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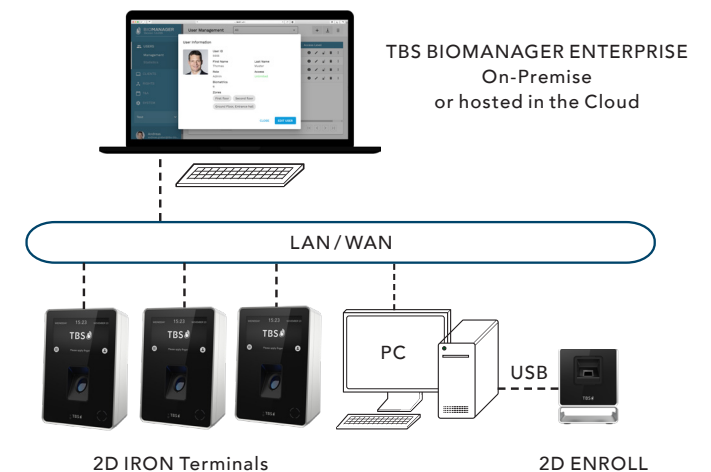
## MULTISPECTRAL FINGERPRINT READER

# 2D IRON HEAVY DUTY



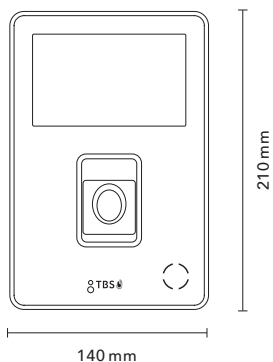
Biometric terminal suitable for harsh environments, combined with best-in-class touch fingerprint sensor for highest security and multifunctionality at the point of access. IP65 certification ready to withstand water and dust in challenging outdoor environments.

- Waterproof and dustproof housing (IP65)
- Proven to withstand harsh environments
- Multispectral sensor V-series
- Excellent identification also for dirty fingers
- Optional liveness detection to prevent spoofing
- Optional RFID modules
- Identification or verification with PIN or card
- Wall mount with robust aluminum HD Box
- Indoor and outdoor installation
- Supports Power-over-Ethernet

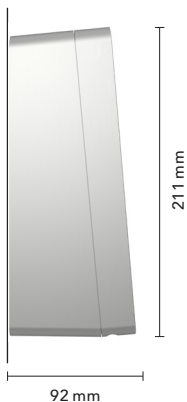




## 2D IRON HD (HEAVY DUTY)



Wall mount (HD-Box)



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|                |                                                           | 3D FLY  | 3D AIR (22) | 3D FLASH+      | 3D LIGHT (23)  | 2D IRON<br>HEAVY DUTY | 2D IRON   | 2D SENSE       | 2D TIME | TBS CONTROLLER<br>SMART+ | TBS EDGE |
|----------------|-----------------------------------------------------------|---------|-------------|----------------|----------------|-----------------------|-----------|----------------|---------|--------------------------|----------|
| Applications   | Access Control                                            | •       | •           | •              | •              | •                     | •         | •              |         | •                        | •        |
|                | Time & Attendance, Workforce Management                   | •       | •           | •              | •              | •                     | •         | •              | •       | •                        |          |
| Sensors        | Touchless Hand Scanner                                    | •       |             |                |                |                       |           |                |         |                          |          |
|                | Touchless 3D Finger Scanner                               |         | •           |                |                |                       |           |                |         |                          |          |
|                | Touchless Face Scanner                                    |         |             | •              |                |                       |           |                |         |                          |          |
|                | Touchless Iris Scanner                                    |         |             |                | •              |                       |           |                |         |                          |          |
|                | Finger optical multispectral                              |         |             |                |                | •                     | •         |                |         |                          |          |
|                | Finger optical (ot, optional) / capacitive (ct)           |         |             | (ot)           |                |                       |           | ct             | ct      |                          |          |
|                | Thermal camera                                            |         |             |                | (•)            |                       |           |                |         |                          |          |
| Identification | PIN                                                       | •       | •           | •              | •              | •                     | •         | •              | •       |                          |          |
| Factors        | RFID                                                      |         | (•)         | • <sup>1</sup> | • <sup>2</sup> | (•)                   | (•)       | (•)            |         |                          |          |
|                | TBS MobileID (Bluetooth)                                  |         | (•)         |                |                | (•)                   | (•)       | (•)            |         |                          |          |
|                | QR Code                                                   |         |             | (•)            | (•)            |                       |           |                |         |                          |          |
| User Interface | Touchscreen size in inch                                  | 7.0     | 5.0         | 8.0            | 5.0            | 5.0                   | 5.0       | 3.5            | 9.0     |                          |          |
|                | Loudspeaker                                               | •       | •           | •              | •              | •                     | •         |                |         |                          |          |
|                | Beeper                                                    |         |             |                |                |                       |           | •              |         |                          |          |
| Biometrics     | Identification (1:N) database limit, default <sup>3</sup> | 10'000  | 10'000      | 10'000         | 10'000         | 10'000                | 10'000    | 5'000          | 5'000   |                          | special  |
|                | Identification (1:N) database limit, PREMIUM <sup>3</sup> | 20'000  | 50'000      | 50'000         | 50'000         | 20'000                | 20'000    | 10'000         | 10'000  |                          | special  |
|                | FRR at FAR 1:100'000                                      | <0.5%   | <0.5%       | <2.0%          | <0.5%          | <1.0%                 | <1.0%     | <2.0%          | <2.0%   |                          |          |
| Communication  | LAN                                                       | •       | •           | •              | •              | •                     | •         | •              | •       | •                        | •        |
|                | Wifi                                                      |         | (•)         |                | (•)            | (•)                   | (•)       | (•)            | •       | •                        |          |
|                | Mobile 4G <sup>4</sup>                                    |         |             |                |                |                       |           |                | •       |                          |          |
| Interfaces     | RS-232 and RS-485                                         | •       | •           | •              | •              | •                     | •         | • <sup>5</sup> |         | RS-485                   | •        |
|                | Wiegand out                                               | •       | •           | •              | •              | •                     | •         | •              |         |                          | •        |
|                | Number of Relais (NO/NC/COM)                              | 2       | 1           | 2              | 1              | 1                     | 1         | 1              |         | 4                        | 2        |
|                | GPIN/GPOUT                                                | 2/2     | 2/2         | 2              | 2/0            | 2/2                   | 2/2       | 3/1            |         | 4/4                      | 2/2      |
| Security       | Presentation Attack Detection (PAD)                       |         | (•)         | (•)            |                | (•)                   | (•)       |                |         |                          |          |
|                | Multi-level data encryption                               | •       | •           | •              | •              | •                     | •         | •              | •       | •                        | •        |
|                | Template on card                                          |         | (•)         |                |                | (•)                   | (•)       | (•)            |         |                          |          |
|                | Tamper Switch                                             |         | •           |                | •              | •                     | •         | (•)            |         | •                        |          |
| Installation   | Input supply voltage DC                                   | 24      | 12-24       | 15-24          | 12-24          | 12-24                 | 12-24     | 12-24          | 12      | 12-24                    | 12-24    |
|                | Max. power rating in W                                    | 100     | 18          | 12             | 16             | 10                    | 10        | 5              | 10      | 3                        | 15       |
|                | Power over Ethernet                                       |         | •           |                |                | •                     | •         |                |         |                          |          |
|                | Operating temperature in °C <sup>6</sup>                  | 0 to 45 | -20 to 60   | -20 to 60      | 0 to 45        | -20 to 60             | -20 to 60 | -20 to 60      | 0 to 35 | -20 to 60                | 0 to 45  |
| Mounting       | Wall mount WM-Box <sup>7</sup>                            |         | IP20        | IP54           | IP30           |                       | IP20      | IP20           | IP30    | IP20                     | •        |
|                | Wall mount HD-Box                                         |         | IP54        |                |                | IP65                  |           |                |         |                          |          |
|                | Flush mount FM-Box                                        |         | IP54        |                |                |                       | IP54      | IP54           |         |                          |          |
|                | Outdoor protection kit <sup>8</sup>                       |         | (•)         | (•)            |                |                       | (•)       | (•)            |         |                          |          |
| Certifications | CE                                                        | •       | •           | •              | •              | •                     | •         | •              | •       | •                        | •        |
|                | FCC/IC                                                    | •       | •           | •              | •              | •                     | •         | •              |         |                          | •        |
|                | UL 294                                                    |         | •           |                |                | •                     | •         |                |         |                          |          |



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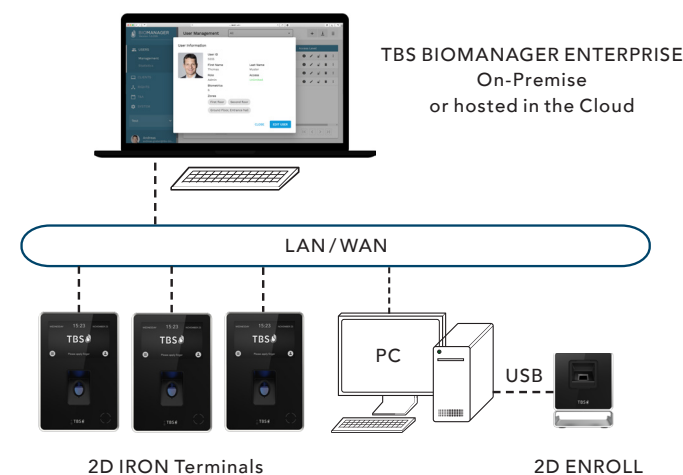
## MULTISPECTRAL FINGERPRINT READER

# 2D IRON



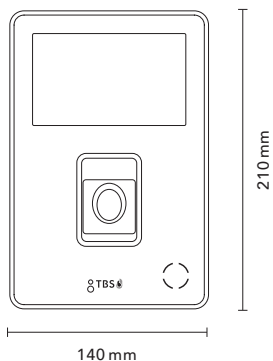
A multi-functional and user-friendly touch terminal offering superior identification performance with best-in-class touch fingerprint sensor.

- Multispectral sensor V-series
- Access and time & attendance
- Optional liveness detection to prevent spoofing
- Excellent identification also for dirty fingers
- Optional RFID modules
- Identification or verification with PIN or card
- Wall mount option for indoor installations
- Flush mount for indoor and outdoor installations
- Supports Power-over-Ethernet

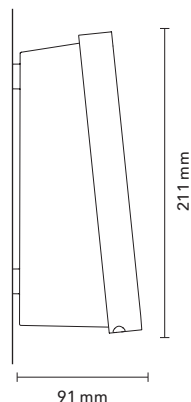




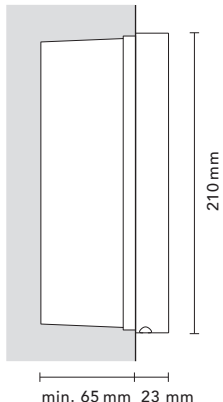
## 2D IRON



Wall mount (WM-Box)



Flush mount (FM-Box)



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- 1 = HF: MIFARE Classic/DESFire (UID/CSN only)  
2 = Fixed to MIFARE Classic/DESFire  
3 = Extended by BME PREMIUM plan. Figure indicates fingerprints, faces, iris pairs or hands  
4 = LTE FDD: B1/B3/B7/B8/B20/B28A  
WCDMA: B1/B8, GSM: B3/B8

- 5 = Either/or, selectable by switch  
6 = Direct sunlight must be avoided  
7 = Indoor use only  
8 = Required if not sheltered  
(\*) = Optional, requires HW accessory or license

|                |                                                           | 3D FLY  | 3D AIR (22) | 3D FLASH+      | 3D LIGHT (23)  | 2D IRON<br>HEAVY DUTY | 2D IRON   | 2D SENSE       | 2D TIME | TBS CONTROLLER<br>SMART+ | TBS EDGE |
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| Sensors        | Touchless Hand Scanner                                    | •       |             |                |                |                       |           |                |         |                          |          |
|                | Touchless 3D Finger Scanner                               |         | •           |                |                |                       |           |                |         |                          |          |
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|                | Finger optical multispectral                              |         |             |                |                | •                     | •         |                |         |                          |          |
|                | Finger optical (ot, optional) / capacitive (ct)           |         |             | (ot)           |                |                       |           | ct             | ct      |                          |          |
|                | Thermal camera                                            |         |             |                | (*)            |                       |           |                |         |                          |          |
| Identification | PIN                                                       | •       | •           | •              | •              | •                     | •         | •              |         |                          |          |
| Factors        | RFID                                                      |         | (*)         | • <sup>1</sup> | • <sup>2</sup> | (*)                   | (*)       | (*)            |         |                          |          |
|                | TBS MobileID (Bluetooth)                                  |         | (*)         |                |                | (*)                   | (*)       | (*)            |         |                          |          |
|                | QR Code                                                   |         |             | (*)            | (*)            |                       |           |                |         |                          |          |
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|                | Beeper                                                    |         |             |                |                |                       |           | •              |         |                          |          |
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| Communication  | LAN                                                       | •       | •           | •              | •              | •                     | •         | •              | •       | •                        | •        |
|                | Wifi                                                      |         | (*)         |                | (*)            | (*)                   | (*)       | (*)            | •       | •                        |          |
|                | Mobile 4G <sup>4</sup>                                    |         |             |                |                |                       |           |                | •       |                          |          |
| Interfaces     | RS-232 and RS-485                                         | •       | •           | •              | •              | •                     | •         | • <sup>5</sup> |         | RS-485                   | •        |
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|                | Multi-level data encryption                               | •       | •           | •              | •              | •                     | •         | •              | •       | •                        | •        |
|                | Template on card                                          |         | (*)         |                |                | (*)                   | (*)       | (*)            |         |                          |          |
|                | Tamper Switch                                             |         | •           |                | •              | •                     | •         | (*)            |         | •                        |          |
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|                | Wall mount HD-Box                                         |         | IP54        |                |                | IP65                  |           |                |         |                          |          |
|                | Flush mount FM-Box                                        |         | IP54        |                |                |                       | IP54      | IP54           |         |                          |          |
|                | Outdoor protection kit <sup>8</sup>                       |         | (*)         | (*)            |                |                       | (*)       | (*)            |         |                          |          |
| Certifications | CE                                                        | •       | •           | •              | •              | •                     | •         | •              | •       | •                        | •        |
|                | FCC/IC                                                    | •       | •           | •              | •              | •                     | •         | •              |         |                          | •        |
|                | UL 294                                                    |         | •           |                |                | •                     | •         |                |         |                          |          |