

Date: June 5, 2014

To: Daikin Sales, Service, and Distribution

Subject: The intelligent Touch Manager (iTM) Version 2.0

Daikin is pleased to announce the release of its new software update for the intelligent Touch Manager (DCM601A71) with version 2.0.

The new iTM software version 2.0 will be released in late August 2013.



intelligent Touch Manager (iTM)

(DCM601A71)



iTM Plus Adaptor (DCM601A72)

iTM Plus Adapter

(DCM601A72)

The iTM has a 10.4" LCD touch screen, USB port, 100Mbps Ethernet port, and is capable of managing up to 512 indoor unit groups which can cover your project requirements. It is more powerful than the hardware capabilities of the intelligent Touch Controller (iTC) and the iTM comes with web access as a standard feature.



simple with a facility network connected PC

Operation, navigation, and commissioning of the iTM are very intuitive and can be done on or off site by touch screen, web access, and/or preset tool. Up to 60 floor layout views can be



created to monitor and control each management point (indoor unit, digital input/output, and analog input/output groups).

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Menu Content	Bur, 05/11 05:40PM	1 Merce	7 V	63 %	ew.		8un, 06/11 05:43PM	A Maru Lat View Do View Pr
Icon View				L	_ist V	iew		Layout View

Easy navigation through menu functions with the new tab/icon display feature

System Ber	Deerston M	grit Energy Navigatio	<u>ta</u>
		0	
	Emergency Auto Bitop Changer		
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Automatic Ctrl





System Settings

Operation Mgmt

The iTM v2.0 will have enhanced features such as: Auto-changeover (Fixed, Individual, Averaging, and Vote), Independent Cool and Heat Setpoints, Independent Setback Setpoints, Scheduling with Optimum Start, and Room Temperature display with 0.1°F resolution.

The iTM is the successor of the intelligent Manager III, and now it will be the successor of the intelligent Touch Controller (iTC).

The iTC will continue to be sold without the Web/Email option as a lower cost alternative Centralized Controller and for projects requiring the HTTP option.

The iTM v2.0 can be used as a backup controller to the BMS integration prior to and after the BMS system fully (or partially) monitors and/or controls the VRV system.

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Advanced Multi-zone	Controller	Comparison	Table
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New Feature			Improved Feature			
			iTM V2.0	iTM V1.04	iTC V6.04	
	1	Indoor Unit Capacity	Up to 64	Up to 64 – 128 Groups		
	2	DIII-Net Adapter	up to 7 (64 indo	1 (64 indoor unit groups)		
	3	Total Mangement Points		650	128	
e	4	Dimensions (inches)	11.42	9.063 x 5.781 x 4.22		
Ma	5	Display Size (inches)		10.4	5.7	
ard	6	Screen Saver	3	Types	N/A	
Ϊ	7	Installation	Wall / Flush	n mount (0.98 in.)	Wall / Flush mount (1.97 in.)	
	8	External Memory	USB 2.0 (up to 32GB)		PCMCIA	
	9	Di / Pi Inputs	1 Di a	ind 3 Di / Pi	1 Di and 3 Pi	
ļ	10	Ethernet	10	10 Mbps		
	11	Menu Navigation	Та	ab / Icon	Menu List	
	12	Area / Zone / Indoor Unit	Area /	Zone / Indoor Unit		
Ś	13	Room Temp Resolution	0.1°F / 0.1°C	1°F / 0.1°C	1°F / 0.1°C	
e me	14	Setpoint Resolution	1°F / 0.1°C	1°F / 0.1°C	1°F / 0.1°C	
C H	15	Setpoint	Single / Dual	Single	Single / Dual	
asi	16	Setpoint Tracking	✓ (Setpoint Tracking)	Mode for $0-7^{\circ}$ F Differential)	\checkmark (0°F only)	
<u>ه</u>	17	Setpoint Range Limitation	(Setpoint Hashing)	√	(0 · 0 · iii)/ √	
	18	Setback	Absolute	Relative	Absolute	
	19	Recovery Temperature	0 - 10°F	0 - 10°E	0 - 10°F	
	20	Remote Control Pemit/Prohibit	0 101	√	√	
	21	Schedule	7, 5+2, 5+1+1, 1	7	7, 5+2, 5+1+1	
	22	Events per day		20	8	
	23	Optimal Start	\checkmark	Available as pre-cool/heat	N/A	
	24	Timed Override	Timer Extension	(adj. 30 - 180 minutes)	2 Hour Override (fixed)	
	25	Layout View		✓	N/A	
	26	Floor Plan Sections		60	N/A	
s	27		Fixed	Fixed / Operating	Fixed	
io	28		Individual		Individual	
	29	Auto-changeover	Averaging	Averaging	Averaging	
Ē		ç	(Weighted Demand)			
	30		(Weighted Demand)			
	31	Changeover Deadband	2°F (Minimum)	6°F	5.4°F	
		Querd Trees	Adjustable	Adjustable	Adjustable	
	32	Guard Timer	(15 / 30 / 60 min)	(15 / 30 / 60 / 90 min)	(15 / 30 / 60 / 90 min)	
	33	Interlock	✓		√	
	34	Emergency Stop	1 Default w/31 optional program settings		1 Default	
	35	Web / Error Email Access	S	tandard	Option	
s	36	System Configuration via Web			NA	
io	37	PPD Option (tenant billing)	(Option	Option	
<u></u>	38			INA	Option	
	39	Di/Dio Unit Compatible		✓	<i>✓</i>	
	40	WAGO I/O (Di/Do/Ai/Ao)		✓	N/A	
	41	Software ID Required for Startup	Not	t Needed	✓	
b a		Automatic Adjustment for				
ioni anc	42	Daylight Savings Time (DST)		V	×	
liss	43	Auto Registration		✓	N/A	
Mair	44	Presetting Tool		\checkmark	N/A	
ບື້	45	History	5	00,000	300	
	46	D-NET		~		



Line #	Feature Highlights							
1	The indoor unit total capacity has been improved for the iTM with up to 512 indoor groups (1024 indoor units)							
3	The iTM has increased the total number of management points to 650 versus 128 with the iTC							
5	The iTM has an improved and much larger touch screen than the iTC (no stylis needed)							
8	The iTM does away with the PCMCIA card and uses the USB Flash Drive to import and export data							
10	Ethernet connection speed increased to 100 Mbps							
11	The iTM has introduced simple menu navigation by using tabs and icons							
12	The iTM now uses Area set up instread of Zones to allow hiearchy placement of indoor unit groups							
13	The iTM can now display the room temperature in 0.1°F							
16	Setpoint Tracking Mode has been added to the iTM to keep the differential between the Cool and Heat setpoints if							
10	needed. The iTC is only capable of maintaining a 0 ⁰ differential							
18	The Setback for the iTM has been improved to provide independent cool and heat setback setpoints							
21/22	The weekly patterns has been improved to provide 4 types (7, 5+2, 5+1+1, 1)							
23	Optimum Start has been added to the iTM scheduling as a new feature							
24	The iTM has a new adjustable timed override (30, 60, 90, 120, 180 min) that allows use of the indoor unit during							
24	unoccupied periods							
25/26	The iTM has Introduced Layout View Screens that allows the use of a building floor plan (up to 60 floor sections)							
20	The iTM Auto-changeover (Fixed (default), Individual, Averaging, and Vote) has been enhance to include a new							
25	feature called Vote							
20/20	Weighted Demand has been added as a new feature to the Auto-changeover modes (Averaging and Vote) to set the							
29/30	priority consideration for each indoor unit in the changeover group							
24	iTM introduces a new Changeover Deadband incorporating an adjustable primary and secondary changeover							
31	deadband from setpoint. The same as th BRC1E72 (NAV) Auto-changeover							
35	Web/Error Email is standard on the iTM							
	Sytem configuration and system changes can now be accomplished from the iTM Web access without the need to							
36	be onsite							
	The iTM introduces the WAGO I/O system that provide Di. Do. Ai, and Ao canabilities without using the DIII-Net							
40	addressing. This maximizes the number DIII-Net addressing that can be used for indoor unit group assignment							
41	No software ID required for startup or Web/Error Email access							
43	The iTM has introduced automatically detect DIII-Net addressed indoor unit and assigns the appropriate model type							
44	Preset Tool provides offsite configuration of the iTM management point settings and Layout View							
45	The iTM History has been increased from the iTC to 500,000 history items (Error, Control. Settings, and Status) saved							

Products

Model	Description	Note			
DCM601A71	intelligent Touch Manager	Controller with 10.4" LCD / Web Standard			
DCM601A72	iTM Plus Adapter	Up to 7 adapter per ITM			
DCM002A71	iTM PPD	Tenant billing software option			

*The iTM Integrator (DCM601A73) and iTM Energy Navigator (DCM008A71) options are not currently available for the North American market.



Auto-changeover

- Auto-changeover for Heat Recovery and Heat Pump systems with Dual/Single setpoints Improved
 - Primary Changeover deadbands (PCd)
 - Adjustable between 1 4°F (default of 2°F)
 - Guard timer
 - Secondary Changeover deadband (SCd)
 - Adjustable between 1 4°F (default of 1°F)
 - Ignores guard timer





- o Enhanced Auto-changeover methods Improved
 - Individual, Fixed (default), Average, and Vote
 - Weighted Demand configuration for Average and Vote methods
 - The Vote Method allows users to configure the system changeover based upon Heat Override New
 - Ideal for Heat Pump or Heat Recovery systems where rooms may have varying loads

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Vote Method



- Changeover is evaluated based upon total cooling demand and total heating demand. If the total cooling demand is greater than the heating (like the figure below), the iTM v2.0 changes the indoor units in the changeover groups to cooling mode.
- When the changeover group is in cool mode the total cooling demand will decreased, at that point the total heating demand may become greater than the cooling demand and change the mode to heating. (A guard timer applies.)
- The setpoints can be different in each indoor unit within the changeover group. The demand is calculated based on the setpoints in comparison to room temperature for each indoor unit. The demand within the Primary Changeover deadband (PCd) is considered as no demand.
 - A weight (0 to 3) can be configured for each indoor unit and is multiplied by the degree difference between the room temperature and setpoint to calculate the weighted demand
- Good for the Heat Pump systems (or under the BS Box with multiple indoor units connected to the same port in Heat Recovery system) as pseudo simultaneous cooling and heating operation.



* Option available for heating override if there is an indoor unit which the heating demand exceeds (H_SP – (PCd + SCd))



Building facilities management

- WAGO I/O system for management and controls of ancillary equipment by schedule, manual control, web access, or interlock
 - o I/O configuration for Digital Input, Digital Output, Analog Input, and Analog Output
 - Up to 512 management points can be created









Bus Coupler

Di, Do, Ai, End Module

24 VCD Power Supply Unit

	Item	Note	Model
Required	Daikin iTM Basic Kit	Power Supply Unit 24 VDC, Connector Module, Bus Coupler, End Module	51291052
D.	2 Channel Di Module		750-400
DI	4 Channel Di Module		750-432
Do	2 Channel Do Module		750-513/000-001
Ai		4-20 mA	750-454
	2 Channel Ai Module	±10 VDC	750-479
		20k Thermistor	750-461/020-000

Training

The following training classes are offered at Daikin training centers. Check the Daikin training schedule for class locations and times at <u>www.daikinuniversity.com</u>.

- Control Product and Application training class (with ITM) (Course Code: CPA008)
- iTM Commission training class (Course Code: ITM008)
 - Onsite training can be requested through the Daikin Training Department
- iTM Sales Training Webinar (Course Code: OITM01) is also available
 - Can be viewed on the Daikin training website at <u>www.daikinuniversity.com</u>.



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Documentation

Located on TRL/FTP site at: ftp.daikinac.com/trl/ControlsDocuments

- iTM User manual
- Installation manual for the iTM
- Installation manual for the iTM Plus Adapter
- Submittal Data Sheet
- iTM Guide Spec
- Sales presentation
- Introduction video
- FAQ

Tools

- TRL iTM available in the product quotation design/commissioning package
- Xpress The iTM is available under Controls tab for system design

Commissioning

The Commissioning of the iTM may only be performed by a technician who has been qualified to perform iTM commissioning. The qualification process will require that the candidate for qualification attend a formal iTM commissioning class. Upon completion of the class participants will be evaluated by the classroom instructor and based this evaluation may become qualified to commission the iTM. If prior approval is given from the Daikin Technical Service Department, qualification status may be granted during onsite iTM commissioning/training. Upon receiving qualification status, the Technical Service Department will provide the iTM Versionup Tool (software upgrade tool needed to upgrade the iTM to later software versions), iTM Presetting tool, and iTM commissioning manuals to the qualified personnel.

Individuals who do not attend a formal iTM commissioning qualification class or receive onsite training to gain qualification status to commission the iTM will not be provided the opportunity for Daikin Technical Service support during startup and commissioning of the iTM. Daikin Technical Service personnel will be available for travel onsite to commission the iTM (iTM commissioning fees will apply). The iTM Versionup Tool, iTM Presetting Tool, and iTM commissioning manuals will not be provided to those without the qualification status.

The Power Proportional Distribution (PPD) option commissioning will be carried out by Daikin Technical Service Personnel only. The iTM PPD Commissioning fees will apply.



intelligent Touch Manager Setup & Commissioning Fee						
#	Description	Part Number	List Price			
1	Basic	DACA-ITMComm	\$1,210 list + (\$50 list x # of indoor unit groups)			
2	Floor Layout Screen	DACA-ITMI SComm	\$500 list x # of Floor layout screens (up to 20 indoor			
2	Option	D/(0/(TrimeOeenin	units per layout screen)			
3	PPD Option	DACA-ITMPPDComm	\$1,100 list + (\$30 list x # of indoor unit groups)			
4	System integration		Charged by project requirement			
			Default fee \$1,000 Continental US and default fee			
5	Actual travel		\$2,500 outside Continental US) and actual hotel			
	expenses		expenses (default fee \$250/day Continental US and			
			\$350/day outside Continental US) apply.			

Commissioning Fee Schedule

Upgrading

Upgrades on existing projects from version 1.0x to 2.0 will require a complete recommissioning. Version 1.0x and 2.0 are not compatible, so no data created in the earlier version will be save when the version upgrade is completed.

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System Overview



Specifications

		intelligent Touch Manager	iTM Plus Adpater
Model		DCM601A71	DCM601A72
Power supply		AC 24V 60 Hz	AC 24V 60 Hz
Power consumption		23W maximum	23W maximum
Operating conditions	Surrounding temperature	32°F 104°F	14°F – 122°F
operating conditions	Humidity	15% - 85% RH (non condensing)	15% - 85% RH (non condensing)
Dimensions	H x W x D (inch)	11.42 x 9.57 x 1.97	5.87 x 6.30 x 2.41
		64 addressed Indoor Unit Groups	64 addressed Indoor Unit Groups
Accessible units	Maximum number of indoor onits	(maximum 128 actual Indoor Units	(maximum 128 actual Indoor Units
	Maximum number of Outdoor Units	10	10
	F1F2 (Daikin DIII-NET communications)	1	1
Interfaces	100Base-TX (Ethernet communication)	1 (RJ-45)	
Interfaces	USB port (for flash memory drive)	1 (2GB to 32 GB)	
	RS485 (for DCM601A72 connection)	1 (2 wire polarity sensitive)	1 (2 wire polarity sensitive)
Input torminals	Di (Digital input for forced shutdown)	1	
Input terminals	Di/Pi (Digital/Pulse input)*	3	4
EMC certification		FCC Part 15 Class B	FCC Part 15 Class B



Dimensions



iTM Plus Adapter



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