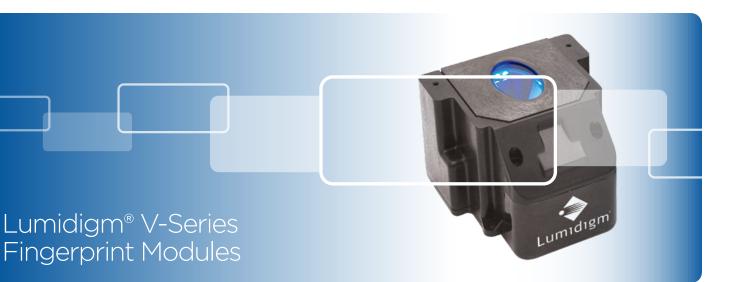
## **BIOMETRIC SOLUTIONS**





### Benefits

- The industry's best fingerprint images
- Meets high-performance challenges
- Designed for easy integration
- Superior liveness detection protects against fake and spoof fingerprints
- Eliminates failure to enroll (FTE) and failure to acquire (FTA) headaches
- Enables high throughput
- Requires minimal maintenance
- Yields a high return on investment for integrators and end-users

#### Features

- Patented multispectral imaging technique looks at and beneath the skin surface, simultaneously
- Flexible, powerful device outputs
   Image
   Template
   Match score
- Compact design
- State-of-the-art liveness detection technology adaptable against future spoof threats
- Expansive operating range
   -10 to 60°C, wet or dry
- 500 dpi

# Offering unparalleled performance, integration options, and industry-leading liveness detection... in any setting!

Lumidigm V-Series fingerprint modules unleash an individual's subsurface fingerprint to increase biometric performance and make your application more secure and reliable. The V-Series returns superior images on anyone, anytime, in any environment.

## **Superior performance**

V-Series fingerprint modules will enhance the throughput and accuracy of any application. High-quality images are captured by Lumidigm modules even when fingerprint ridges are hard to distinguish due to genetics, age, dirt, finger placement, or environmental conditions. Lumidigm V-Series modules can easily enroll and verify ALL people! The V-Series modules greatly reduce management hassles along with end-user frustration.

## Flexible integration

The V-Series modules are small and lightweight and easily integrated with existing systems. Multiple modes of operation and communication interfaces are available in the V-Series. Image, template or score are available as outputs. Designed for easy integration into any system, V-Series modules rise to the top with accurate, high-quality images and solve your performance problems, anytime, anywhere.

## **Superior liveness detection**

Eliminate performance problems associated with conventional fingerprint sensors. V-Series modules protect against fake and spoof fingerprints by capturing fingerprint data from the surface and subsurface of the finger. Using the industry's best liveness detection technology, we provide the most secure and accurate sensors available.

## hidglobal.com



Operating systems supported       Windows 7 / 7 Embedded (32/64-bit), Windows XP / XP Embedded Linux       Windows XP / XP Embedded Linux (Intel 32-bit and 64-bit)         Android       Mindows XP / XP Embedded       Linux (Intel 32-bit and 64-bit)		V30x Modules	V31x Modules
Image resolution / bit depth       500 dbi / 8-bit, 256 grayscale         Platen area       0.7" x 11" ellipse         Image out       ANSI 331 compliant         Template out       ANSI 378 compliant         Score or verification (1:0)       Requires ANSI 378 template input         Latent detection       Included         Latent detection       Included         Latent protection       Included         Latent protection       Up to 1000       Up to 1000 users per group, unlimited groups         Inger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         Pinger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         Pinger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         DePEATING WITH ENCLOSHE       Verification of a heater       Humidity         OPERATING WITH ENCLOSHE       0.0 50°C       N/a         Operating system supported       Vindows R / 2 Bribadded (22/4-bbit)       Windows X / 2 Bribadded (22/4-bbit)         Operating system supported       Vindows R / 2 B		IMAGIN	G SYSTEM
Platen area       0.7" x 11" ellipse         BIOMETRIC FUNCTIONS         Image out       ANSI 328 compliant         Template out       ANSI 328 compliant         Score or verification (11)       Requires ANSI 328 template input         Latent detection       Included         Latent detection       Included         Latent detection       Included         Latent detection       Included         Verification mode (1:1)       Up to 1000       Unlimited         Identification (11)       Up to 1000       Unlimited         Identification mode (1:1)       Up to 1000       Unlimited         Identification mode (1:1)       Up to 1000       Up to 1000 users per group. unlimited groups         Finger placement to image       1.3 sec. (typical)       900 ms - 1.3 sec (typical)         Primer placement to image       2.0 sec. (typical)       900 ms - 1.3 sec (typical)         Primer placement to image to 1.3 sec. (typical)       900 ms - 1.3 sec (typical)       100 to 60°C:         Ingress protection at platen       IP65       Ingress protection at platen       IP65         OPERATING WITH ENCLOSUET       0 to 60°C: cold range con be extended with the addition of a heater       Humidity       0 to 60°C	Technology	Patented Lumidigm optical multispectral imaging	
BIOMETRIC FUNCTIONS         Image out       ANSI 381 compliant         Template out       ANSI 378 compliant         Score or verification (1:N)       Available (V30x-30 only)       Uses ANSI 378 template input         Latent detection       Included         Latent protection       Included         Uses ANSI 378 template input       Uses ANSI 378 templates as input         Latent detection       Included         Verification mode (1:N)       Up to 1000       Unlimited         Verification mode (1:N)       Up to 1000       Unlimited groups         BIOMETRIC PERFORMANCE       B00 ms - 1 sec (typical)       900 ms - 1 sec (typical)         Finger placement to identification       2.1 sec. (typical, V30x-30 only)       900 ms - 1 sec (typical)         Pinger placement to identification       2.1 sec. (typical, V30x-30 only)       900 ms - 1 sec (typical)         Ingress protection at platen       IP65       Ingress protection at platen         OPERATING WITHOUT ENCLOSUBE       -0 to 60°C       INTERFACE         Temperature       -0 to 60°C       INTERFACE         OPERATING WITHOUT ENCLOSUBE       0 to 60°C       INTERFACE         USB 2.0       480 Mbs high-speed       INTERFACE         USB 2.0 </th <th>Image resolution / bit depth</th> <th>500 dpi / 8-bi</th> <th>t, 256 grayscale</th>	Image resolution / bit depth	500 dpi / 8-bi	t, 256 grayscale
Image out       ANSI 378 compliant         Score or verification (th)       Requires ANSI 378 template input         Identification (th)       Available (V30x-30 only)       Uses ANSI 378 templates as input         Latent detection       Included       Included         Latent protection       Included       Included         Identification mode (th)       Up to 1000       Unlimited         Verification mode (th)       Up to 400 (V30x-30 only)       Up to 1000 users per group, unlimited groups         Identification mode (th)       Up to 400 (V30x-30 only)       900 ms - 1 sec (typical)         Finger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to image       1.3 sec. (typical, 900 ms - 1 sec (typical)       900 ms - 1 sec (typical)         Finger placement to image       1.0 to 60°C;       900 ms - 1 sec (typical)       900 ms - 1 sec (typical)         OPERATING WITH ENCLOSUBE       -10 to 60°C; cold range can be extended with the addition of a heater       -10 to 60°C;         Humidity       0-100%; RH condensing       0/a       Mindows 9 / 8 Embedded (32/64-bit)         OPERATING WITHOUT ENCLOSUBE       -10 to 60°C;       10 to 60°C;       10 to 60°C;         UB 2.0       430 Mbps high-speed       10 to 60°C; <th>Platen area</th> <th colspan="2">0.7" x 1.1" ellipse</th>	Platen area	0.7" x 1.1" ellipse	
Template out       ANSI 378 compilant         Score or verification (13)       Requires ANSI 378 template input         Identification (13)       Available (V30x-30 only)       Uses ANSI 378 templates as input         Latent detection       Included       Included         Latent protection       Included       Included         Verification mode (13)       Up to 1000       Unlimited         Identification mode (14)       Up to 400 (V30x-30 only)       Up to 1000 users pare group, unlimited groups         BIOMETRIC PERFORMANCE       20 sec. (typical)       800 ms - 1 sec (typical)         Finger placement to image       13 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to identification       20 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to identification       21 sec. (typical) X0X-30 only)       950 ms - 11 sec (typical)         Pringer placement to identification       10 to 60°C cold range can be extended with the addition of a heater       -10 to 60°C cold range can be extended with the addition of a heater         Imgress protection at platen       Pie5       Pie5       Pie5         OPERATING WITHOUT ENCLOSUBE       Vindows 8 / 8 Embedded (32/64-bit)       Windows 8 / 8 Embedded (32/64-bit)         Windows 7 / 7 Embodded (32/64-bit)       Windows		BIOMETRIC FUNCTIONS	
Score or verification (1:1)       Requires ANSI 378 template input         identification (1:N)       Available (V30x-30 only)       Uses ANSI 378 templates as input         Latent detection       Included         Latent protection       Included         Verification mode (1:N)       Up to 1000       Unlimited         Verification mode (1:N)       Up to 000 (V30x-30 only)       Up to 1000 users per group. Unlimited groups         BIOMETRIC PERFORMANCE       B00 ms - 1 sec (typical)       900 ms - 1 sec (typical)         Finger placement to identification       2.1 sec. (typical)       900 ms - 1 sec (typical)         Pinger placement to identification       2.1 sec. (typical)       900 ms - 1 sec (typical)         OPERATING WITH PUT ENCODENTEX       ENCODENTEX14       Net: biometric performance is maintained throughout the operating ranges specified.         OPERATING WITHOUT ENCLOSUBE       -10 to 60°C; coid range can be extended with the addition of a heater       Humidity         OPERATING WITHOUT ENCLOSUBE       0 to 60°C       N/a       Windows 8 / 8 the moded(d (22/64-bi), Windows 7 / 7 Embedded (32/64-bi), Windows 7 / 7 Embedded (32	Image out	ANSI 381 compliant	
Identification (1:N)       Available (V30x-30 only)       Uses ANSI 378 templates as input         Latent detection       Included         Latent protection       Included         Uses ANSI 378 templates as input       Included         Latent protection       Included         Uses ANSI 378 templates as input       Included         Verification mode (1:N)       Up to 1000       Unlimited         Identification mode (1:N)       Up to 400 (V30x-30 only)       Up to 1000 users per group, unlimited groups         Finger placement to image       1.3 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to identification       2.1 sec. (typical) (SAO-30 only)       950 ms - 1 sec (typical)         Pringer placement to identification       L2 sec. (typical) (SAO-30 only)       950 ms - 1 sec (typical)         Pringer placement to identification       L2 sec. (typical) (SAO-30 only)       950 ms - 1 sec (typical)         Pringer placement to identification       L2 sec. (typical) (SAO-30 only)       950 ms - 1 sec (typical)         Pringer placement to identification       L2 sec. (typical) (SAO-30 only)       950 ms - 1 sec (typical)         Pringer placement to identification       L2 sec. (typical)       L2 sec. (typical)         Pringer placement to identification       L2 sec. (typi	Template out	ANSI 378 compliant	
Latent detection       Included         Latent protection       Included         TEMPLATE STORAGE         Verification mode (1:1)       Up to 1000       Unlimited         Identification mode (1:1)       Up to 400 (V30x-50 only)       Up to 1000 users per group, unlimited groups         BIOMETRIC PERFORMANCE         Finger placement to image       1.3 sec. (typical)       800 ms - 1 sec (typical)         Finger placement to image       2.0 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to identification       2.1 sec. (typical)       900 ms - 1 sec (typical)         EVIRONMENTAL       Note: bioinetric performance is monitoaned throughout the operating ranges specified.         Ingress protection at platen       -10 to 60°C; cold range can be extended with the addition of a heater         OPERATING WITH ENCLOSURE       -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-95% RH non-condensing         OPERATING WITH ENCLOSURE       0 to 60°C         Humidity       0-95% RH non-condensing         USB 2.0       480 Mbps high-speed         R5-232       115.2 Kbps         Windows 8 / 8 Embedded (32/64-bit)       Windows 8 / 8 Embedded (32/64-bit)         Windows 8 / 8 Embedd	Score or verification (1:1)	Requires ANSI 378 template input	
Latent protection       Included         TEMPLATE STORAGE         Verification mode (1:1)       Up to 1000       Unlimited         Identification mode (1:1)       Up to 400 (V30x-30 only)       Up to 1000 users per group, unlimited groups         BIOMETRIC PERFORMANCE         Finger placement to image       1.3 sec. (typical)       900 ms - 1.1 sec. (typical)         Finger placement to identification       2.1 sec. (typical)       900 ms - 1.1 sec. (typical)         ENVIRONMENTAL         Note: biometric performance is melanismed intengiout the operating ranges specified.         Ingress protection at platen       IPG5         OPERATING WITH ENCLOSURE         OPERATING WITHOT ENCLOSURE       0 to 60°C         Humidity       0-100% RH condensing         OPERATING WITHOT ENCLOSURE       0 to 60°C         Mindows 8 / 8 Embedded       10 mone: 3 / 8 Embedded         USB 2.0       480 Mbps high-speed         ESD Immunity       IEC 61000-4-2 Level 44-15 kV Air         Undows 8 / 8 Embedded         Windows 8 / 9 Embedded       20 (480 Mbps high-speed         Coperating systems supported       Nordows 8 / 8 Embedded       Undows 8 / 7 Embedded       Undows 8 / 7 Embedded	Identification (1:N)	Available (V30x-30 only)	Uses ANSI 378 templates as input
TEMPLATE STORAGE         Verification mode (1:1)       Up to 1000       Unlimited Up to 1000 users per group, unlimited groups         BIOMETRIC PERFORMANCE         Finger placement to image       1.3 sec. (typical)       800 ms - 1 sec (typical)         Finger placement to image       1.3 sec. (typical)       900 ms - 11 sec (typical)         Finger placement to identification       2.1 sec. (typical)       900 ms - 11 sec (typical)         Finger placement to identification       2.1 sec. (typical)       900 ms - 11 sec (typical)         ENVIRONMENTAL Note: biometric performance is maintained throughout the operating ranges specified.         Ingres protection at platen       IP65         OPERATING WITH ENCLOSURE Temperature       O to 60°C         Humidity       0-100% RH condensing       Immediation of a heater         Humidity       0-95% RH non-condensing       Immediated 32/64-bit       Windows 8 / 8 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Operating systems supported       Windows 8 / 8 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Operating systems supported       Encryption       n/a       Encryption       N/a       Encryptid video for privice/playbaci protection	Latent detection	Included	
Verification mode (1:1)       Up to 1000       Unlimited         identification mode (1:1)       Up to 400 (V30x-30 only)       Up to 1000 users per group, unlimited groups         Finger placement to image       1.3 sec. (typical)       800 ms - 1 sec (typical)         Finger placement to itemplate / score       2.0 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to itemplate / score       2.0 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to itemplate / score       2.0 sec. (typical)       950 ms - 1 sec (typical)         Finger placement to itemplate / score       2.0 sec. (typical)       950 ms - 1 sec (typical)         OPERATING WITH ENCLOSURE       Note: biometric performance is maintained throughout the operating ranges specified.         Humidity       0-100% RH condensing       0         OPERATING WITHOUT ENCLOSURE       Note: biometric def (32/64-bit).       Windows 8 / 8 Embedded (32/64-bit).         Windows 8 J & Embedded (32/64-bit).       Windows 7 / 7 Embedded (32/64-bit).       Windows 7 / 7 Embedded (32/64-bit).         Operating systems supported       N/a       Probedded (32/64-bit).       Windows 7 / 7 Embedded (32/64-bit).         Windows 8 / 8 Embedded (32/64-bit).       Android       Encryption       n/a         Encryption       n/a       Encryption	Latent protection	Included	
Identification mode (1:N)       Up to 400 (V30x-30 only)       Up to 1000 users per group, unimited groups         EIOMETRIC PERFORMANCE       EIOMETRIC PERFORMANCE         Finger placement to itemplate / score       2.0 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to itemplate / score       2.0 sec. (typical)       900 ms - 1 sec (typical)         Finger placement to itemplate / score       2.0 sec. (typical)       950 ms - 1 sec (typical)         Note: biometric performance its monitorised throughout the operating ranges specified.       ENVIRONMENTAL         Note: biometric performance its monitorised throughout the operating ranges specified.       Ingress protection at platen       IP65         OPERATING WITH ENCLOSURE       0 to 60°C       0 to 60°C       Imminity         OPERATING WITH ENCLOSURE       0 to 60°C       INTERFACE         USB 2.0       480 Mbps high-speed       Nater biodeted (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Wi		TEMPLAT	ESTORAGE
Identification mode (FM)       Op is 4.00 (VSM-S0 mig)       Initiated groups         BIOMETRIC PERFORMANCE         BIOMETRIC PERFORMANCE         Finger placement to image       1.3 sec. (typical)       80 O ms - 1 sec. (typical)         Finger placement to identification       2.1 sec. (typical)       900 ms - 11 sec. (typical)         ENVIRONMENTAL         Note: biometric performance is maintained functopatu the operating ranges specified.         INTENTION INTENTAL         OPERATING WITH ENCLOSURE         Temperature         -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-100% RH condensing         OPERATING WITH ENCLOSURE         Temperature         -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-100% RH condensing         OPERATING WITHOUT ENCLOSURE         Temperature         0 to 60°C         Windows 8 / E Embedded (32/64-bit)         Windows 8 / E Embedded (23/64-bit)       Windows 8 / E Embedded (23/64-bit)         Windows 7 / Z Embedded (23/64-bit)       Windows 8 / E Embedded (23/64-bit) <td< th=""><th>Verification mode (1:1)</th><th>Up to 1000</th><th>Unlimited</th></td<>	Verification mode (1:1)	Up to 1000	Unlimited
Finger placement to image       1.3 sec. (typical)       800 ms - 1 sec (typical)         Finger placement to template / score       2.0 sec. (typical)       900 ms - 11 sec (typical)         Finger placement to identification       2.1 sec. (typical, V30x-30 only)       950 ms - 11 sec (typical)         ENVIRONMENTAL         Interview (typical, V30x-30 only)       950 ms - 11 sec (typical)         OPERATING WITH ENCLOSURE         Temperature       -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-100% RH condensing       0         OPERATING WITHOUT ENCLOSURE         Temperature       0 to 60°C       0         Humidity       0-95% RH non-condensing       0         ESD Immunity       IEC 61000-4-2 Level 4+.15 KV Air         USB 2.0       480 Mbps high-speed         Nindows 8 / 8 Embedded (32/64-bit), Windows 7 / 7 Embedded (32/	Identification mode (1:N)	Up to 400 (V30x-30 only)	
Finger placement to template / score       2.0 sec. (typical)       900 ms - 11 sec (typical)         Finger placement to identification       2.1 sec. (typical) V30x-30 only)       950 ms - 11 sec (typical)         ENVIRONMENTAL Note: biometric performance is maintained throughout the operating ranges specified.         Ingress protection at platen       IPG5         OPERATING WITH ENCLOSURE       -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-100% RH condensing         OPERATING WITHOUT ENCLOSURE       0 to 60°C         Humidity       0-95% RH non-condensing         OPERATING WITHOUT ENCLOSURE       INTERFACE         USB 2.0       480 Mbps high-speed         R5-232       II5.2 Kbps       n/a         Windows 8 / 8 Embedded (32/64-bit), Windows 7 / 7 Embedded (32/64-bit), Windows 7		BIOMETRIC P	ERFORMANCE
Finger placement to identification       2.1 sec. (typical, V30x-30 only)       950 ms - 1.1 sec (typical)         ENVIRONMENTAL Note: biometric performance is moltahed throughout the operating ranges specified.       ENVIRONMENTAL IPG5         OPERATING WITH ENCLOSURE Temperature       IP65       IPG5         OPERATING WITH ENCLOSURE Temperature       -10 to 60°C; cold range can be extended with the addition of a heater       IPG5         OPERATING WITH ENCLOSURE Temperature       0 to 60°C       0 to 60°C         Humidity       0-95% RH non-condensing       IPG5         OPERATING WITHOUT ENCLOSURE       0 to 60°C       INTERFACE         USB 2.0       480 Mbps high-speed       N/a         Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedded (3	Finger placement to image	1.3 sec. (typical)	800 ms - 1 sec (typical)
ENVIRONMENTAL Note: biometric performance is maintained throughout the operating ranges specified.         Ingress protection at platen       IP65         OPERATING WITH ENCLOSURE Temperature       -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       O-100% RH condensing       OPERATING WITHOUT ENCLOSURE         OPERATING WITHOUT ENCLOSURE Temperature       O to 60°C         Humidity       O-95% RH non-condensing         ESD Immunity       IEC 61000-4-2 Level 4+/-15 kV Air         Windows 7 / 2 Embedded (32/64-bit)       Windows 8 / 8 Embedded (32/64-bit)         Windows 8 / 8 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 9 / 9 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64	Finger placement to template / score	2.0 sec. (typical)	900 ms - 1.1 sec (typical)
Note:       Description at platen       IP65         OPERATING WITH ENCLOSURE Temperature       -10 to 60°C; cold range can be extended with the addition of a heater Humidity       0-100% RH condensing         OPERATING WITHOUT ENCLOSURE Temperature       0 to 60°C       -         OPERATING WITHOUT ENCLOSURE Temperature       0 to 60°C       -         OPERATING WITHOUT ENCLOSURE Temperature       0 to 60°C       -         OPERATING WITHOUT ENCLOSURE       0 to 60°C       -         BESD Immunity       IEC 61000-4-2 Level 4+/-15 kV Air       -         USB 2.0       480 Mbps high-speed       n/a         Windows 7 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedded (32/64-bit)	Finger placement to identification	2.1 sec. (typical, V30x-30 only)	950 ms - 1.1 sec (typical)
OPERATING WITH ENCLOSURE Temperature       -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-100% RH condensing         OPERATING WITHOUT ENCLOSURE Temperature       0 to 60°C         Mumidity       0-95% RH non-condensing         ESD Immunity       IEC 61000-4-2 Level 4+/-15 kV Air         Windows B / 8 Embedded (32/64-bit) Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedde			
OPERATING WITH ENCLOSURE Temperature       -10 to 60°C; cold range can be extended with the addition of a heater         Humidity       0-100% RH condensing         OPERATING WITHOUT ENCLOSURE Temperature       0 to 60°C         Mumidity       0-95% RH non-condensing         ESD Immunity       IEC 61000-4-2 Level 4+/-15 kV Air         Windows B / 8 Embedded (32/64-bit) Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedde	Ingress protection at platen	IP65	
Humidity       O-100% RH condensing         OPERATING WITHOUT ENCLOSURE       0 to 60°C         Temperature       0 to 60°C         Humidity       0-95% RH non-condensing         ESD Immunity       IEC 61000-4-2 Level 4+/-15 kV Air         INTERFACE       INTERFACE         USB 2.0       480 Mbps high-speed         RS-232       115.2 kbps       n/a         Windows 7 / 7 Embedded (32/64-bit)       Windows 8 / 8 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Operating systems supported       Windows XP / XP Embedded       Windows XP / XP Embedded         Linux       Android       Encryptol       N/a         Encryption       n/a       Encrypted video for privacy/playbad         Overall dimensions       2.68°W x 2.61°D x 2.02°H (6.8 cm x 6.6 cm x 5.1 cm)         Housing       Polycarbonate plastic, glass fiber reinforced; platen area is IP65         Supply current – operational       +5 VDC 500 mA (peak)       +5 VDC 300 mA (peak)         Supply current – idle       +5 VDC 500 mA (peak)       +5 VDC 100 mA (typical)         Hetroperability       CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients         Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, Ro			
OPERATING WITHOUT ENCLOSURE Temperature       0 to 60°C         Humidity       0-95% RH non-condensing         ESD Immunity       IEC 61000-4-2 Level 41/-15 kV Air         INTERFACE       INTERFACE         USB 2.0       480 Mbps high-speed         RS-232       115.2 Kbps         Windows 8 / 8 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (32/64-bit)         Windows 7 / 7 Embedded (32/64-bit)       Windows 7 / 7 Embedded (1000000000000000000000000000000000000	Temperature	-10 to 60°C; cold range can be extended with the addition of a heater	
Temperature   0 to 60°C     Humidity   0-95% RH non-condensing     ESD Immunity   IEC 61000-4-2 Level 4+/-15 kV Air     ESD Immunity   IEC 61000-4-2 Level 4+/-15 kV Air     USB 2.0   480 Mbps high-speed     Marcel ARS-232   115.2 Kbps   n/a     Operating systems supported   Windows 8 / 8 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Operating systems supported   Windows 8 / 8 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Windows 8 / 8 Embedded (32/64-bit)   Windows 7 / 7 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Windows 8 / 8 Embedded (32/64-bit)   Windows 8 / 8 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Nodows 8 / 8 Embedded (32/64-bit)   Windows 8 / 8 Embedded (32/64-bit)     Windows 8 / 9 Tembedded (32/64-bit)   Nodows 8 / 8 Embedded (32/64-bit)   Windows 8 / 8 Embedded (32/64-bit) <	Humidity	0–100% RH condensing	
Humidity       0-95% RH non-condensing         ESD Immunity       IEC 61000-4-2 Level 4+/-15 kV Air         INTERFACE         USB 2.0       480 Mbps high-speed         RS-232       115.2 Kbps       n/a         Operating systems supported       Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedde	OPERATING WITHOUT ENCLOSURE		
ESD Immunity     IEC 61000-4-2 Level 4+/-15 kV Air       INTERFACE       USB 2.0     480 Mbps high-speed       RS-232     115.2 Kbps     n/a       Windows 8 / 8 Embedded (32/64-bit)     Windows 7 / 7 Embedded (32/64-bit)     Windows 7 / 7 Embedded (32/64-bit)       Operating systems supported     Windows 7 / 7 Embedded (32/64-bit)     Windows 7 / 7 Embedded (32/64-bit)       Mindows XP / XP Embedded     Linux     Mindows XP / XP Embedded     Unit (Intel 32-bit and 64-bit)       Mindows XP / XP Embedded     Encryption     n/a     Encrypted video for privacy/playbacl protection       POWER SUPPLY RECOURSEMENTS     POWER SUPPLY REQUIREMENTS     Encryptical information in the store of the store store of the store of the store of the stor	Temperature	0 to 60°C	
INTERFACE         USB 2.0       480 Mbps high-speed         RS-232       115.2 Kbps       n/a         Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedded (32/64-bit) Portaction         Encryption       n/a       Encrypted video for privacy/playbacl protection         Overall dimensions       2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)         Housing       Polycarbonate plastic, glass fiber reinforced; platen area is IP65         Supply current – operational       +5 VDC 500 mA (peak)       +5 VDC 100 mA (typical)         Supply current – idle       +5 VDC 100 mA (typical)       +5 VDC 100 mA (t	Humidity	0–95% RH non-condensing	
USB 2.0   480 Mbps high-speed     RS-232   115.2 Kbps   n/a     Operating systems supported   Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedded (32/64-bit) Windows X / XP Embedded Linux   Windows 8 / 8 Embedded (32/64-bit) Windows X / XP Embedded Linux (Intel 32-bit and 64-bit)     Encryption   n/a   Encrypted video for privacy/playbacl protection     Overall dimensions   2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)     Housing   Polycarbonate plastic, glass fiber reinforced; platen area is IP65     Device certifications   FORM FACTOR     Supply current - operational   +5 VDC 500 mA (peak)   +5 VDC 300 mA (peak)     Supply current - idle   +5 VDC 100 mA (typical)   +5 VDC 100 mA (typical)     Interoperability   ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm     Device certifications   CE, FCC Part 15 Class B, EN 60950, IEC 62471, ROHS, DEA EPCS, Certified support for thin clients     MINIMUM SYSTEM REQUIREMENTS   MINIMUM SYSTEMENTS     MINIMUM SYSTEMENTS   MINIMUM SYSTEMENTS     MINIMUM SYSTEMENTS   MINIMUM SYSTEMENTS     MINIMUM SYSTEMENTS   MINIMUM SYSTEMENTS	ESD Immunity	IEC 61000-4-2 Level 4+/-15 kV Air	
RS-232     115.2 Kbps     n/a       Operating systems supported     Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedded (32/64-bit) Windows XP / XP Embedded Linux Android     Windows 8 / 8 Embedded (32/64-bit) Windows XP / XP Embedded Linux Android       Encryption     n/a     Encrypted video for privacy/playback protection       Overall dimensions     2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)       Housing     Polycarbonate plastic, glass fiber reinforced; platen area is IP65       POWER SUPPLY REQUIREMENTS     POWER SUPPLY REQUIREMENTS       Supply current – operational     +5 VDC 500 mA (peak)     +5 VDC 300 mA (peak)       Supply current – idle     +5 VDC 100 mA (typical)     +5 VDC 100 mA (typical)       MINEX-certified algorithm     CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients       Device certifications     CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients       MINIMUM SYSTEM REQUIREMENTS     MINIMUM SYSTEM REQUIREMENTS       MINIMUM SYSTEM REQUIREMENTS     MINIMUM SYSTEM REQUIREMENTS       Memory     n/a     64 MB free RAM		INTERFACE	
Operating systems supported       Windows 8 / 8 Embedded (32/64-bit) Windows 7 / 7 Embedded (32/64-bit) Windows 7 / 7 Embedded (32/64-bit) Windows X / XP Embedded Linux       Windows 8 / 8 Embedded (32/64-bit) Windows XP / XP Embedded Linux (Intel 32-bit and 64-bit)         Encryption       n/a       Encrypted video for privacy/playbacl protection         Overall dimensions       2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)         Housing       Polycarbonate plastic, glass fiber reinforced; platen area is IP65         DOWER SUPPLy REQUIREMENTS       Supply current - operational       +5 VDC 500 mA (peak)       +5 VDC 300 mA (peak)         Supply current - idle       +5 VDC 100 mA (typical)       +5 VDC 100 mA (typical)       50 (22,1,1,1,2,1,2,2,1,3,1,3,1,3,1,3,1,3,1,3	USB 2.0	480 Mbps high-speed	
Operating systems supported     Windows 7 / 7 Embedded (32/64-bit), Windows XP / XP Embedded Linux Android     Windows XP / XP Embedded Linux (Intel 32-bit and 64-bit) Linux (Intel 32-bit and 64-bit)       Encryption     n/a     Encrypted video for privacy/playbacl protection       Overall dimensions     2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)       Housing     Polycarbonate plastic, glass fiber reinforced; platen area is IP65       Supply current – operational     +5 VDC 500 mA (peak)     +5 VDC 300 mA (peak)       Supply current – idle     +5 VDC 100 mA (typical)     +5 VDC 300 mA (peak)       Interoperability     ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm       Device certifications     CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified algorithm       MINIMUM SYSTEM REQUIREMENTS     MINIMUM SYSTEM REQUIREMENTS       MINIMUM SYSTEM REQUIREMENTS     MINIMUM SYSTEM REQUIREMENTS	RS-232	115.2 Kbps	n/a
Encryptionn/aprotectionPOWER SUPPLYFORM FACTOROverall dimensions2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)HousingPolycarbonate plastic, glass fiber reinforced; platen area is IP65Device certifications+5 VDC 500 mA (peak)Supply current – operational+5 VDC 500 mA (peak)Supply current – idle+5 VDC 100 mA (typical)Supply current – idle+5 VDC 100 mA (typical)Supply current – idle+5 VDC 100 mA (typical)POWER SUPPLIANCEStandardsCertified algorithmANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithmCertified support for thin clientsCE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHs, DEA EPCS, Certified support for thin clientsCertified support for thin clientsUSB 1.1 or RS-232High-speed USB 2.0 (480 Mbps)n/aMemoryn/a	Operating systems supported	Windows 7 / 7 Embedded (32/64-bit), Windows XP / XP Embedded Linux	
Overall dimensions     2.68"W x 2.61"D x 2.02"H (6.8 cm x 6.6 cm x 5.1 cm)       Housing     Polycarbonate plastic, glass fiber reinforced; platen area is IP65       POWER SUPPLY REQUIREMENTS       Supply current – operational     +5 VDC 500 mA (peak)     +5 VDC 300 mA (peak)       Supply current – idle     +5 VDC 100 mA (typical)     +5 VDC 100 mA (typical)       Supply current – idle     +5 VDC 100 mA (typical)     +5 VDC 100 mA (typical)       Interoperability     ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm       Device certifications     CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients       MINIMUM SYSTEM REQUIREMENTS     MINIMUM SYSTEM REQUIREMENTS       Memory     n/a     64 MB free RAM	Encryption	n/a	Encrypted video for privacy/playback protection
Housing   Polycarbonate plastic, glass fiber reinforced; platen area is IP65     POWER SUPPLY REQUIREMENTS     Supply current – operational   +5 VDC 500 mA (peak)   +5 VDC 300 mA (peak)     Supply current – idle   +5 VDC 100 mA (typical)   +5 VDC 100 mA (typical)     Supply current – idle   +5 VDC 100 mA (typical)   +5 VDC 100 mA (typical)     Interoperability   ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm     Device certifications   CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHs, DEA EPCS, Certified support for thin clients     Interface   USB 1.1 or RS-232   High-speed USB 2.0 (480 Mbps)     Memory   n/a   64 MB free RAM		FORM FACTOR	
POWER SUPPLY REQUIREMENTS         Supply current – operational       +5 VDC 500 mA (peak)       +5 VDC 300 mA (peak)         Supply current – idle       +5 VDC 100 mA (typical)       +5 VDC 100 mA (typical)         Standards compliance       Standards compliance         Interoperability       ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm         Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients         MINIMUM SYSTEM REQUIREMENTS       MINIMUM SYSTEM REQUIREMENTS         Memory       n/a       64 MB free RAM	Overall dimensions	2.68"W x 2.61"D x 2.02"H	(6.8 cm x 6.6 cm x 5.1 cm)
Supply current – operational   +5 VDC 500 mA (peak)   +5 VDC 300 mA (peak)     Supply current – idle   +5 VDC 100 mA (typical)   +5 VDC 100 mA (typical)     STANDARDS COMPLIANCE     Interoperability   ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm     Device certifications   CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients     Interface   USB 1.1 or RS-232   High-speed USB 2.0 (480 Mbps)     Memory   n/a   64 MB free RAM	Housing	Polycarbonate plastic, glass fiber reinforced; platen area is IP65	
Supply current – idle       +5 VDC 100 mA (typical)       +5 VDC 100 mA (typical)         STANDARDS       COMPLIANCE         Interoperability       ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm         Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, ROHS, DEA EPCS, Certified support for thin clients         Interface       USB 1.1 or RS-232       High-speed USB 2.0 (480 Mbps)         Memory       n/a       64 MB free RAM		POWER SUPPLY REQUIREMENTS	
STANDARDS COMPLIANCE         Interoperability       ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm         Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients         MINIMUM SYSTEM REQUIREMENTS       MINIMUM SYSTEM REQUIREMENTS         Interface       USB 1.1 or RS-232       High-speed USB 2.0 (480 Mbps)         Memory       n/a       64 MB free RAM	Supply current — operational	+5 VDC 500 mA (peak)	+5 VDC 300 mA (peak)
Interoperability       ANSI 378, ISO 19794-2:2005, ANSI 381, ISO 19794-4:2005, NFIQ compliant, MINEX-certified algorithm         Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients         Interface       USB 1.1 or RS-232       High-speed USB 2.0 (480 Mbps)         Memory       n/a       64 MB free RAM	Supply current — idle	+5 VDC 100 mA (typical)	+5 VDC 100 mA (typical)
Interoperability       MINEX-certified algorithm         Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients         Device certifications       MINIMUM SYSTEM REQUIREMENTS         Interface       USB 1.1 or RS-232       High-speed USB 2.0 (480 Mbps)         Memory       n/a       64 MB free RAM		STANDARDS	COMPLIANCE
Device certifications       CE, FCC Part 15 Class B, EN 60950, IEC 62471, RoHS, DEA EPCS, Certified support for thin clients         MINIMUM SYSTEM REQUIREMENTS         Interface       USB 1.1 or RS-232       High-speed USB 2.0 (480 Mbps)         Memory       n/a       64 MB free RAM	Interoperability		
Interface       USB 1.1 or RS-232       High-speed USB 2.0 (480 Mbps)         Memory       n/a       64 MB free RAM	Device certifications		
Memory n/a 64 MB free RAM	MINIMUM SYSTEM REQUIREMENTS		
	Interface	USB 1.1 or RS-232	High-speed USB 2.0 (480 Mbps)
Operating system n/a Supported OS required	Memory	n/a	64 MB free RAM
	Operating system	n/a	Supported OS required



#### ASSA ABLOY An ASSA ABLOY Group brand

© 2014 HID Global Corporation/ASSA ABLOY AB. All rights reserved. HID, HID Global, the HID Blue Brick logo, the Chain Design and Lumidigm are trademarks or registered trademarks of HID Global or its licensor(s)/supplier(s) in the US and other countries and may not be used without permission. All other trademarks, service marks, and product or service names are trademarks or registered trademarks of their respective owners. 2014-11-25-lumidigm-m-series-sensor-ds-en PLT-02168

### For Lumidigm inquiries:

+1 (505) 272-7057 lumidigm@hidglobal.com

North America: +1 512 776 9000 Toll Free: +1 800 237 7769 Europe, Middle East, Africa: +44 1440 714 850 Asia Pacific: +852 3160 9800 Latin America: +52 55 5081 1650

hidglobal.com