**Multi-technology Access Reader Specification**

**Manufacturer - Matrix Research Limited**

**Product Brand - ACX**

1. 3-in-1 Multi-technology Smart Card smart Reader (Bluetooth + Scramble QR Code + RFID Card)
2. Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, and LEGIC card technology.
3. 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
4. Programmable reader buzzer beep sound interval and times for access granted and access denied
5. Programmable reader LED color (7 colors) interval and times for access granted and access denied
6. Reader configuration can be updated through the network by ACX proprietary software
7. Reader firmware can be upgraded through the network by ACX proprietary software
8. Reader outputs ACX proprietary scramble encryption RS485 format
9. Reader Tamper: Optical sensor
10. Reader size shall be not larger than 80mm(W) x 130mm(H) x 20mm(D)
11. Waterproof, IP65 rated

1. 4-in-1 Multi-technology Smart Card Keypad Reader (Keypad + Bluetooth + Scramble QR Code + RFID Card)
2. 12 capacitance touch keypads, 0~9,\*,#. Keypad has blacklight in 7 different colors.
3. Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, and LEGIC card technology.
4. 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
5. Programmable reader buzzer beep sound interval and times for access granted and access denied
6. Programmable reader LED color (7 colors) interval and times for access granted and access denied
7. Reader configuration can be updated through the network by ACX proprietary software
8. Reader firmware can be upgraded through the network by ACX proprietary software
9. Reader outputs ACX proprietary scramble encryption RS485 format
10. Reader Tamper: Optical sensor
11. Reader size shall be not larger than 80mm(W) x 130mm(H) x 20mm(D)
12. Waterproof IP65 rated
13. 4-in-1 Multi-technology Palm Vein Smart Card Reader (Palm Vein + Bluetooth + Scramble QR Code + RFID Card)
14. Palm Vein recognition technology should be provided by Fujitsu PalmSecure-F Pro sensor
15. Palm Vein Sensor supports binocular infrared live detection
16. Palm Vein recognition can be completed in one second for 2,000 palm vein users. Each user can register 2 palm vein templates
17. FRR is 0.00001%, Palm Vein detective range of the Palm Vein Sensor from 30mm to 70mm
18. Supports 5,000 local personnel
19. Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, and LEGIC card technology.
20. 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
21. Programmable reader buzzer beep sound interval and times for access granted and access denied
22. Programmable reader LED color (7 colors) interval and times for access granted and access denied
23. Reader configuration can be updated through the network by ACX proprietary software
24. Reader firmware can be upgraded through the network by ACX proprietary software
25. Reader outputs ACX proprietary scramble encryption RS485 format
26. Reader Tamper: Optical sensor
27. Reader size shall be not larger than 80mm(W) x 130mm(H) x 20mm(D)
28. Waterproof IP55 rated
29. 4-in-1 Multi-technology Facial Recognition Smart Card Reader (Facial Recognition + Bluetooth + Scramble QR Code + RFID Card)
30. Facial Recognition Algorithm by SenseTime technology
31. Facial detection supports binocular infrared live detection
32. Face recognition can be completed in 300 milliseconds
33. The recognition accuracy rate is higher than 99% and 0.5m-1.5m recognition distance is supported
34. Supports 20,000 local personnel
35. Real-time detection and tracking of human faces, accurate detection can be carried out in situations such as side faces, half occlusion, and blur
36. Minimum 0.5 lux recognition
37. Effective defense against non-living attacks such as 3D printing, electronic screens, video, pictures, masks, hoods, etc.
38. Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, and LEGIC card technology.
39. 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
40. Programmable reader buzzer beep sound interval and times for access granted and access denied
41. Programmable reader LED color (7 colors) interval and times for access granted and access denied
42. Reader configuration can be updated through the network by ACX proprietary software
43. Reader firmware can be upgraded through the network by ACX proprietary software
44. Reader outputs ACX proprietary scramble encryption RS485 format
45. Reader Tamper: Optical sensor
46. Reader size shall be not larger than 80mm(W) x 130mm(H) x 20mm(D)
47. Waterproof IP55 rated
48. 4-in-1 Multi-technology Facial Recognition Smart Card LCD Reader (Facial Recognition + Bluetooth + Scramble QR Code + RFID Card)
49. Facial Recognition Algorithm by SenseTime technology
50. Reader cover material by Aluminum alloy
51. Reader LCD 5.5”
52. Facial detection supports binocular infrared live detection
53. Face recognition can be completed in 300 milliseconds
54. The recognition accuracy rate is higher than 99% and 0.5m-1.5m recognition distance is supported
55. Supports 20,000 local personnel
56. Real-time detection and tracking of human faces, accurate detection can be carried out in situations such as side faces, half occlusion, and blur
57. Minimum 0.5 lux recognition
58. Effective defense against non-living attacks such as 3D printing, electronic screens, video, pictures, masks, hoods, etc.
59. Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, and LEGIC card technology.
60. 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
61. Programmable reader buzzer beep sound interval and times for access granted and access denied
62. Programmable reader LED color (7 colors) interval and times for access granted and access denied
63. Reader configuration can be updated through the network by ACX proprietary software
64. Reader firmware can be upgraded through the network by ACX proprietary software
65. Reader outputs ACX proprietary scramble encryption RS485 format
66. Reader Tamper: Optical sensor
67. Reader size shall be not larger than 96mm(W) x 240mm(H) x 22mm(D)
68. 4-in-1 Multi-technology Octopus smart lock reader (Octopus + Bluetooth + Scramble QR Code)
69. Support HK Octopus Card, Octopus mobile apps, Octopus watch
70. Supports Octopus, Mobile Virtual Card by Bluetooth 4.0+ and Scramble QR Code
71. Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
72. The reader shall have the Octopus Holding Limited Type Approval Certificate
73. Octopus ISO card read range: 7cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
74. Programmable reader buzzer beep sound interval and times for access granted and access denied
75. Programmable reader LED color (7 colors) interval and times for access granted and access denied
76. Reader configuration can be updated through the network by ACX proprietary software
77. Reader firmware can be upgraded through the network by ACX proprietary software
78. Reader outputs ACX proprietary scramble encryption RS485 format Reader size shall be not larger than 94mm(W) x 196mm(H) x 55mm(D)
79. Flush mount design with only 6mm extruded from the wall