

## Technology is nothing without control

An innovative and complete range of integrated controls for application in the Toshiba VRF MiNi-SMMS, SMMS, SHRM systems ensures maximum comfort and excellent performance

by perfectly matching the different control requirements. The range is composed of three control types: local, central and network controls.

Compact design and minimised installation space

Simplified display using icons

Automatic network addressing

TCC-Link connections with non-polarised wiring

## Local control systems

The wired local controller RBC-AMT32E (or simplified model RBC-AS21E2) can monitor a single unit or a group of a maximum of eight indoor units. It offers the following functions: start/stop, operating mode change, temperature and fan speed adjustment, timer, auto-diagnostics and fault code display. To define a timer scheduled for each day

of the week, the schedule/weekly timer TCB-EXS21TLE, can be used with a single local or central controller. Its main functions are: weekly programming with different daily start/stop cycles, summer/winter programming, repeat, clear, day omit. To facilitate application flexibility, a range of wireless controls is also available (TCB-AX21E2, RBC-

AX22CE2, TCB-AX21U (W)E2) to manage the main control functions.



## Central control systems

With the Toshiba central controller TCB-SC642TLE2, up to 64 indoor units can be monitored individually. The central Toshiba controllers are compact and user-friendly and can

also be combined with local controls and a weekly timer to guarantee optimised user comfort under any conditions.



## Toshiba network solutions

Toshiba offers precise control of new VRF systems in both stand-alone applications for autonomous monitoring of the air conditioning system, and integrated into a central control scheme together with Super Digital Inverter and Digital Inverter

split systems. The innovative solutions of the Toshiba Network guarantee maximised integration with other building systems such as elevators, fire protection systems, lighting etc. Open-network controls are specifically

designed for Building Management Systems.

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LonWorks Interface

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BACnet System

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Windows™ gateway

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Touch screen control saver

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# Toshiba units have everything under control



## Wired Control

RBC-AMT32E

The standard remote controller gives access to all of the functions for the indoor unit. It also gives access to the configurable engineer's menu and data retrieval features of the system, such as fault code and sensor information. The device is compatible with the new 4 Series DI/SDI cassette and the existing DI/SDI/SMMS and SHRM indoor units.



## Simplified Control

RBC-AS21E2

The simplified remote controller is connected in the same way as the standard remote controller, but offers reduced functionality. The remote controller does not have the lapse timer and the ability to set up the indoor unit. Unit fault codes are still displayed.



## Central Controller

TCB-SC642TLE2

The central controller can control up to 64 indoor units individually. All their functions can be controlled. Malfunction checks are available for each indoor unit. This controller can also connect to the weekly timer and has volt-free inputs to enable the indoor units and indicate a fault. It has the ability to shut down all units in the event of a fire. Up to four controllers can be connected to the network.



## IR Remote Control

TCB-AX21E2

The wireless remote controller can be used with the appropriate indoor units to give full control of the indoor units. Two remote controllers can be used on the same indoor unit. The sensor on the remote controller can be used to control the system. Fault codes are displayed.



## Weekly/Schedule Timer

TCB-EXS21TLE

Operates in weekly timer mode and schedule timer mode

- 6 programming schedules per day
- Allows programming of 8 groups
- 100 hours max. back-up power supply
- 7 weekly schedule types and 3 programming schedules per day (weekly timer mode): combination of ON and OFF operation with a timer that can be set by a minute unit
- Special holiday program



## Compliant Manager

BMS-CM1280TLE / BMS-CM1280FTLE\*

- WEB function (Intranet)\*
- Energy monitoring\*
- Easy settings and operations (10 times per day/32 times per week: on/off, operating mode, setting temp., remote control restriction)
- TCC-Link direct connection
- Password available
- Schedule timer



## LonWorks Gateway

TCB-IFLN640TLE

The LonWorks Gateway uses all standard network variables to control the individual functions of the indoor units. The gateway can also be used with Toshiba Interactive Intelligence.

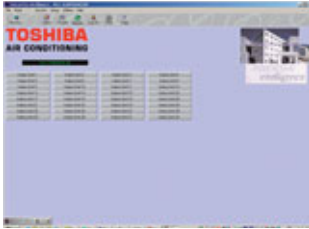


## Intelligent Server

BMS-LSV6E

The intelligent server is the connection point between the PC station for BACnet system and TCS.NET relay interfaces of the air conditioner network.

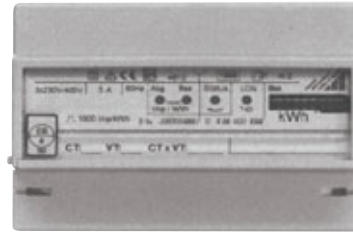




### Windows Package

RBC-WP1-PE

The Windows™ package Interactive Intelligence allows all indoor units connected to the gateway to be set and monitored on the PC. All individual indoor units can be controlled. The program can be customised to allow implementation of site-specific graphics. It can perform time scheduling data logging and alarm handling.



### Energy Monitoring Kit

RBC-EM1-PE

The Energy Monitoring Kit is a power meter designed to connect to Interactive Intelligence. It provides the power supply for an outdoor unit. This information is then used to calculate the unit running costs, depending upon the demand from the unit.



### Touch Screen

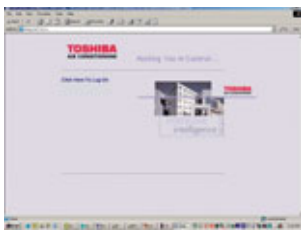
BMS-TP0641ACE - up to 64 indoor units

BMS-TP05121ACE - up to 512 indoor units

BMS-TP0641PWE - up to 64 indoor units + electrical bill calculation

BMS-TP5121PWE - up to 512 indoor units + electrical bill calculation

The new Touch Screen Controller provides a graphical interface with the air conditioning system in multi-language versions (EN, FR, IT, DE, ES) It can control each of the individual indoor units and is capable of providing information from the indoor unit settings and malfunction check codes. It is also used to calculate the energy consumption for the selected indoor units. This controller runs time schedules for the indoor units and allows you to set up data logs. The Touch Screen is connected to the air conditioner control network directly by relay interfaces. Password function available.



### Internet Kit

RBC-IK1-PE

The Internet Kit allows Interactive Intelligence to be viewed over a network using Internet explorer for up to 5 users.



### DI Module

RBC-DI1-PE

The DI1 module allows Interactive Intelligence to enable and monitor other equipment within the building. It can also be used to shut down the indoor units in the event of a fire or other conditions like a timed plant extend.



### Fan Accessory

RBC-SMFI

The fan interface connects to the indoor unit. Its function is to control an external ventilation fan. The relay can be operated with the indoor unit or independently.



### Fault Detection Panel

RBC-FDP2-F-PE

The fault detection panel gives an output if any fault is present in the system. It also has preset modes for cooling, heating and automatic mode. This enables it to be used without a remote controller. Two FDP2s can be networked for a duty share application.

The BMS version of the FDP (RBC-FDP-BMS-PE) is more advanced with dedicated configurable inputs. These can set the operating parameters of the indoor unit. They can be voltage or resistance inputs.

## SMMS/SHMR/Mini SMMS Control Options

Model Number	Reference	Description	Used with
RBC-AMT32E	Wired Remote Controller	To suit DI and SDI systems (excluding Flexi)	All indoor units
RBC-AS21E2	Simplified Wired Remote Controller	As above but designed for hotel and domestic applications	All indoor units
TCB-SC642TLE2	Central Remote Controller	Enables the control of up to 64 individual units	All VRF units, network adapter required for DI/SDI
TCB-EXS21TLE	Weekly/Schedule Timer	Operates in weekly or schedule timer mode, 6 programming schedules per day, up to 64 indoor units	All VRF units, network adapter required for DI/SDI
RBC-FDP2-F-PE	Fault Display Module	Gives indication of a unit malfunction and relay output	All indoor units
TCB-CC163TLE2	On/Off Controller	Enables on/off control (max. 16 units)	All VRF units, network adapter required for DI/SDI
RBC-SMTI	Timer Interface Lead	Timer interface lead suitable for all DI & SDI units	RBC-AMT32E/TCB-SC642TLE
RBC-SMFI	Fan Interface Kit	Enables the control of external fans	All indoor units
RBC-AX22CE2	Infra-red Remote Kit	Wireless remote unit kit for Ceiling suspended units	All ceiling units
TCB-AX21E2	Infra-red Remote Kit	Wireless remote unit kit for Ducted units	All ducted units
TCB-AX31U(W)-E	Infra-red Remote Kit	Designed as a replacement corner panel for Cassettes	All cassettes
TCB-TC21LE2	Remote Sensor	Remote temperature sensor	All indoor units
TCB-CC163TLE2	In/Off Controller	Controller that enables individual on/off control of up to 16 indoor units	All indoor units
TCB-PCNT20E	Network/Protocol Adaptor Kit	Enables the intergration with the AI network	All indoor units
TCB-IFCB-4E2	On / Off Control Box	Enables remote location control of on / off	All indoor units
TCB-PCDM2E	Power Peak Cut Control Board	Power Peak Cut Control Board	All VRF outdoor units
TCB-PCIN2E	Error Output Control Board	Error output control board	All VRF outdoor units
TCB-PCMO2E	External Master On/Off control	External Master On/Off control board	All VRF outdoor units
TCB-PCNT30TLE2	Interface	1 : 1 model connection interface	Allows DI/SDI indoor unit connection to TCC link network
BMS-CM1280TLE	Compliant Manager	Central controller, 10 times per day operation, operating mode, setting temp., remote control restriction, up to 128 indoor units	All VRF units, network adapter required for DI/SDI
BMS-CM1280FTLE	Compliant Manager	As BMS-CM1280TLE with Web connection and energy monitoring function	All VRF units, network adapter required for DI/SDI
BMS-WB2561PWE	Web Based Controller	Network Intranet connection, yearly schedule, error message history, up to 256 IDUs	All VRF units, network adapter required for DI/SDI
BMS-WB01GTE	Web Based Controller	Network Intranet connection, yearly schedule, error message history, up to 2.048 IDUs	All VRF units, network adapter required for DI/SDI
BMS-TP0641ACE	Touch Screen Controller	Enables full control of up to 64 indoor units, ML	All VRF units, network adapter required for DI/SDI
BMS-TP5121ACE	Touch Screen Controller	Enables full control of up to 512 indoor units, ML	All VRF units, network adapter required for DI/SDI
BMS-TP0641PWE	Touch Screen Controller	Enables full control of up to 64 indoor units with electric billing, ML	All VRF units, network adapter required for DI/SDI
BMS-TP5121PWE	Touch Screen Controller	Enables full control of up to 512 indoor units with electric billing, ML	All VRF units, network adapter required for DI/SDI
BMS-LSV6E	Intelligent Server	Allows connection to a BACnet™ system	Relay interface
BMS-STBN08E	BACnet™ Server Software	Enables integration with BACnet™	Intelligent server to allow connection to a BACnet system
BMS-STCC06E	Intelligent Server Software	Software package for the intelligent server	Intelligent server to allow connection to a 1st generation Touch Screen system
BMS-IFLSV2E2	TCS-Net Relay Interface	Relay for integration to TCS-Net	All VRF units, network adapter required for DI/SDI
BMS-IFWH4E2	Energy Monitoring Interface	Relay interface to allow energy monitoring	Web-based controller/Touch Screen/Intelligent Server
BMS-IFDD02E2	Digital I/O Relay Interface	Digital I/O relay interface	Web-based controller/Touch Screen/Intelligent Server
TCB-IFLN640TLE	Lonworks® Gateway	Allows control of 64 indoor units from a Lonworks based BMS	All VRF units, network adapter required for DI/SDI/SDI
RBC-IT4	Timer Interface	Allows all DI/SDI/SMMS/SHRM units to be time controlled via 240 V signal	All indoor units
RBC-WP1-PE	Windows Package	Windows control package	Used with Windows package
RBC-EM1-PE	Energy Kit	Energy monitoring kit (used with the Windows control package)	Used with Windows package
RBC-IK1	Internet Kit	Internet kit (used with the Windows control package)	Used with Windows package
RBC-DI1-PE	Digital I/O Module	Digital input/output module (used with the Windows control package)	Used with Windows package

Model Number	Size (max. indoor load)	Description
<b>VRF - 3-pipe headers and Y-joints (SHRM only) - reducers and insulation included</b>		
RBM-BY53FE	5 (6.3) hp	Y-joint, 3-pipe
RBM-BY103FE	10 (14.1) hp	Y-joint, 3-pipe
RBM-BY203FE	20 (25.1) hp	Y-joint, 3-pipe
RBM-BY303FE	30 (48) hp	Y-joint, 3-pipe
RBM-HY1043FE	10 (14.1) hp - 4-way	4-way header, 3-pipe
RBM-HY2043FE	20 (25.1) hp - 4-way	4-way header, 3-pipe
RBM-HY1083FE	10 (14.1) hp - 8-way	8-way header, 3-pipe
RBM-HY2083FE	20 (25.1) hp - 8-way	8-way header, 3-pipe
RBM-BT13FE		T-piece kit for 3-pipe SHRM outdoor unit
<b>VRF - 2-pipe headers and Y-joints (SMMS and 2-pipe sections of SHRM)</b>		
RBM-BY53E	5 (6.3) hp	Y-joint, 2-pipe
RBM-BY103E	10 (14.1) hp	Y-joint, 2-pipe
RBM-BY203E	20 (25.1) hp	Y-joint, 2-pipe
RBM-BY303E	30 (48) hp	Y-joint, 2-pipe
RBM-HY1043E	10 (14.1) hp - 4-way	4-way header, 2-pipe
RBM-HY2043E	20 (25.1) hp - 4-way	4-way header, 2-pipe
RBM-HY1083E	10 (14.1) hp - 8-way	8-way header, 2-pipe
RBM-HY2083E	20 (25.1) hp - 8-way	8-way header, 2-pipe
RBM-BT13E		T-piece kit for 2-pipe SMMS outdoor unit
<b>VRF accessories</b>		
TCP-PCM02E*	External control CN 508	Low-noise operation (50 dBA) by external switch
TCP-PCM02E*	External control CN 509	Run outdoor fans by external switch (snow control)
TCP-PCM02E*	External control CN 510	Mode selection by external switch (SMMS)
TCP-PCM02E*	External control CN 512	Stop and start of all associated indoor units by pulse
TCP-PCDM02E**	Load shedding PCB	Limits compressor speed by external switches
TCP-PCIN2E	Output PCB from CN511	Continuous contacts made when either in system shutdown or when at least one indoor unit is operating
Dyna Doctor	Dyna Doctor	Monitoring and diagnostic software
TCB-DP31DE2	High static duct (18 to 48)	Drain pump kit (600 mm lift from top of indoor unit)
TCB-DP32DE2	High static duct (72 to 96)	Drain pump kit (600 mm lift from top of indoor unit)
TCB-DP22CE2	Ceiling units	Drain pump kit (600 mm lift from top of indoor unit)
TCB-KP12CE***	Ceiling unit (2 hp)	Elbow piping kit (required by drain pump kit)
TCB-KP22CE***	Ceiling unit (3/4/5 hp)	Elbow piping kit (required by drain pump kit)

\* Master outdoor unit only (if used). Function is dependent on which interface PCB socket is used (all four could be used if required)

\*\* Master outdoor unit only (if used).

\*\*\* Elbow piping kits allow the refrigeration circuit connections to be routed to make space for pump