

**HEAD-END SOFTWARE**

**Velocity Version 3.5 SP1** – available in Workstation, Corporate, Federal, Enterprise Level 1, and Enterprise Level 2 editions

**COMPUTER REQUIREMENTS**

**Software**

- Windows Server 2008 R2 64-bit Standard or Enterprise edition (for Server)
- Windows 7 SP1 32-bit or 64-bit Professional, Ultimate, or Enterprise edition (for standalone Workstation or Client)
- Windows XP SP3 32-bit or 64-bit Professional edition (for Client only)
- SQL Server 2008 Express included; SQL Server 2008 is optional
- DIGI\*TRAC CCM Firmware 7.4.53 or higher
- SNIB2 Firmware 5.99 or higher
- XBOX Firmware 2.45 or 3.15

**Hardware for Velocity Server**

- Intel Xeon E3-1220 3.10 GHz Turbo Quad Core/4T Processor with 8MB Cache (or equivalent)
- 4GB DDR3 SDRAM (1333MHz)
- 300GB 15K RPM SAS Hard Drive
- 16X DVD+/-RW Drive
- Mouse & Keyboard
- 20-inch LCD Monitor and 1GB Video Card
- Sound Card/Chip and Speakers
- 1 Ethernet RJ-45 Port
- USB Ports to support Page Printer for Reports, Badge Printer for Badges, and Card Enrollment Station

**Optional Equipment**

- Uninterruptible Power Supply
- 1 Parallel Port to support Line Printer for Real-Time Alarms & Events
- Data Backup Device w/ Removable Media
- Modem (if using dial-up for Controllers)
- Camera for ID Photo on Badges

**Hardware for Velocity standalone Workstation or Velocity Client**

- Intel Core i7 Quad Core 3.4GHz Processor with 8MB Cache (or equivalent)
- 4GB DDR3 SDRAM (1333MHz)
- 250GB 6.0Gb/s SATA Hard Drive
- 16X DVD+/-RW Drive
- Mouse & Keyboard
- 20-inch LCD Monitor and 1GB Video Card
- Sound Card/Chip and Speakers
- 1 Serial Port
- 1 Ethernet RJ-45 Port

To ensure long-term compatibility with Velocity feature enhancements and future versions of Windows and SQL Server, invest in the best computer possible.

**VELOCITY COMPONENTS**

- **Event Viewer** – Routing by Operator
- **Alarm Viewer** – Routing by Operator
- **Enrollment Manager**
  - User Management
  - User-Defined Fields with option for Drop Down Lists
  - Single and Batch Badge Printing
  - Badge Print and Issue Control
  - Person Templates and Person Groups
  - Multi-Person Edit
  - Scanner Support – Business Card, Drivers License, Passport, PIV Reader
- **Linked Credential Templates**
- **Door/Master Door Groups** – Global
- **Function Groups**

**VELOCITY COMPONENTS (cont.)**

- **Photo ID Badging** – 1 and 2 Sided
- **Badge & Graphic Designer**
- **Alarm Graphics**
  - User-Customizable Dynamic Icons
  - Alarm Priority / Queue
  - Control Zone Area Status
  - Issue Control Commands
  - CCTV Integration
  - Supports Multiple File Formats: BMP, JPG, EMF, WMF, DXF (AutoCad)
  - HTML & IP Camera Links
- **Customization Manager**
  - Language Translations
  - Assign .WAV audio files to alarm types
  - Define Alarm Priority Levels
  - Define Alarm Type Response Instructions
  - Point Customization & Escalation
- **Status Viewer** – User-Defined Groups
  - Door Status
  - Alarm Input & Mask Status
  - Relay Status
- **Command Sets** – Issue Commands to Controllers Globally
  - Access / Unlock / Relock Doors
  - Mask / Unmask Alarms
  - Change Facility Threat Level
- **SQL Manager**
  - Manual Backups
  - Database Restore
- **Velocity Scheduling Agent**
  - Archive Alarm and Event Logs
  - SQL Database Backups
  - Synchronize Controller Clocks
  - Run Reports
  - Email Reports
  - Run Import/Export Users
  - Run 3<sup>rd</sup> Party Application
  - Run Command Set
  - Dial-Up Remote Sites
- **Operators and Roles**
  - Rights and Permissions by Workstation Defined by Role
  - Restrict by Role: Users, Hardware, Graphics, Reports, Command Sets, Credential Templates, and Status Groups
- **optional Web Console (requires IIS)**
- **DVR Integration – American Dynamics integrated; others available**
- **Diagnostics Window**
- **User Data Import/Export Wizard**
- **Email Notification of Alarm Events**
- **Serial Port Formatted Output**
- **MS Message Queue**
- **Alarm Responses**
- **CCTV Interface**
- **Context-Sensitive Help**
- **Reports** – Standard and Customizable
- **Who's Inside Display**

**VELOCITY FEATURES**

**Hardware Features**

- CCM: FLASH Downloadable Controller Firmware; 4,000 base user capacity (expandable, except M1N)
- AEB8 (addresses 1-32): supports up to 32 Expansion inputs per controller
- MEB/CB64 & 128: Combination Code/Buffer Expansion Board; Up to 132K users supported per controller
- X-Box & SNIB2: Supports Regional Passback, User Management, and Input/Output linking for all controllers connected to X-Box or SNIB2

**VELOCITY FEATURES (cont.)**

**Software Features**

- Standard Windows Interface for most components; new "ribbon" toolbar for Velocity's main window and the Badge & Graphic Designer
  - User-Configurable GUI by Operator
  - Unlimited User Capacity
  - Multiple Function Credentials
  - Multiple Credentials per User
  - PIN numbers with up to 15 Digits
  - Card Codes with up to 32 Hex Digits (requires CCM Firmware 7.4.58 or higher)
  - Global Time Zones and Holidays
  - 366-Day Holiday Schedule, this year and next year; 4 Holiday Schedules per Time Zone
  - Automatic Daylight Savings Time Adjustment
  - Restrict Access By: Time of Day; Day of Week; Door; Alarm Condition
  - Door Groups – Each Reader Address (Entry & Exit) has its own Time Zone
  - Momentary Access By CODE, Card, Dual Technology
  - Additional User Functions: Unlock / Relock; Alarm Mask / Unmask; Lock Down / Lock Down Release
  - Extended Access with Countdown display on ScramblePad
  - Special Needs Time Extension
  - Card Only At Dual Technology By Time Zone
  - 2 Person Access – A/B Rule By Door with Executive Override
  - Tag User For Tracking
  - Door Status Monitoring: Door Forced; Door-Open-Too-Long; Auto-Relock
  - Threat Levels (99) control of reader disable, user restriction, dual required
  - Passback – Direction Control
    - Hard / Soft
    - Timed
    - Internal Restriction
    - Passback Zones with Executive Override
    - Regional per X-Box
  - Occupancy Counting
  - Automatic Mask / Unmask of Alarms based on Occupancy Count
  - Temporary User Controls
    - Use Count Limits (1-255 Uses)
    - Temporary Day Limits (1-255 Days)
    - Absentee Rule Limits (1-255 Days)
    - Disable or Delete On Expiration of Temporary Users
    - Regional per X-Box
  - Entry / Exit Delays For Alarm Control
  - Extensive Zoning Capabilities of Alarms
  - Alarm Input State Change and Mask Status Reporting
  - Alarm Action Features – TZ control of all options, Trigger CZ on Alarm and Secure "Latch Monitor" function with DTLM3
  - Door / Equipment Interlocking (Man Traps, Sally Ports), and Misc. Input / Output Linking Applications
  - DIGI\*TRAC Controller – Export, Import, Duplicate, and Drag & Drop controller configurations
  - User Partitioning
  - Alarm Point Level Customization
  - Alarm & Event Routing by Operator
- Interoperability**
- SDK – Professional Services Support
    - API for Users & Credentials

## SCRAMBLEPAD®

### Patented Features

- Scrambling Display
- Viewing Restrictor

### Additional Features

- Weather Resistant
- 3 - 15 Digit Codes (simultaneously)
- Duress
- Evenly Distributes Wear
- Supervised
- Physical Tamper
- CODE Tamper
- Includes MATCH Functionality
- Auto-Start of ScramblePad Option When Dual Credential Required
- Extended Access Countdown Display
- Green LED Follows Door Relay

### 2 Versions (both with Integrated MATCH Functionality)

- DS47L: ScramblePad
- DS47L-HI: ScramblePad with high intensity display for high ambient lighting conditions

### Versions That Include Proximity (with Integrated MATCH Functionality)

- DS47L-SPX (HID)
- DS47L-SPX-HI (HID)

**NOTE: Other proximity versions and Smart Card versions are available.**

### Mounting Boxes

- MB1: Flush Mount
- MB2: Surface Mount
- MB2S: Surface Mount, Shallow Depth
- MB2SL: Surface Mount, Sloped
- MB3: Heavy Duty, Flush
- MB4: Heavy Duty, Surface
- MB5: Exterior, Surface
- MB8: Heavy Duty, Flush, ADA
- MB9: Heavy Duty, Surface, ADA
- MB10/11: LCD Option
- MP35: Mounting Post for MB5, 35", for curb mounting
- MP41: Mounting Post for MB5, 41", for ground level mounting
- UMK: Universal Mounting Kit (requires MB2)

Standard Mounting Height: 58"  
ADA Mounting Height: 48"

**NOTE: Mounting Height Is Subject To Local Codes.**

## MATCH™

- Interface To Readers Other Than ScramblePad
- ABA Format
- 26-55 Bit Standard Wiegand Format
- 75 Bit GSA Format
- One MRIB Required Per Door (except on Mx Controllers which include 6-pin Wiegand terminals for direct wiring of one entry reader per door)

**NOTE: MRIB available as board only (MRIB), or as an assembly (MRIA) which includes mounting base and bezel and requires Hirsch Mounting Box. Integrated MATCH functionality included with all DS47L ScramblePads. Separate MATCH required for custom formats.**

## MATCH™ (cont.)

### Readers Supported

- Magnetic Stripe
- Bar Code
- Wiegand
- Proximity
- Smart Card
- FIPS-201 PIV or PIV-I Readers
- Biometric:
  - Hand Geometry
  - Finger Print
  - Retina Scan
  - Iris Scan
  - Facial Recognition
- Smart Card / Biometric Combination

## DIGI\*TRAC™

### Controller Models

- Model **M1N**: 1 Door Access Control
- Model **M2N2**: 2 Door Access Control
- Model **M8N2**: 8 Door Access Control
- Model **M16N2**: 16 Alarm Inputs
- Model **MSPN2-8R**: 8-32 Relay Outputs
- Model **M64N2**: 64 Relay Outputs
- Model **Mx-2, Mx-4, or Mx-8**: 2, 4, or 8 Door Access Control (can be upgraded in the field by changing the CCMx)

### Key Hardware Features

- NEMA Style Enclosure
- Conduit Knockouts
- Removable Door
- Key Lock
- Tampered Enclosure
- 10 Amp Door Relays (5 Amp on Mx)
- Dedicated Alarm Relays
- Internal Power Supply
- UPS With Battery
- Memory Battery
- Fused Power Circuits
- Parallel Printer Port (except on Mx)
- Relay Status LEDs
- Diagnostic LEDs
- CCM - Command & Control Module
- UL294 on Model 2 & Model 8
- Single or Dual Technology, Entry and Exit Readers on each door

### DIGI\*TRAC Expansion Board Options

- AEB8: 8 Input Alarm Expansion Board
- REB8: 8 Output Relay Expansion Board
- SNIB: SCRAMBLE\*NET Interface Board (Built into M1N)
- SNIB2: Onboard 10/100 Ethernet Input, 128 Bit AES Encryption (Built into Mx)
- MEB/BE: Memory Expansion Board, Buffer Expansion
- MEB/CB64: Code Expansion to 68,000 Users
- MEB/CB128: Code Expansion to 132,000 Users

**NOTES: All DIGI\*TRAC controllers come standard with a SNIB2 installed (or built in). Each controller can accommodate up to 5 total Expansion Boards (4 after counting the included SNIB2), except the Model 64 can only accept 4 total. Only 1 MEB/CE or CB per controller and a maximum of 4 AEB8 per controller, except 2 AEB8 in Model 16.**

## DIGI\*TRAC™ (cont.)

**No REB8 can be added to Model 64. The Model 1N will not accept any Expansion Boards.**

## DATA PROTOCOLS

### SNIB – SNET Protocol

- RS232 or RS485, Optically Isolated
- Encrypted – HES with SNIB
- Hardwired, Fiber Optic, Leased Line
- 1 Controller Up To 50' on RS232
- 16 Controllers Daisy-Chained Up To 4,000' on RS485 With Net\*Adapt1
- 16 Controllers With NET\*MUX4, Daisy-Changed / Star Wiring
- NET\*MUX4 - 1 Input, 4 Output. Each Port RS232 or RS485
- Dial-Up to Remote Sites

### X-BOX – XNET Protocol

- RS232 and RS485 Output
- Up To 16 Controllers Each
- Offloads Controller Polling and Encryption From Velocity Server

### SNIB2 – XNET2 Protocol

- 10/100 Ethernet Input
- RS485 Output Downstream
- Built-In X-Box Functionality
- 128 Bit, NIST Certified, AES Encryption
- SNIB Downstream Support

## WIRING REQUIREMENTS

### DIGI\*TRAC

#### Controller To Reader

2 Pair, Stranded, Twisted, Overall Shield  
22 AWG - 750'  
18 AWG - 1800'

#### Controller To Door Lock

1 Pair, Stranded, Twisted, Shielded  
18 AWG (distance function of resistance)

**NOTE: Only Run In Same Conduit As Reader or Line Module Wiring if twisted and overall shielded.**

#### Controller To Line Module

1 Pair, Stranded, Twisted, Shielded  
22 AWG - 3000' (DTLM2/MELM2)

### SCRAMBLE\*NET

**RS485** – 2 Pair, Stranded, Twisted, Overall Shield, 22 AWG - 4,000'

**RS485** downstream with SNIB2 – Cat5 cable

**RS232** – 3 Conductor, Stranded, Overall Shield, 22 AWG - 50'

## LINE SUPERVISION MODULES

Required For All Monitored Devices.  
Digitally Processed, Analog Inputs

### 2 Styles

- DTLM: Screw Terminals
- MELM: Flying Leads

### 3 Versions

- 1 Input: Alarm
- 2 Inputs: Alarm, RQE
- 3 Inputs: Alarm, RQE, Tamper