

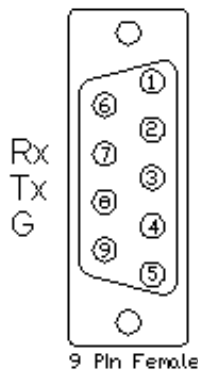
**Partner: Canon**  
**Model: BU-45H**  
**Device Type: Integrated Camera Unit**



**GENERAL INFORMATION**

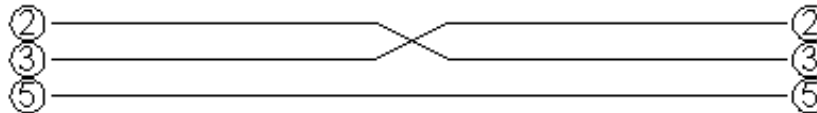
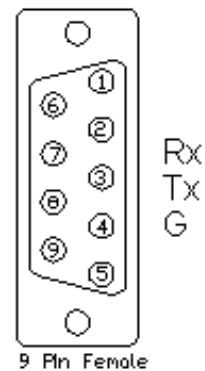
<b>SIMPLWINDOWS NAME:</b>	Canon BU-45H v1.0
<b>CATEGORY:</b>	Camera
<b>VERSION:</b>	1.0
<b>SUMMARY:</b>	This module will control the Canon BU-45H via RS-232
<b>GENERAL NOTES:</b>	This module will control the Canon BU-45H camera via RS-232. This module was tested using a Canon BU-50H camera.
<b>CRESTRON HARDWARE REQUIRED:</b>	C2I-COM, ST-COM, C2-COM-* or CNX-COM2
<b>SETUP OF CRESTRON HARDWARE:</b>	RS232 Baud: 9600 Parity: None Data Bits: 8 Stop Bits: 1
<b>VENDOR FIRMWARE:</b>	Unknown
<b>VENDOR SETUP:</b>	Note that per Canon BU Series manual, an RS-232 to RS422 converter and RJ-45F to DB-9M converter is required for connection to camera.
<b>CABLE DIAGRAM:</b>	CNSP-124.

Rear View of Connector



**CNSP-124**

Rear View of Connector



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**CONTROL:**

Camera_<On/Off>	D	Pulse to turn camera on or off.
Pan_Speed_<Increase/Decrease>	D	Press to increase or decrease the pan speed.
Pan_Speed_Analog_In	A	Analog value to set pan speed. To be used with a slider definition on touchpanel.
Tilt_Speed_<Increase/Decrease>	D	Press to increase or decrease the tilt speed.
Tilt_Speed_Analog_In	A	Analog value to set tilt speed. To be used with a slider definition on touchpanel.
Pan_<Left/Right>	D	Press to pan the camera left or right.
Tilt_<Up/Down>	D	Press to tilt the camera up or down.
Zoom_<In/Out>	D	Press to zoom the camera in or out.
Zoom_<In/Out>_Wide	D	Press to zoom the camera in or out wide.
Focus_<In/Out>	D	Press to focus the camera lens in or out.
Focus_<Manual/Auto>	D	Pulse to set focus mode to manual or auto.
Wiper_Control	D	Pulse to perform one reciprocating wiper operation.
Washer_Control	D	Pulse to execute four washer cycles and set washer terminal to ON during the first two cycles.
White_Balance_Preset_A_Mem	D	Pulse to set white balance to preset A memory. Once this function is triggered, the camera cannot be set back to auto. Enabled only when camera shooting mode is manual.
Shutter_Speed_*	D	Pulse to set the shutter speed. Enabled only when camera shooting mode is manual.
Image_Stabilizer_<On/Off>	D	Pulse to turn image stabilizer on or off.
ND_Filter_*	D	Pulse to set the ND filter.
Shooting_Mode_<Auto/Manual>	D	Pulse to set shooting mode to auto or manual.
Preset_Memory_*	D	Pulse to recall preset memory 0 through 31. If Preset Store is active, this pulse will store the current camera settings (pan, tilt, zoom, focus) to the preset memory selected.
Preset_Recall_Speed_<Up/Down>	D	Press to adjust the time it takes for the camera to recall a stored preset.

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Preset_Store	D	Pulse to enable or disable storing of presets.
Aux_1_<On/Off>	D	Pulse to set the Aux 1 terminal on or off.
Aux_2_<On/Off>	D	Pulse to set the Aux 2 terminal on or off.
Aux_3_<On/Off>	D	Pulse to set the Aux 3 terminal on or off.
Aux_4_<On/Off>	D	Pulse to set the Aux 4 terminal on or off.
FPU_Power_<On/Off>	D	Pulse to turn FPU power on or off.
Color_Bar_<On/Off>	D	Pulse to turn color bar on or off.
Camera_Gain_*	D	Pulse to set camera gain.
Knee_Point_*	D	Pulse to set the knee point. Enabled only when camera shooting mode is manual.
Gamma_Curve_*	D	Pulse to set the gamma curve. Enabled only when camera shooting mode is manual.
Color_Matrix_*	D	Pulse to set the color matrix. Enabled only when camera shooting mode is manual.
Black_Level_*	D	Pulse to set black level. Enabled only when camera shooting mode is manual.
H_Detail_Frequency_*	D	Pulse to set the horizontal detail frequency. Enabled only when camera shooting mode is manual.
R_Gain_<Up/Down>	D	Press to adjust the R gain. Enabled only when camera shooting mode is manual.
G_Gain_<Up/Down>	D	Press to adjust the G gain. Enabled only when camera shooting mode is manual.
B_Gain_<Up/Down>	D	Press to adjust the B gain. Enabled only when camera shooting mode is manual.
Color_Gain_<Up/Down>	D	Press to adjust the color gain. Enabled only when camera shooting mode is manual.
Hue_<Up/Down>	D	Press to adjust the hue. Enabled only when camera shooting mode is manual.
Sharpness_<Up/Down>	D	Press to adjust the sharpness. Enabled only when camera shooting mode is manual.
Setup_Level_<Up/Down>	D	Press to adjust the setup level. Enabled only when camera shooting mode is manual.
Iris_AE_Level_<Up/Down>	D	Press to adjust the AE level. Controls Iris when shooting mode is manual and AE Level when shooting mode is auto.

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Master_Pedestal_<Up/Down>	D	Press to adjust the master pedestal level. Enabled only when camera shooting mode is manual.
Initialize_Home	D	Pulse to initialize the camera and move to home position.
Initialize_Original	D	Pulse to initialize the camera and move to original position.
From_Device	S	Serial signal to be routed from an RS-232C port

### FEEDBACK:

Camera_Is_<On/Off>	D	Indicates whether the camera is on or off.
Pan_Speed_Analog_Out	A	Represents the pan speed of the camera. For bargraph or slider definition on touchpanel.
Tilt_Speed_Analog_Out	A	Represents the tilt speed of the camera. For bargraph or slider definition on touchpanel.
Pan_Is_*	D	Indicates the camera's pan activity status.
Tilt_Is_*	D	Indicates the camera's tilt activity status.
Zoom_Is_<Busy/Inactive>	D	Indicates the camera's zoom activity status.
Focus_Is_<Busy/Inactive>	D	Indicates the camera's focus activity status.
Focus_Is_<Manual/Auto>	D	Indicates if the camera's focus mode is manual or auto.
White_Bal_Is_<Auto/Not_Auto>	D	Indicates if the white balance mode is set to auto or not auto.
Preset_Recall_Speed_Text	S	Text field indicating the current preset recall speed.
Preset_Store_Active	D	Flashes to indicate that the preset store mode is active. When this mode is active and a preset memory button is pulsed, the current camera's pan, tilt, focus and zoom settings will be stored in the camera for that memory preset button and the Preset Store Active mode will clear.
R_Gain_Analog_Gauge	A	Represents the R Gain setting sent to the camera from the module (this is one-way, will not represent R Gain set locally on camera). For bargraph or slider definition on touchpanel.
G_Gain_Analog_Gauge	A	Represents the G Gain setting sent to the camera from the module (this is one-way, will not represent G Gain set locally on camera). For bargraph or slider definition on touchpanel.
B_Gain_Analog_Gauge	A	Represents the B Gain setting sent to the camera from the module (this is one-way, will not represent B Gain set locally on camera). For bargraph or slider definition on touchpanel.

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Color_Gain_Analog_Gauge	A	Represents the Color Gain setting sent to the camera from the module (this is one-way, will not represent Color Gain set locally on camera). For bargraph or slider definition on touchpanel.
Hue_Analog_Gauge	A	Represents the Hue setting sent to the camera from the module (this is one-way, will not represent Hue set locally on camera). For bargraph or slider definition on touchpanel.
Sharpness_Analog_Gauge	A	Represents the Sharpness setting sent to the camera from the module (this is one-way, will not represent Sharpness set locally on camera). For bargraph or slider definition on touchpanel.
Setup_Level_Analog_Gauge	A	Represents the Setup Level setting sent to the camera from the module (this is one-way, will not represent Setup Level set locally on camera). For bargraph or slider definition on touchpanel.
Iris_AE_Level_Analog_Gauge	A	Represents the Iris AE Level setting sent to the camera from the module (this is one-way, will not represent Iris AE Level set locally on camera). For bargraph or slider definition on touchpanel.
Master_Pedestal_Analog_Gauge	A	Represents the Master Pedestal setting sent to the camera from the module (this is one-way, will not represent Master Pedestal set locally on camera). For bargraph or slider definition on touchpanel.
Camera_Is_Busy	D	Indicates if the camera is currently busy initializing, powering on or setting white balance to preset a memory.
AE_Is_<Auto/Not_Auto>	D	Indicates if the AE mode is set to auto or not auto.
To_Device	S	Serial data signal to be routed to a 2 way com port.

**TESTING:**

OPS USED FOR TESTING:	v4.001.1012
SIMPL WINDOWS USED FOR TESTING:	2.11.27
DEVICE DB USED FOR TESTING:	25.05.002.00
CRES DB USED FOR TESTING:	21.01.014.00
SYMBOL LIBRARY USED FOR TESTING:	644
SAMPLE PROGRAM:	Canon BU-45H v1.0 Demo PRO2
REVISION HISTORY:	v1.0