pump down and system shutdown
(recommended for office buildings)

B - Individual isolation allowing
continuous operation (recommended for
hotel applications)

C - Refrigerant dilution with continuous
operation. (adapted to small systems)

Model	Picture	Description	A	B	C	Model	Picture	Description	A	B	C
TCB-LDS1		Leak detector With plastic cover	✓	✓	✓	TCB-LD1UPE		R32 leak sensor (audible and visual alarm)	✓	✓	✓
TCB-LDS2		Leak detector With metal cover	✓	✓	✓						
TCB-AW1786*		Shut-off valve		✓	✓						
TCB-LD1		Control box		✓		RBM-Y1 FUXP-E		Shut-off valve included into FS Box for 3-pipe SHRM Advance operations	✓	✓	
TCB-LD2		Control panel			✓						
TCB-LDSBB1		Flush mounting for leak detector (dry lining)				RBM-SV1HUP-E		Shut-off valve for 2-pipe SHRM Advance operations	✓	✓	
TCB-LDSBB2		Flush mounting for leak detector (concrete)									
						TCB-BT1 UPE		Battery kit to secure Shut-off valve operations in case of power failure	✓	✓	

DOMESTIC SMART APP CONTROL

● MULTIPLE UNITS, ONE APP

- 1 user can control up to 10 AC units
- 1 AC unit can be controlled by up to 5 users

● EASY GROUPING

- Make control simple by grouping your AC units in up to 3 zones

● SECURE CONNECTIONS

- Password & login
- Child lock function

● COMPATIBLE PRODUCTS

- DAISEIKAI 9, SHORAI, Console, SEIYA.

● DOWNLOAD YOUR APP

- Toshiba AC Control App for your Android and iOS smartphone from Google Play or the App Store

Smart and efficient

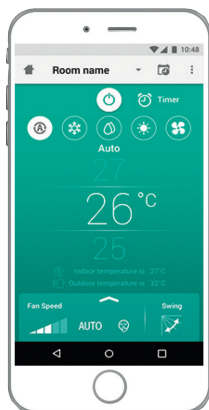
Take complete control of your comfort with the Toshiba Home AC Control App. Simple to use on your smartphone or tablet, both at home, and on the move. Fully compatible, the adapter can be used with all Toshiba High-Wall and Console units.



Enhance your comfort, at home or away

Customise your comfort, by finding the perfect cooling or heating level for your family at any time, no matter where you are. When at home, simply replace your infrared remote control with the intuitive smart app. This also gives you easy access to your air conditioner on the move, allowing you to adapt your comfort to your lifestyle.

Modern app



This user-friendly app is available in 5 languages and boasts a host of intuitive features. It has a different colour for each different mode, and the main functions are accessible in just one touch.

Toshiba premium features enable you to enjoy all the benefits of your AC systems at home. Simply swipe up on the main app screen on your smartphone or tablet to access additional Toshiba specific features.



TOSHIBA

EXPERIENCE
THE FUTURE

Controls



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