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## Crestron to eKey Biometrics Interface

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### **Summary**

This datasheet relates to Ultamation's eKey interface module for Crestron control systems. It provides the essential information for integration between the eKey system and the Crestron control processor, and for programming of the module with a host Crestron program.

This module is designed for use with the eKey "Home" and "Multi" platforms.

### **Installation Notes**

The CV LAN interface communicates to the Crestron system directly via an IP connection. No special wiring or configuration is required outside of that needed for a standalone eKey installation.

### **Equipment Setup**

Connect the eKey equipment and setup the system using the eKey controller as per the eKey installation instructions. Specific eKey installation instructions can be obtained from:

<http://international.ekey.net/home-en>

## **Programming Notes**

Each of the module files should be placed either in the host program's project folder, or to make the eKey interface available to all Crestron programs, in the SIMPL Windows installation's User Macro (for .umc files) and User SIMPL+ (for .usp and .ush files) directories. This pdf should be placed in both directories for SIMPL's FI help function to work properly.

The module is broken into two parts:

1. A protocol receiver module that handles listening for and parsing messages from the CV LAN interface.
2. One or more scanner decoder modules that handle providing feedback from scanners in the system.

### **The Protocol Receiver Module**

This module handles all of the IP communications to the CV LAN and eKey controller.

1. Put the IP Address of the CV LAN into the CV\_LAN\_IP\_Address parameter.
2. Put the "Receiver port" value (set during eKey configuration) into the CV\_LAN\_Port parameter.
3. Put the "Spacer" character (again, set during eKey configuration) into the CV\_LAN\_Spacer parameter. This acts as a protocol delimiter.
4. Put the Protocol Type selected during eKey configuration into the CV\_LAN\_Protocol parameter. This can be "Home", "Multi" or "Rare". Ultamation recommends the use of the "Multi" protocol wherever possible.

The signals that this module exposes are raw data, parsed from the eKey protocol strings, and should be used with the "Scanner Decoder" module (discussed below) to obtain meaningful feedback.

### **The Scanner Decoder Module**

This module handles decoding feedback from the Protocol Receiver module, and turning it into meaningful signals that you can then trigger events with in your program.

Add the serial number of the scanner that you wish to monitor into the "ScannerSN" parameter on this module. In eKey Multi installations, this serial number can be obtained from the eKey control interface's built-in menu system. For other eKey platforms please refer to the manufacturer's documentation.

This module can also process messages from the control processor (i.e. for button input activation detection), if the serial number of the *control processor* is entered into the "ScannerSN" parameter.

## Version Information

This module has been compiled and tested under:

3-Series FW:	1.012.0023
SIMPL Windows:	4.02.65
Device DB:	66.02.001.00
CresDB:	51.05.007.00
Symbol Library:	948
SIMPL+:	4.02.26
Sample Program:	eKey Demo PRO3 (Ultamation).smw

## The Protocol Receiver Module

Enable	Rising edge. Connects to the CV LAN. Disconnects on the falling edge of the signal.
ValidPacket	Connect to the corresponding input on the eKey Scanner Decoder Module.
UserID#	Connect to the corresponding input on the eKey Scanner Decoder Module.
UserStatus#	Connect to the corresponding input on the eKey Scanner Decoder Module.
FingerID#	Connect to the corresponding input on the eKey Scanner Decoder Module.
Key#	Connect to the corresponding input on the eKey Scanner Decoder Module.
Action#	Connect to the corresponding input on the eKey Scanner Decoder Module.
InputID#	Connect to the corresponding input on the eKey Scanner Decoder Module.
UserName\$	Connect to the corresponding input on the eKey Scanner Decoder Module.
ScannerSN\$	Connect to the corresponding input on the eKey Scanner Decoder Module.
ScannerName\$	Connect to the corresponding input on the eKey Scanner Decoder Module.

## The Scanner Decoder Module

ValidPacket	Connect to the corresponding output on the eKey Protocol Receiver Module.
UserID#	Connect to the corresponding output on the eKey Protocol Receiver Module.
UserStatus#	Connect to the corresponding output on the eKey Protocol Receiver Module.
FingerID#	Connect to the corresponding output on the eKey Protocol Receiver Module.
Key#	Connect to the corresponding output on the eKey Protocol Receiver Module.
Action#	Connect to the corresponding output on the eKey Protocol Receiver Module.
InputID#	Connect to the corresponding output on the eKey Protocol Receiver Module.
UserName\$	Connect to the corresponding output on the eKey Protocol Receiver Module.
ScannerSN\$	Connect to the corresponding output on the eKey Protocol Receiver Module.
ScannerName\$	Connect to the corresponding output on the eKey Protocol Receiver Module.
User_Access_Granted	Pulses when access is granted to a user.
User_Rejected_Not_Recognised	Pulses when a user is not recognised
Scanner_Rejected_Timezone_A	Pulses when the scanner rejects a user based on current time zone. Configured on controller.
Scanner_Rejected_Timezone_B	Pulses when the scanner rejects a user based on current time zone. Configured on controller.
User_Rejected_Locked	Pulses when a user is rejected because the scanner is locked.
User_Rejected_Only_ALWAYS	Pulses when a user is rejected, because the scanner is set to only accept users set to "ALWAYS", as opposed to Timezone A or B.
Scanner_Not_Assigned_To_Controller	Pulses when a user is detected, but the scanner is not coupled with a controller
Scanner_Input_Trigger	Pulses when a controllers input is triggered

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Scanner_User#	The numeric user ID, propagated when a user is detected
Scanner_User_Name\$	The string user ID, propagated when a user is detected
Scanner_User_Status_Normal	High when the user is in "disabled" mode
Scanner_User_Status_Locked	High when the user is in "enabled" mode
Scanner_User_Status_Undefined	High when the user's mode is undefined
Scanner_Finger_Left_*	High when a user's specific finger is detected (Left hand)
Scanner_Finger_Right_*	High when a user's specific finger is detected (Right hand)
Scanner_Finger_Undefined	High when the scanned finger is not defined
Scanner_Name\$	The string name of the scanner
Scanner_Input#	The numeric designation of the last activated button input.
Scanner_Key#	The numeric designation of the last triggered key

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Examples:

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