



Dedicated Micros Serial MCI Module Application Guide

Description






This module allows you to serially control any Dedicated Micros DVR that supports the use of the CC01A adapter. This module was developed against a Digital Sprite 2 although we have had reports of successful implementation with the D4 and the BX2. The module allows you to control the main and spot monitor outputs, sequencing, PTZ telemetry as well as the event list and playback controls.

Application Notes

This module will **only** support the “old” style Digital Sprite 2. This generation can be identified by its all silver front panel. This generation runs version 3.1 firmware. This module **does not** support the “new” DS2 which can be identified by its silver front panel with a black insert in the middle where the camera controls are located. To control the new DS2 please use the Dedicated Micros IP Module that is included in this module bundle.

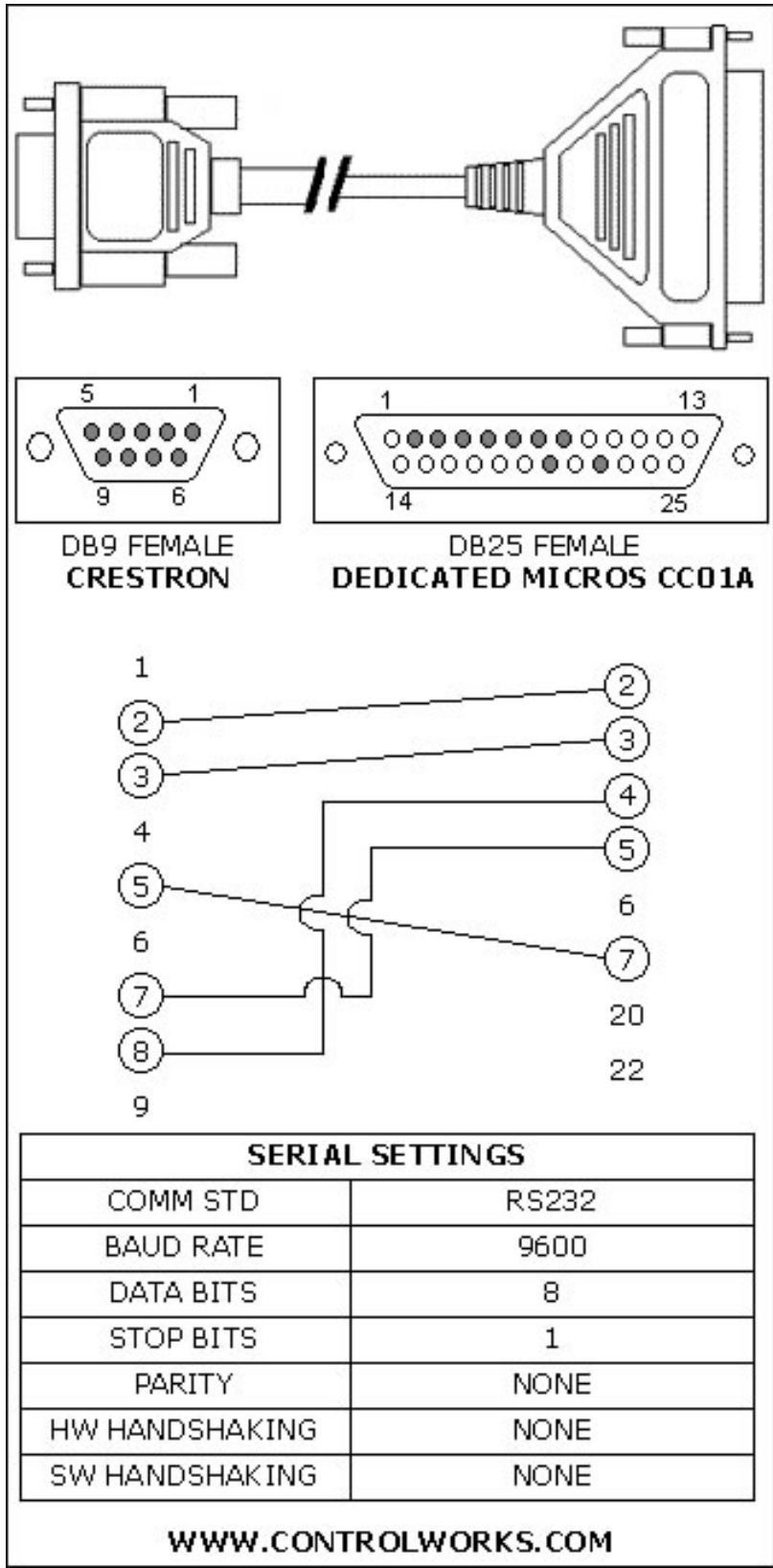
Supported Processors

This module will run on any 2-series processor. These processors include the PRO2, AV2, PAC2, PAC2M, CP2, CP2E, MP2, MP2E, MC2W, QM-RMC and QM-RMC-RX.

Compatibility			Processor Requirements	
 2-Series Compatible	 NOT CNMSX Compatible	 NOT System Builder Compatible	 Ethernet NOT NEEDED	 Compact Flash NOT NEEDED

Serial Cable Pinout

This module requires the use of a Dedicated Micros PN CC01A. This device translates the DVR C-Bus to RS-232 for use with a Crestron com port. **This part is required.** The other COM ports on a Dedicated Micros DVR are for telemetry use only. They cannot be configured for external control.



Signal And Parameter Descriptions

Bracketed signals such as "[signal_name]" are optional signals

DIGITAL INPUTS

select_unit_1...16	pulse to have the module address the desired DVR ID number after the CC01A goes online. See "cc01a_online_fb" digital output description below. It is not possible to connect to a DVR that is in use by another device on the C-Bus. Previous connections must be idle for at least 10 seconds before you can connect to the DVR.
primary_mode_live	pulse to view live video
primary_mode_decode	pulse to enable playback of video from the DVR
smode_full...smode_pip4_bottom_right	pulse one to select the various multiplexed output formats, not all formats are available on all models
play_speed_halt...play_speed 64x+/-	pulse to select a playback speed forward, backwards or pause (halt)
select_channel_1...16	pulse to select a camera on the main monitor
sequence_on...off...toggle	pulse to select the sequence mode
sequence_time_2s...14s	pulse to select the sequence dwell time
cam1_seq_enable...cam16_seq_enable	enter a "1" on each camera input that you wish to include in the sequence operation
spot_seq_mode	pulse to put the spot monitor output into sequence
spot_cam_mode	pulse to put the spot monitor output into camera mode
spot_mode_mon_cam1...cam16	pulse to select a camera on the spot monitor output
cam1_spot_ena	enter a "1" on each camera input that you wish to include in the spot monitor operation
pan_right..zoom_out	hold high for the duration you wish to have the telemetry motion active. Releasing the button will stop the motion. See telemetry_speedx for setting the speed of the PTZ action
aux_relay1_on..aux_relay3_off	pulse to trigger the desired relay in the PTZ receiver
telemetry_preset_goto	pulse to recall presets
telemetry_preset_store	pulse to store presets
telemetry_preset_clear	pulse to clear the currently selected preset
telemetry_preset1..preset16	pulse to activate one of the three above actions for a specific camera
telemetry_speed1..speed17	place a "1" or hold an input high with an interlock to select which rate of speed to move the PTZ
telemetry_default_speed	if you are having an issue with telemetry speed place a "1" on this input and zero's on all other speed inputs. This drops the speed variable from the string and has been found to work better on older firmware.
wash_on...lamps_off	pulse to turn on the related function on the cameras telemetry receiver
autopan_on...autopan_off	pulse to control the autopan function
patrol_on...patrol_off	pulse to control the patrol function
event_list_launch	pulse to launch the event list after entering the desired year, month, hour and minute variables below
event_list_exit	pulse to exit out of the event list mode. Note that many other DVR functions will not be operational if the event list is still active.
event_list_play	pulse to start playback of the launched list.
event_list_up_1..event_list_down_1	pulse to navigate the event list on the monitor output
event_list_from_year_up...minute_down	pulse to increment and decrement the values for the starting event list year, month, hour and minutes

event_list_to_year_up...minute_down	pulse to increment and decrement the values for the ending event list year, month, hour and minutes
event_list_search_alarm	pulse to include alarms in the list results
event_list_search_activity	pulse to include activity in the list results
event_list_search_system	pulse to include system events in the list results
event_list_search_on	pulse to enable the event "off" in the results
event_list_search_off	pulse to enable the event "on" in the results
event_list_search_panic	pulse to include panics in the list results
Note: You must have "search_on", "search_off" or both on to get valid list results	
event_list_cam1/16_enable	place a "1" or on each input for which cameras to include in the Event list search results
playback_list_from_year_up..minute_down	pulse to increment and decrement the values for the playback year, month, hour and minutes
playback_list_launch	pulse to start playback from the date that you entered with the above inputs

ANALOG INPUTS

This module does not utilize any analog inputs.

SERIAL INPUTS

rx\$. connect to the receive line of the Crestron com port

DIGITAL OUTPUTS

Note: All feedback is generated by the module. No feedback is parsed from the CC01A except for the first four digital outputs listed below.

cc01a_command_ok	pulses high when the CC01A understands (OK) the transmitted command
cc01a_command_error	pulses high when the CC01A does not (NOK) understand the transmitted command
cc01a_online_fb	high when the com has been properly established with the CC01A (see note below)
cc01a_offline_fb	high to indicate that com has not been established with the CC01A (see note below)
select_unit_1_fb...16_fb.....	high to indicate the selected address
primary_mode_live_fb.....	high to indicate the DVR is in live mode
primary_mode_decode_fb.....	high to indicate the DVR is in decode (playback) mode
smode_full...smode_pip4_bottom_right	pulse one to select the various multiplexed output formats
play_speed_halt_fb...play_speed 64x_fb.....	high to indicate which speed is active
select_channel_1_fb...16_fb	high to indicate which camera input is selected
sequence_on_fb	high to indicate sequence mode is on
sequence_off_fb	high to indicate sequence mode is off
sequence_time_2s_fb...14s_fb	high to indicate the current sequence dwell time
sequence_hold_on_fb.....	high to indicate sequence hold is on
sequence_hold_off_fb	high to indicate sequence hold is off
spot_seq_mode_fb	high to indicate spot sequence mode
spot_cam_mode_fb.....	high to indicate spot camera mode
spot_mode_mon_cam1_fb...cam16_fb	high to indicate which camera is selected for the spot monitor output
telemetry_preset_goto_fb.....	high when in preset recall mode
telemetry_preset_store_fb.....	high when in preset store mode
telemetry_preset_clear_fb	high when in preset clear mode
telemetry_preset1_fb..preset16_fb	high to indicate which preset is active
event_list_search_fb_alarm...panic_fb.....	high to indicate which events have been selected

ANALOG OUTPUTS

event_list_from_year	four digit analog representing the selected event list starting year
event_list_from_month	two digit analog representing the selected event list starting month
event_list_from_day	two digit analog representing the selected event list starting day
event_list_from_hour	two digit analog representing the selected event list starting hour
event_list_from_minute	two digit analog representing the selected event list starting minute
event_list_to_year	four digit analog representing the selected event list ending year
event_list_to_month	two digit analog representing the selected event list ending month
event_list_to_day	two digit analog representing the selected event list ending day
event_list_to_hour	two digit analog representing the selected event list ending hour
event_list_to_minute	two digit analog representing the selected event list ending minute

playback_to_year	four digit analog representing the selected event list starting year
playback_to_month	two digit analog representing the selected event list starting month
playback_to_day	two digit analog representing the selected event list starting day
playback_to_hour	two digit analog representing the selected event list starting hour
playback_to_minute	two digit analog representing the selected event list starting minute

SERIAL OUTPUTS

tx\$. connect to the transmit line of the Crestron com port

PARAMETERS

Event from year	number in decimal to default the year (2006d)
Event from Month	number in decimal to default the month (12d)
Event from Day	number in decimal to default the day (31d)
Event from Hour	number in decimal to default the hour (24d)
Event from Minute	number in decimal to default the minute (59d)
Event to year	number in decimal to default the year (2006d)
Event to Month	number in decimal to default the month (12d)
Event to Day	number in decimal to default the day (31d)
Event to Hour	number in decimal to default the hour (24d)
Event to Minute	number in decimal to default the minute (59d)
Playback Year	number in decimal to default the year (2006d)
Playback Month	number in decimal to default the month (12d)
Playback Day	number in decimal to default the day (31d)
Playback Hour	number in decimal to default the hour (24d)
Playback Minute	number in decimal to default the minute (59d)
Stop Delay	time in seconds (example: .2s) that the module will wait before sending the telemetry stop command after releasing a PTZ button. Depending on the protocol you are using you may have to experiment with this value to achieve the proper operation.

Note on CC01A communications

In order for the module to properly communicate with the CC01A it is necessary that CC01A gets power cycled. When the CC01A reboots it sends the module a string to let it know it is waiting to be setup for modem support or MCI command support. The module needs to see this string in order to send the correct command to force the CC01A into the right mode. When this setup is completed successfully the [cc01a_online_fb](#) digital output will go high. It should be noted that some of the functions of the module will still work even if the module shows the CC01A offline.

Support

This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email support@controlworks.com or call us at 440-449-1100. ControlWorks normal office hours are 9 AM to 5 PM Eastern, Monday through Friday, excluding holidays.

Before calling for support, please ensure that you have loaded and tested operation using the included demonstration program and touchpanel(s) to ensure that you understand the correct operation of the module. It may be difficult for ControlWorks to provide support until the demonstration program is loaded.

Updates, when available, are automatically distributed via Email notification to the address entered when the module was purchased. In addition, updates may be obtained using your username and password at <http://www.thecontrolworks.com/customerlogin.aspx>.

Distribution Package Contents

The distribution package for this module should include:

Dedicated Micros MCI Module v9.umc	Crestron User Module
Dedicated Micros MCI Demo XPanel v9.vtp	Demo touchpanel for XPanel
Dedicated Micros MCI Demo Program V9.smw	Demo program for PRO2 processor
Dedicated_Micros_MCI_Module_V9_Help.pdf	This Help File

Revision History

V9 jim@controlworks.com 2008.4.22

- Removed: Default telemetry speed as would cause issues with PTZ head if enabled
- Added: ILOCK to the demo program for telemetry speed control example
- Added: Negative (backwards) playback speeds
- Removed: Untested direct serial communications with "new" DS2 DVRs on COM1

V8 jim@controlworks.com 2007.06.11 (internal release only)

Rebuilt V7 CC01A module for direct communication on serial port 1 on a Digital Sprite 2 NetVue

V7 jim@controlworks.com 2006.11.01

- Fixed: lack of carriage return for the secondary modes
- Fixed: Bit mask on all camera selections
- Updated touchpanel and help file to new format

V6 jim@controlworks.com

Internal release

V5 jim@controlworks.com 2005.01.14

- Fixed: Bug relating to event list launch commands
- Changed: Removed message\$ output
- Added: playback commands
- Added: Logic to support the initialization of the proper com parameters
- Added: Parameters for defaulting event list and playback values
- Added: Command OK and NOK outputs
- Added: Telemetry preset, recall and clear commands
- Added: Parameter for telemetry stop command
- Added: Motion speed argument for telemetry

V4 tom@controlworks.com 2004.09.21

Added: Event list playback

V3 jim@controlworks.com 2004.04.30

Added: Telemetry commands

V2 jim@controlworks.com 2003.08.31

- Fixed: Attach command
- Added: Message\$ and enable

V1 jim@controlworks.com 2003.08.15

Initial release

Development Environment

This version of the module was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

Hardware	Firmware Version
Crestron PRO2 Processor	3.155.1143
Dedicated Micros "old" Digital Sprite	3.1
Software	Software Version
Crestron SIMPL Windows	2.08.44
Crestron Vision Tools Pro-e	3.7.2.8
Crestron Database	19.02.005
Crestron Symbol Library	531
Crestron Device Library	531

ControlWorks Consulting, LLC Module License Agreement

Definitions:

ControlWorks, *We*, and *Us* refer to ControlWorks Consulting, LLC, with headquarters located at 701 Beta Drive, Suite 22 Mayfield Village, Ohio 44143-2330. *You* and *Dealer* refer to the entity purchasing the module. *Client* and *End User* refer to the person or entity for whom the Crestron hardware is being installed and/or will utilize the installed system. *System* refers to all components described herein as well as other components, services, or utilities required to achieve the functionality described herein. *Module* refers to files required to implement the functionality provided by the module and may include source files with extensions such as UMC, USP, SMW and VTP. *Demo Program* refers to a group of files used to demonstrate the capabilities of the Module, for example a SIMPL Windows program and VisionTools Touchpanel file(s) illustrating the use of the Module but not including the Module. *Software* refers to the Module and the Demo Program.

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Provision of Support

We provide limited levels of technical support only for the most recent version of the Module as determined by Us. We do not provide support for previous version of the module, modifications to the module not made by Us, to persons who have not purchased the module from Us. In addition, we may decline to provide support if the Demo Program has not been utilized. We may withdraw a module from sale and discontinue providing support at any time and for any reason, including, for example, if the equipment for which the Module is written is discontinued or substantially modified. The remainder of your rights and obligations pursuant to this license will not be affected should ControlWorks discontinue support for a module.

Modification of Software

You may not decrypt (if encrypted), reverse engineer, modify, translate, disassemble, or de-compile the Module in whole or part. You may modify the Demo Program. In no event will ControlWorks Consulting, LLC be liable for direct, indirect, incidental or consequential damages resulting from You modifying the Software in any manner.

Indemnification/Hold Harmless

ControlWorks, in its sole and absolute discretion may refuse to provide support for the application of the Module in such a manner that We feel has the potential for property damage, or physical injury to any person. Dealer shall indemnify and hold harmless ControlWorks Consulting LLC, its employees, agents, and owners from any and all liability, including direct, indirect, and consequential damages, including but not limited to personal injury, property damage, or lost profits which may result from the operation of a program containing a ControlWorks Consulting, LLC Module or any component thereof.

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