

## PRODUCT UPDATE 2011 “Smart Manager”

Toshiba Air Conditioning are pleased to introduce a new product into our current range of control options.



### The BMS-SM1280HTLE Smart Manager

The BMS-SM1280HTLE has the following benefits and key features.

- Capability to control upto 128 indoor units from a central location
- Fully compatible with Toshiba DI / SDI and VRF systems (Not Toshiba RAS range)
- Remote access via Internet connection
- Energy monitoring capability
- Easy set up
- Advance Timer Function



Brief Summary of Specification.

<b>Model Number.</b>	<b>BMS-SM1280HTLE</b>
<b>Available Date.</b>	<b>Quarter 2 - 2011</b>
<b>Retail Price ex VAT.</b>	<b>£2,140</b>

*Note: Computer NOT supplied*



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For further details, please contact TCUK Customer Services on 0870 8430333 or your local sales representative.

The manufacturer reserves the right to change the product specifications and information without notice.

## Specifications.

<b>Hardware</b>	
Power Supply Input	1 phase – 50/60 Hz – 220 / 240v
Central Controller Dimensions H x W x D (mm)	120 x 180 x 64
Weight Central Controller Kg	0.8
Power Supply Dimensions H x W x D (mm)	114 x 177 x 50
Weight Power Supply Kg	0.9
Operating Environment Temperature	0 – 40 °C. Humidity: 10 – 90%
Input / Output Terminals	<ol style="list-style-type: none"> <li>1. ON / OFF and Alarm Status Output</li> <li>2. All Indoor Units ON and All Indoor Units OFF Input</li> </ol>
Accessories	<ol style="list-style-type: none"> <li>1. BMS-IFWH5E – Energy Monitoring Interface</li> <li>2. BMS-IFDD03E Digital I/O Relay Interface</li> <li>3. TCB-PCNT30TLE Network Adaptor</li> </ol>
<b>Computer Specification</b>	<b>(Field Supplied)</b>
Operating System	Microsoft Windows XP / Vista / 7
Monitor Resolution	SVGA – 1,024 x 768 or better
LAN Port or LAN Card	1 Base – T or 100Base -TX
Other	Pointing device / Mouse

## Description

Smart manager is a product that is capable of controlling 128 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, (Excluding RAS models).

It is also capable of displaying individual fault codes for any units on the network.

Smart manager can be remotely connected to via a PC and all the functions can be controlled via Internet Explorer.

Smart manager can also be linked to energy monitoring relay interfaces for the collection of data for energy billing.

The controller can also be linked to the digital input output module for the interface to other systems.

Smart manager has additional 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, plus a return back function, which returns the units setting to a predetermined setting after an amount of time.

All of these functions are accessed via the Web Interface.



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## Application

Smart manager is normally used on an installation where there are multiple indoor units in one location. It gives the ability to link multiple refrigerant systems together for time clock control and to give an indication of any faults within the systems.

There are auxiliary inputs for on/off control and relay outputs for remote run and fault indication.

It is possible to connect up to ten central controllers on one network, which controls up to 128 master indoor units from multiple locations.

Smart manager can provide a remote access solution from a PC using a Web browser up to four remote connections can be established at any one time.

If Smart manager is to be used for energy monitoring the energy monitoring relay interface is required. A power meter is required for each refrigerant system the data is down loaded to a Pc via the network connection. The data is then used in an Excel based program to generate the bills for the air conditioners.

## Connections

**Smart manager requires a 220 / 230 Volt single phase 3 Amp power supply, which connects to a power supply unit, (Supplied as part of the kit.) which in-turn supplies low voltage power to the Smart manager.**

The two-core network cable should be screened and have a minimum cross-sectional area of 1.5mm for networks of up to 1000 meters. This should be increased to 2.5mm for networks of 1000 to 2000 meters total length.

The network cable terminates at the U1/U3 and U2/U4 connections on the rear of the device.

Terminals COM-DI, DI1, DI2 and DI3 are used to remotely operate all of the connected indoor units. The indoor units can be enabled with a contact closure between COM-DI and DI2 this can pulse for 0.5 seconds or a static input.

The indoor units can be disabled by COM-DI the same contact specification applies. If a fire alarm shutdown is required this can be achieved by a contact closure or opening on terminals COM-DI to DI3.

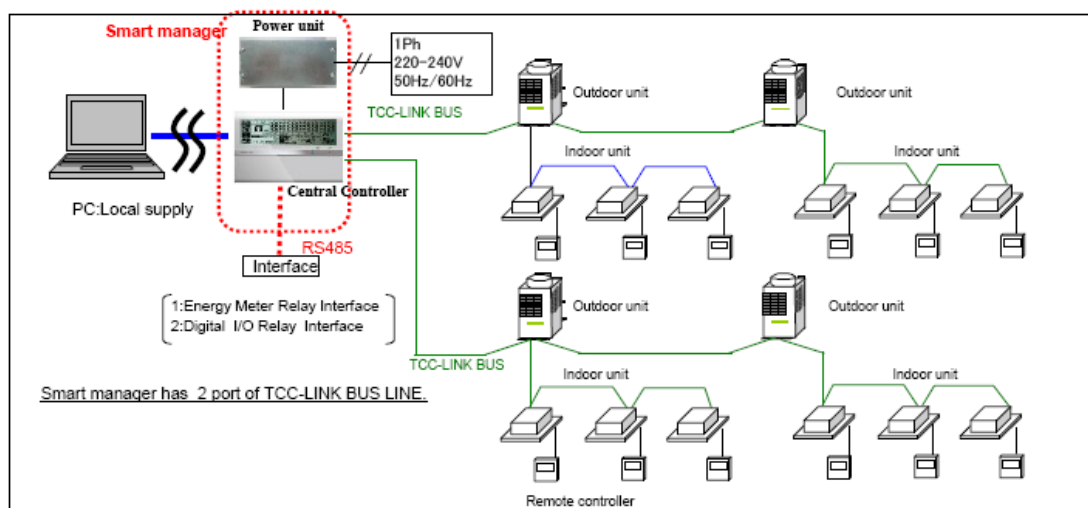
Terminals COM-DO, DO1 and DO2 provide dry contact, (Voltage Free) outputs for connection to other systems. A relay contact will close between COM-DO and DO2 indicating system operation and COM-DO and DO1 indicating a fault on any connected units.

The controller has a standard RJ45 connector for the connection to the network

Terminals A (+) B (-) are the connections to the RS485 network to connect to the energy monitoring relay interfaces and digital input output module.

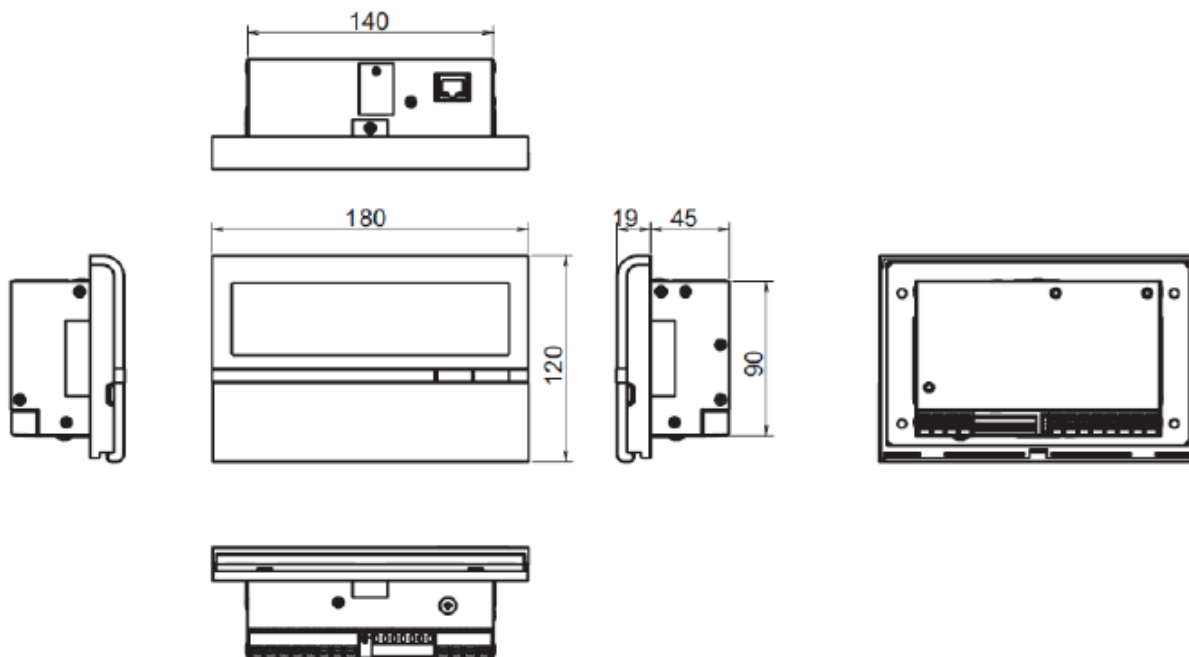
A schedule timer (TCB-EXS21TLE) can be connected to CN02 should it be required

## Diagrams

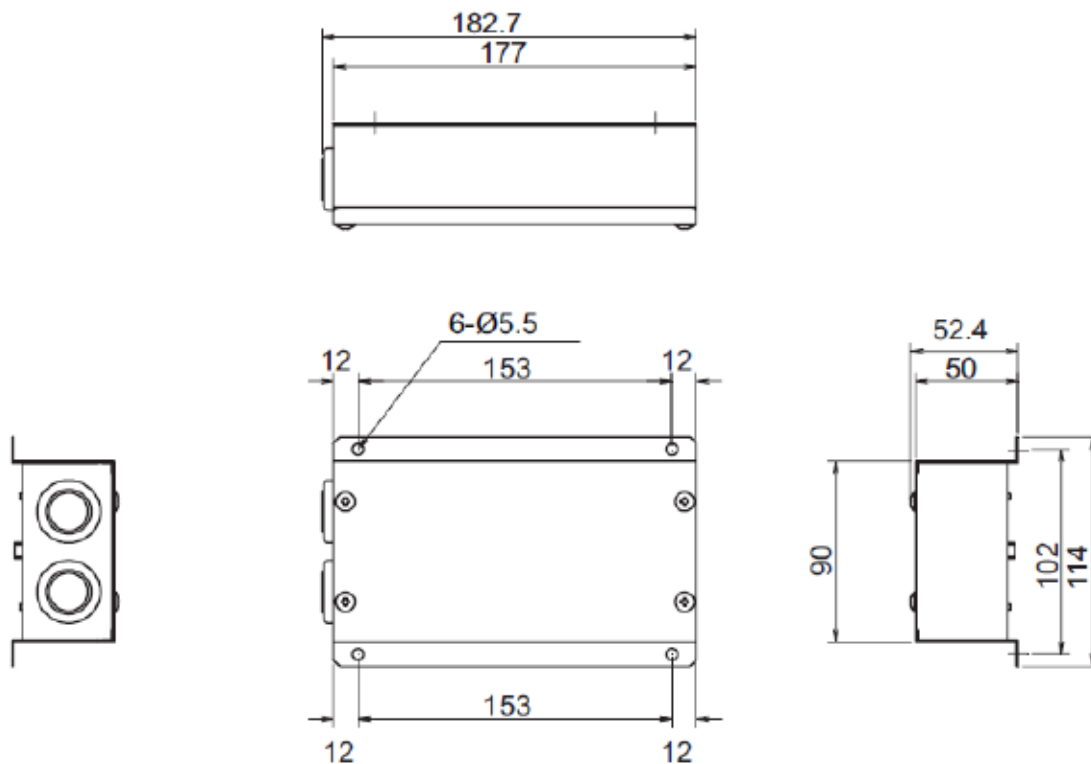


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## Controller Dimensions



## Power Pack Dimensions



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## Limitations

Individual control of 128 master indoor units, (7 slave units per master possible when connecting DI and SDI)

The total length of each U1/U2 network is as follows

1.5mm<sup>2</sup> Screened up to 1000m

2.5mm<sup>2</sup> Screened up to 2000m

The total length of the RS485 Network A/B

1.5mm<sup>2</sup> Screened up to 500m

## Solution Components

### Smart Manager High-Spec Model BMS-SM1280HTLE and Power Pack

Smart manager to be located in the building containing the controlled air conditioners.

### **Network Adapter TCB-PCNT30TLE2**

Network adapters will be required for each Master indoor unit when the central controller is used in conjunction with DI/SDI slit systems.

### **Energy Monitoring Relay Interface BMS-IFWH5E**

The energy monitoring Relay Interface connects to the RS485 Network and provides a means of interface to the pulse power meters. Up to eight power meters can be connected to each Relay Interface.

### **Digital Input Output Relay Interface BMS-IFDD03E**

The D/I module connects to the RS485 network and provides 8 inputs and 4 outputs, which could be used to interface a fire alarm system or a room occupancy sensor. The D/I module output can be used as a means of remote fault indication to another system.



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