SPECTRUM™ III
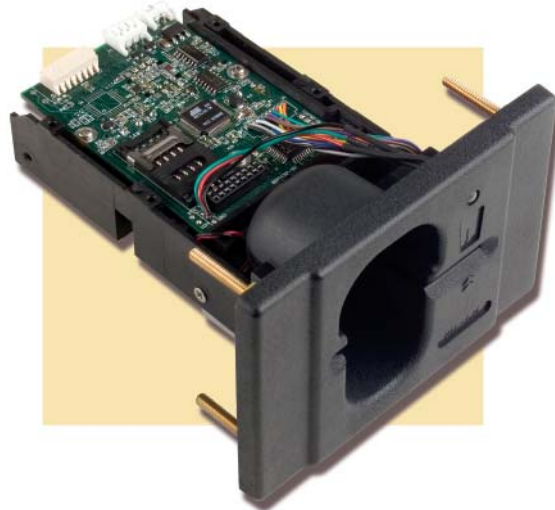# HYBRID INSERT READER

Intelligent OEM Module

for Magnetic Stripes
RS-232, USB, PC/SC, and USB/RS-232 Interface

USB

CE

Reads magnetic stripes.

ID TECH's Spectrum Hybrid Insert Reader is designed to read and decode up to three tracks of magnetically-encoded information. It reliably reads media conforming to ISO 7810 and 7811 standards. The magnetic head is spring-loaded to ensure good contact with warped or bowed cards.

Reads smart cards.

The ID TECH Hybrid Insert Reader can read and write to Integrated Circuit Cards (ICC), smart cards, memory or microprocessor cards conforming to ISO 7816 standards. The reader is approved to the Terminal Level 1 EMV 2000 specification, and is able to communicate with a host PC as a smart card reader-writer under the PC/SC version 1.0 interface. In fact, both the USB and RS-232 versions of the reader can communicate with the host as PC/SC or serial devices. The PCA provides a SAM (SIM) socket. An optional secondary PCA provides four additional SAM interface sockets.

Selects and formats data.

The ID TECH Hybrid Insert Reader is a fully-intelligent unit that can be configured to read all tracks or selected tracks from a magnetic stripe. It can also output data with a terminating character and up to nine prefix and postfix characters to match a data format expected by the host.

Industry compatible footprints and applications.

The reader chassis is molded from a fiber-filled engineering plastic that supports the magnetic head and PCB with a landing-style smart card connector. The smart card connector has gold-plated contacts that create a .02 inch "wiping" action to ensure dependable connection and long life. A molded bezel (choice of standard, metal, or flush mount) attachs to the chassis.An optional tri-color LED guides the user through the reading process and signals successful and unsuccessful reads. In addition, the reader offers debris gate, card latch, and "half card drop-out".

IDTECH ®

Value through Innovation

Spectrum™ III Intelligent Hybrid Insert Reader Specifications

Electrical

RS-232:	+5 VDC/70mA* (power adapter regulated 5 VDC/500mA or equivalent).
USB:	+5 VDC/70mA power supplied by the host computer.
Operating Current:	70 mA maximum for three tracks of magnetic data.
Chassis Ground:	Connected to GND and magnetic head case.

*Without latch or smart card options.

Environmental

Operating Temperature:	32° F to 131° F (0° C to 55° C).
Storage Temperature:	-40° F to 158° F (-40° C to 70° C).
Humidity:	Maximum 95% non-condensing.

Reliability

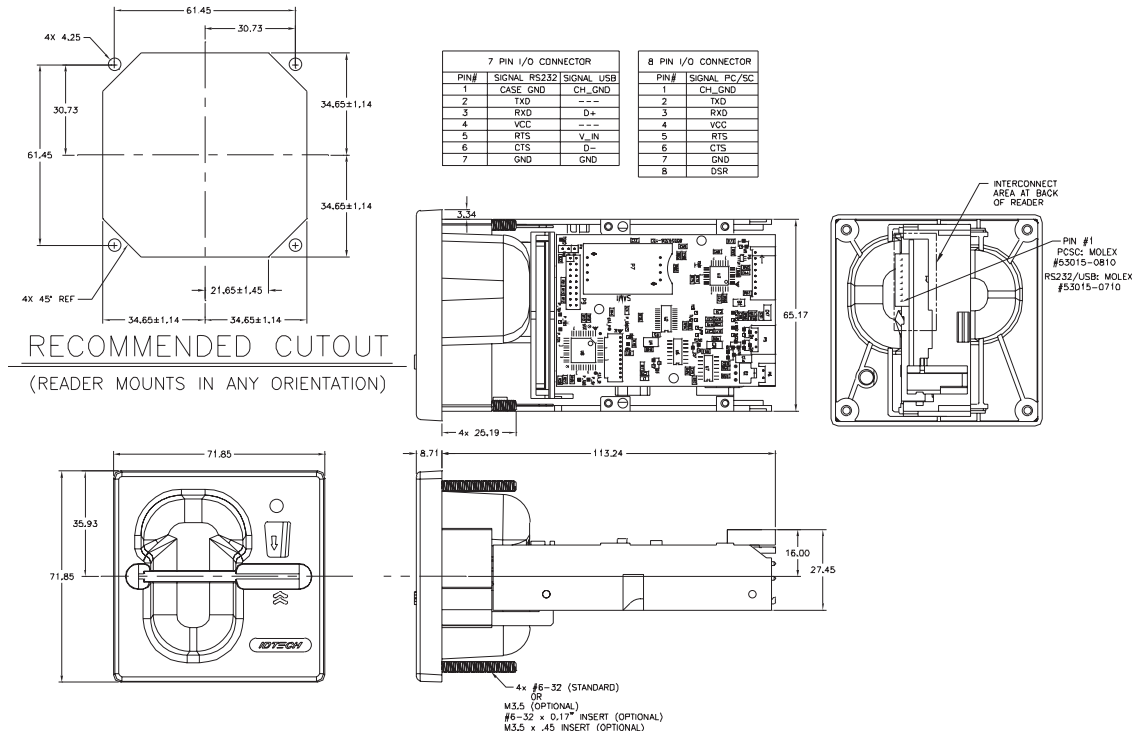|	
Magnetic Head Life:	1,000,000 cycles minimum.*
IC Card Connector:	1,000,000 cycles minimum.* Contacts are gold-plated and exceed EMV life requirements for minimum resistance over the life of the reader.
Chassis and Bezel:	1,000,000 card cycles minimum.*
Warranty:	One year, parts and labor.

*All wear reliability numbers are based on operation in a benign environment.

Mechanical

Magnetic Stripe Formats:	ISO 7811, F2F. Media with magnetic coercivity of 300 through 4,000 Oersted can be read.
Reading Speed:	3 to 50 inches per second.
Media Thickness:	.025 to .035 inches. Maximum card thickness .035 inches.
Dimensions:	Length: 4.64 inches (117 mm). Width: 3.97 inches (101 mm). Height: .389 inches (9.88 mm).*
Options:	Latch, Gate, Security Access Module (SAM) sockets, LED Indicator, "Card Seated" Signal (optional for magnetic stripe, standard for ICC), "Card Present" Signal.

*Without multiple SAM sockets.

Insert Reader Footprint:

RECOMMENDED CUTOUT
(READER MOUNTS IN ANY ORIENTATION)

7 PIN I/O CONNECTOR		
PIN#	SIGNAL RS232	SIGNAL USB
1	CASE GND	CH_GND
2	TXD	– – –
3	RXD	D+
4	VCC	– – –
5	RTS	V_IN
6	CTS	D–
7	GND	GND

8 PIN I/O CONNECTOR	
PIN#	SIGNAL PC/SC
1	CH_GND
2	TXD
3	RXD
4	VCC
5	RTS
6	CTS
7	GND
8	DSR