Intelligent Reader Module (IRM)
for Compass 6e

The Intelligent Reader Module (IRM) serves as the door controller for Compass 6e integrated security management and access control systems. The IRM can also be configured for credential or biometric control of elevators, lighting and HVAC, as well as arming/disarming zones based upon card activity.

All Intelligent Modules (IMs) use advanced circuit board design, a high speed Rabbit™ processor, and surface mount component technology. Compass hardware is unlike any other in the security industry. Using combinations of only three modules – IRM (Reader Control), IIM (Input Monitoring) and IOM (Output Activation) – you can achieve nearly limitless capability in an extremely small footprint

Compass systems can accommodate a single entry or campus-wide enterprise application and everything in between. Systems can be easily and economically expanded as requirements change or grow.

Main Features

A variety of communication options are available through the use of plug-on daughterboard communication adapters. Adapters are available to support TCP/IP, RS-485, RS-232 and dial-up topologies. Any combination of these techniques may be used in a single system reducing overall system cost and significantly expanding system capability.

- 2 definable reader ports
- 8 multi-state inputs configurable for 2, 3, or 4-state supervision
- 4 multi-purpose outputs
- Full distributed processing
- TCP/IP, RS-485 (full duplex), RS-232 (two-door package only) or dial-up communication
- Up to 32 IMs (any combination IRM, IIM, IOM) may be multi-dropped on a single comm line or TCP/IP LAN connection
- Supports industry standard reader types and technologies including Wiegand, card and/or PIN, proximity, biometric, SmartCard, mag stripe, barcode, etc.
- Supports up to 29 different card formats (up to 64 bits) and the proprietary Compass 29-bit card format
- On-board memory supports up to 26,344 unique IDs
- On-board replaceable lithium battery maintains critical memory for up to two months if all power is lost
- Extensive transient protection for enhanced reliability

- Flash memory for rapid firmware upgrades
- Watchdog timer
- Auto-detect and Auto-configure
- Auto-device assignment
- Auto-downloads
- UL 294, 1076 & CAN/CSA certified

Parts and Ordering Information

IRM Packages	
IRM223	2-Door Package: One 2-Door IRM with one RS-232 communication daughterboard in enclosure 10" x 12" x 4"
IRM213	2-Door Package: One 2-Door IRM with one RS-485 communication daughterboard in enclosure 10" x 12" x 4"
IRM203	2-Door Package: One 2-Door IRM with no daughterboard in enclosure 10" x 12" x 4" Select daughterboard from IM Components below
IRM413	4-Door Package: Two 2-Door IRM (allows up to 4 readers) with two RS-485 communication daughterboards in enclosure 12" x 18" x 4"

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Specifications

Size
4.5" x 6" x 1.5", Weight 8 oz.

Temperature
0° to 50° C

Humidity
0 to 85% non-condensing

IRM Power
650ma peak @ + 12VDC, 9 watts (includes communication daughterboard). +12VDC nominal (13.8VDC max/10.8VDC min) Reverse polarity protection. PTC fuse on + 12VDC input. On-board + 5VDC input (with thermal shutdown). Transient protected.

Inputs
Eight 2, 3, or 4-state software selectable 4.7 and 15k ohm resistors

Outputs
Four Form "C", rating: 1A @24VDC

Readers
Two Wiegand or two Clock+Data

Cardholders
26,344 per IRM

PIN Code
Up to 6 digits

Facility Access Levels
255 per IRM

Holidays/Special Events
255 per IRM

Timelines
255 per IRM

Interfaces
TCP/IP, RS-485 (full duplex), RS-232 (2-door package only) or dial-up

Baud Rates
2,400 to 115,200 bps

Diagnostics
TX and RX LEDs, "Heartbeat" (address) LED, output LED. Downloadable system diagnostics.

Parts and Ordering Information continued

IRM Packages continued	
IRM403	4-Door Package: Two 2-Door Intelligent Reader Modules (allows up to 4 readers) with one RS-485 communication daughterboard in enclosure 12" x 18" x 4". A second daughterboard is required; options include CDB001, CDB004 or CDB005
IRM813	8-Door Package: Four 2-Door Intelligent Reader Modules (allows up to 8 readers) with three RS-485 communication daughterboards in enclosure 18" x 22.25" x 4.5". A fourth daughterboard is required; options include CDB001, CDB004 or CDB005
IRM Components	
IMH001	Enclosure (10" x 12" x 4") with key lock, label, tamper switch and power supply
IMH004	Enclosure (12" x 16" x 4") with key lock, label, tamper switch and power supply
IMH008	Enclosure (18" x 22.25" x 4.5") with key lock, label, tamper switch and power supply
MPS001	Module Power Supply: 12VDC @ 1.2 amp, non-UL listed, transformer and mounting studs.
MPS002	Module Power Supply: 12VDC @ 2.5 amp, non-UL listed, transformer and mounting studs.
MPS003	Module Power Supply: 12VDC @ 6 amp, non-UL listed. Does not require transformer and mounting studs.
CDB001	RS-485 Communication Daughterboard
CDB002	RS-232 Communication Daughterboard
CSB003	Control Communication Daughterboard
CDB004	RS-232–RS-485 Communication Daughterboard
CDB005	TCP/IP–RS-485 Communication Daughterboard
IRM003	Intelligent Reader Module Board Only. Includes mounting studs with 4.7k and 15K resistor packs. Communication daughterboard not included.
Battery Backup	
RP136C	5AH Battery (For use with IRM223, IRM213, IRM203, IIM221, IIM211, IOM221, IOM211 and IMH001)
RP136D	7AH Battery (For use with IRM413, IRM403 and IMH004)
RP136E	12AH Battery (For use with IRM413, IRM403, IMH004, IRM813 and IMH008)
RP136F	18AH Battery (For use with IRM813 and IMH008)
Lithium Battery	
IM-BAT	Coin cell 3V lithium battery maintains on-board module data

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