

# AES Encryption for Hirsch ScramblePad®

BQT's AES Encryptor suite provides encryption support to Hirsch Electronics' ScramblePad®, high-security access control solution.

BQT Solutions and Hirsch Electronics have co-developed a suite of AES Encryptor products to provide end to end encryption on both existing and new ScramblePad® installations.

BQT's AES Encryptor suite ensures that data communication between the ScramblePad® and the control panel is encrypted using the 128bit AES Rijndael protocol. Purpose built devices encrypt and decrypt the data transferred between ScramblePad® and Digi\*Trac Controller. The encryption devices operate in a completely transparent manner, purely providing a layer of encryption on the data being transferred.

Due to the need encrypt at one end and decrypt at the other, the encryption system relies on a device to be positioned at both the ScramblePad end and the control panel end. At the control panel, the Hirsch Master device is used to supply encrypted communications to up to four ScramblePad® devices. In each ScramblePad® device, the Hirsch Remote device is utilized for encryption of data travelling to and from the control panel.

If more than four devices require encryption, the Hirsch Extender can be installed, supplying encrypted comms to an additional four ScramblePad® devices. Each Hirsch Extender device is purely an expansion device that relies on a connection to a Hirsch Master device.

The suite of encryption devices has been designed to be easily retrofitted to existing data lines or installed at factory. Due to the transparent nature of the encryption operation, during a retrofit installation there is no requirement to upgrade firmware in either the ScramblePad® or Digi\*Trac Controller.

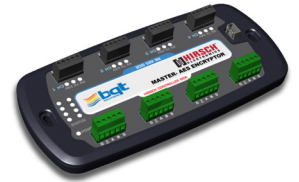
The encryption range is compatible with the M1, M2 and M8 DIGI\*TRAC™ controllers as well as the DCA enunciation device and the full suite of ScramblePad products including:

- ScramblePad®
- ScramblePad/Match
- ScrambleProx®
- ScrambleSmart™
- ScrambleSmartProx

# Hardware

## Hirsch Master

The Master device is manufactured in a purpose built injection moulded enclosure. The cover to the enclosure provides mounting architecture as well as status LED's, product identification and labelling. At each end of the device are mounting holes for secure positioning within the Hirsch control panel. The electronics are fully encapsulated within the enclosure providing security and durability to the unit. Connection of data lines is via plugable screw terminals, making connection to these terminals very simple.



## Hirsch Extender

The Extender device utilizes the same enclosure as the Master however is differentiated by colour. It relies on a supplied cable to link to the Master device when added to the system.



## Hirsch Remote

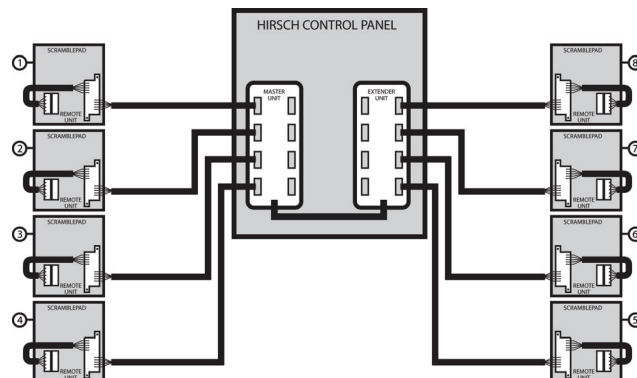
The Remote unit is presented in a low profile plastic enclosure with the electronics fully encapsulated. The unit is designed to be an integral component of a Hirsch ScramblePad®, ScrambleProx, ScrambleSmart, or Match assembly and is suitable for retrofit applications. From the Remote unit are two cables, one going to the Master Unit and the other to the data input/output connector on the ScramblePad. The enclosure includes two mounting holes for the mechanical attachment to the ScramblePad® backplate. Alternatively the Remote can be adhered in place using double sided adhesive tape. Once mounted, the Remote Unit is contained fully within the Scramblepad® housing.



## Hirsch Encryptor specifications

<b>master/extender unit</b>	
- input	- Hirsch proprietary protocol
- output	- RS485 encrypted / AES 128 bit Rijndael
<b>remote unit</b>	
- input	- RS485 encrypted / AES 128 bit Rijndael
- output	- Hirsch proprietary protocol
<b>power requirement</b>	24 - 28 Vdc available from Hirsch Controller, UPS backed
<b>operating temperature</b>	-10°C to +55°C (14°F to 131°F)
<b>relative humidity</b>	90% max, operating non-condensing
<b>reader dimensions</b>	
- master/extender unit	- 195mm (L) x 90mm (W) x 16mm (D) (7.70" x 3.54" x 0.63") - excluding connectors
- remote unit	- 75mm (L) x 21mm (W) x 9mm (D) (2.96" x 0.83" x 0.35")
<b>status LED's</b>	
- master/extender unit	- Error byte / Hirsch A & B, +24Vdc + 5 Vdc, RXD, TXD
- remote unit	- Error byte
<b>colour finish</b>	Charcoal
<b>certifications</b>	FCC, CE
<b>warranty</b>	2 years

## Interconnectivity



For further information, please visit our website [www.bqtsolutions.com](http://www.bqtsolutions.com) or contact us at one of our global locations.

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**NOTE:** Support line operates within Australia Eastern Standard Time.

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