

Multi-technology Access Reader Specification

Manufacturer - Matrix Research Limited

Product Brand - ACX

1. Contactless Smart Card smart Reader (RFID Card)
 - a) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime and LEGIC Advant card technology.
 - b) 13.56MHz card read range: 5cm+;
 - c) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - d) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - e) Reader configuration can be updated through the network by ACX proprietary software
 - f) Reader firmware can be upgraded through the network by ACX proprietary software
 - g) Reader outputs Wiegand, OSDP or ACX proprietary scramble encryption RS485 format
 - h) Reader Tamper: Optical sensor
 - i) Reader size shall be no larger than 80mm(W) x 110mm(H) x 20mm(D)
 - j) Waterproof, IP65 rated.

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2. 2-in-1 Multi-technology Smart Card smart Reader (Bluetooth + RFID Card)
- k) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime and LEGIC Advant card technology.
 - l) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - m) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - n) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - o) Reader configuration can be updated through the network by ACX proprietary software
 - p) Reader firmware can be upgraded through the network by ACX proprietary software
 - q) Reader outputs Wiegand, OSDP or ACX proprietary scramble encryption RS485 format
 - r) Reader Tamper: Optical sensor
 - s) Reader size shall be no larger than 80mm(W) x 110mm(H) x 20mm(D)
Waterproof, IP65 rated

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3. 3-in-1 Multi-technology Smart Card smart Reader (Bluetooth + Keypad + RFID Card)
 - a) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - b) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - c) 12 capacitance touch keypads, 0~9,*,#. Keypad has backlight in 7 different colors.
 - d) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - e) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - f) Reader configuration can be updated through the network by ACX proprietary software
 - g) Reader firmware can be upgraded through the network by ACX proprietary software
 - h) Reader outputs Wiegand, OSDP or ACX proprietary scramble encryption RS485 format
 - i) Reader Tamper: Optical sensor
 - j) Reader size shall be no larger than 80mm(W) x 110mm(H) x 20mm(D)
 - k) Waterproof, IP65 rated

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4. 3-in-1 Multi-technology Smart Card smart Reader (Bluetooth + Scramble QR Code + RFID Card)
 - a) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - b) Supports Bluetooth 5.0, 2.4GHz
 - c) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - d) QR code resolution 640 x 480
 - e) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - f) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - g) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - h) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - i) Reader configuration can be updated through the network by ACX proprietary software
 - j) Reader firmware can be upgraded through the network by ACX proprietary software
 - k) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - l) Reader Tamper: Optical sensor
 - m) Reader size shall be no larger than 80mm(W) x 130mm(H) x 20mm(D)
 - n) Waterproof, IP65 rated

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5. 4-in-1 Multi-technology Smart Card Keypad Reader (Keypad + Bluetooth + Scramble QR Code + RFID Card)
- a) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - b) Supports Bluetooth 5.0, 2.4GHz
 - c) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - d) QR code resolution 640 x 480
 - e) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - f) 12 capacitance touch keypads, 0~9,*,#. Keypad has backlight in 7 different colors.
 - g) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - h) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - i) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - j) Reader configuration can be updated through the network by ACX proprietary software
 - k) Reader firmware can be upgraded through the network by ACX proprietary software
 - l) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - m) Reader Tamper: Optical sensor
 - n) Reader size shall be no larger than 80mm(W) x 130mm(H) x 20mm(D)
 - o) Waterproof IP65 rated.

6. 4-in-1 Multi-technology Palm Vein Smart Card Reader (Palm Vein + Bluetooth + Scramble QR Code + RFID Card)
 - a) Palm Vein recognition technology should be provided by the Fujitsu PalmSecure-F Pro sensor
 - b) Palm Vein Sensor supports binocular infrared live detection
 - c) Palm Vein recognition can be completed in one second for 2,000 palm vein users. Each user can register 2 palm vein templates
 - d) FAR is 0.00001%, Palm Vein detective range of the Palm Vein Sensor is from 30mm to 70mm
 - e) Supports 5,000 local personnel
 - f) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - g) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - h) Supports Bluetooth 5.0, 2.4GHz
 - i) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - j) QR code resolution 640 x 480
 - k) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - l) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - m) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - n) Reader configuration can be updated through the network by ACX proprietary software
 - o) Reader firmware can be upgraded through the network by ACX proprietary software
 - p) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - q) Reader Tamper: Optical sensor
 - r) Reader size shall be no larger than 80mm(W) x 130mm(H) x 20mm(D)
 - s) Waterproof IP55 rated

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7. 4-in-1 Multi-technology Facial Recognition Smart Card Reader (Facial Recognition + Bluetooth + Scramble QR Code + RFID Card)
- a) Facial Recognition Algorithm by SenseTime technology
 - b) Facial detection supports binocular infrared live detection
 - c) Face recognition can be completed in 300 milliseconds
 - d) The recognition accuracy rate is higher than 99% and 0.5m-1.5m recognition distance is supported
 - e) Supports 20,000 local personnel
 - f) Real-time detection and tracking of human faces, accurate detection can be carried out in situations such as side faces, half occlusion, and blur
 - g) Minimum 0.5 lux recognition
 - h) Effective defense against non-living attacks such as 3D printing, electronic screens, video, pictures, masks, hoods, etc.
 - i) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime; and LEGIC Advant card technology.
 - j) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - k) Supports Bluetooth 5.0, 2.4GHz
 - l) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - m) QR code resolution 640 x 480
 - n) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - o) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - p) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - q) Reader configuration can be updated through the network by ACX proprietary software
 - r) Reader firmware can be upgraded through the network by ACX proprietary software
 - s) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - t) Reader Tamper: Optical sensor
 - u) Reader size shall be no larger than 80mm(W) x 130mm(H) x 20mm(D)

8. 4-in-1 Multi-technology Facial Recognition Smart Card LCD Reader (Facial Recognition + Bluetooth + Scramble QR Code + RFID Card)
- a) Facial Recognition Algorithm by SenseTime technology
 - b) Reader cover material by Aluminum alloy
 - c) Reader LCD 5.5"
 - d) Facial detection supports binocular infrared live detection
 - e) Face recognition can be completed in 300 milliseconds
 - f) The recognition accuracy rate is higher than 99% and 0.5m-1.5m recognition distance is supported
 - g) Supports 20,000 local personnel
 - h) Real-time detection and tracking of human faces, accurate detection can be carried out in situations such as side faces, half occlusion, and blur
 - i) Minimum 0.5 lux recognition
 - j) Effective defense against non-living attacks such as 3D printing, electronic screens, video, pictures, masks, hoods, etc.
 - k) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - l) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - m) Supports Bluetooth 5.0, 2.4GHz
 - n) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - o) QR code resolution 640 x 480
 - p) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - q) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - r) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - s) Reader configuration can be updated through the network by ACX proprietary software
 - t) Reader firmware can be upgraded through the network by ACX proprietary software
 - u) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - v) Reader Tamper: Optical sensor
 - w) Reader size shall be no larger than 96mm(W) x 240mm(H) x 22mm(D)

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9. 4-in-1 Multi-technology Octopus smart lock reader (Octopus + Bluetooth + Scramble QR Code)
- a) Support HK Octopus Card, Octopus mobile apps, Octopus watch
 - b) Supports Octopus, Mobile Virtual Card by Bluetooth 4.0+ and Scramble QR Code
 - c) Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - d) Supports Bluetooth 5.0, 2.4GHz
 - e) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - f) QR code resolution 640 x 480
 - g) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - h) The reader shall have the Octopus Holding Limited Type Approval Certificate
 - i) Octopus ISO card read range: 7cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - j) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - k) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - l) Reader configuration can be updated through the network by ACX proprietary software
 - m) Reader firmware can be upgraded through the network by ACX proprietary software
 - n) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format Reader size shall be no larger than 94mm(W) x 196mm(H) x 55mm(D)
 - o) Flush mount design with only 6mm extruded from the wall.

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10. 5-in-1 Multi-technology Reader (Facial Recognition + Palm Vein + Bluetooth + Scramble QR Code + RFID Card)
- a) This is a flush-mounted reader
 - b) Facial Recognition Algorithm by SenseTime technology
 - c) Facial detection supports binocular infrared live detection.
 - d) Face recognition can be completed in 300 milliseconds.
 - e) The recognition accuracy rate is higher than 99% and 0.5m-1.5m recognition distance is supported.
 - f) Supports 20,000 local personnel
 - g) Real-time detection and tracking of human faces, accurate detection can be carried out in situations such as side faces, half occlusion, and blur
 - h) Minimum 0.5 lux recognition
 - i) Effective defense against non-living attacks such as 3D printing, electronic screens, video, pictures, masks, hoods, etc.
 - j) Palm Vein recognition technology should be provided by Fujitsu PalmSecure-F Pro sensor
 - k) Palm Vein Sensor supports binocular infrared live detection.
 - l) Palm Vein recognition can be completed in one second for 2,000 palm vein users. Each user can register 2 palm vein templates.
 - m) FAR is 0.00001%, Palm Vein detective range of the Palm Vein Sensor from 30mm to 70mm
 - n) Supports 5,000 local personnel.
 - o) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - p) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - q) Supports Bluetooth 5.0, 2.4GHz
 - r) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - s) QR code resolution 640 x 480
 - t) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - u) Programmable reader buzzer beep sound interval and times for access granted and access denied.
 - v) programmable reader LED color (7 colors) interval and times for access granted and access denied.
 - w) Reader configuration can be updated through the network by ACX proprietary software.
 - x) Reader firmware can be upgraded through the network by ACX proprietary software.
 - y) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - z) Reader Tamper: Optical sensor
 - aa) Reader size shall be no larger than 90mm(W) x 180mm(H) x 30mm(D)

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11. Flush-mounted 3-in-1 Multi-technology Smart Card smart Reader (Bluetooth + Scramble QR Code + RFID Card)
- a) This is a flush-mounted reader which can be directly mounted on the electric junction box.
 - b) Reader size is 86mm(W) x 86mm(H) x 5mm(D) with reader cover plate.
 - c) Reader size is 86mm(W) x 86mm(H) x 3mm(D) without reader cover plate.
 - d) Supports 13.56MHz NXP Mifare Class, Mifare Plus, Mifare DESFire, LEGIC Prime, and LEGIC Advant card technology.
 - e) Supports Bluetooth 5.0, 2.4GHz
 - f) QR code camera minimum resolution is 5 mil (1mil = 0.0254mm, 0.01 inch)
 - g) QR code resolution 640 x 480
 - h) QR code camera scanning range, $\pm 60^\circ$ for left & right, $\pm 40^\circ$ for front and back, 360° rotation.
 - i) 13.56MHz card read range: 5cm+; Bluetooth read range: 0.5m to 10m; QR Code read range: 4cm to 22cm
 - j) Programmable reader buzzer beep sound interval and times for access granted and access denied
 - k) Programmable reader LED color (7 colors) interval and times for access granted and access denied
 - l) Reader configuration can be updated through the network by ACX proprietary software
 - m) Reader firmware can be upgraded through the network by ACX proprietary software
 - n) Reader outputs OSDP or ACX proprietary scramble encryption RS485 format
 - o) Reader Tamper: Optical sensor
 - p) Waterproof, IP55 rated