

TRANSIT Ultimate

long-range vehicle and driver identification reader

Key features:

- ✓ simultaneous vehicle and driver identification
- ✓ read range up to 10 meters (33 feet)
- ✓ object speed up to 200 km/h (125 mph)
- ✓ tag authentication based on AES encryption
- ✓ adjustable read range
- ✓ bi-directional communication
- ✓ variety of integrated communication interfaces
- ✓ robust industrial design
- ✓ OSDP v2 supported including secure channel protocol

The TRANSIT Ultimate is an extremely robust RFID reader that enables simultaneous identification of vehicles and drivers in challenging situations. Based on semi active RFID technology, vehicles and drivers are identified at distances up to 10 meters (33 feet) and speeds up to 200 km/h (125 mph).

This high-end reader is designed to perform well in high security applications, demanding vehicular access control applications and under harsh environmental conditions. Typical applications include highly secured vehicle access at airports, seaports, mines, military bases and other installations where vehicles must be assigned to specific drivers.

Channel selection

The TRANSIT Ultimate operates on a factory-set frequency. The frequency channel selection allows multiple readers to operate in close vicinity of each other without interference.

Read range adjustment

The reader resolves typical multi-lane, entry and exit reader challenges. The read range of the reader can be adjusted, offering accurate identification in demanding applications.

Housing & mounting

The weatherproof TRANSIT Ultimate features an IP66 certified housing. The reader operates reliably under harsh environmental conditions and is able to withstand exposure to rain, snow and ice. Wall mounting equipment is included.

Interfaces & protocols

The TRANSIT Ultimate is designed for seamless and flexible integration into existing management systems in the industry, such as security, parking, traffic and logistics.



Several communication interfaces are available such as RS232 (default, standard included), RS422, RS485, HID Interface Board (HIB) and TCP/IP. Also open industry-standards protocols such as Wiegand and OSDP are supported. Customer specific protocols can be implemented on request.

OSDP capability

The TRANSIT Ultimate long-range RFID reader supports the Open Supervised Device Protocol (OSDP) for automatic vehicle identification applications. OSDP enables advanced and secure communication between the long-range RFID reader and the controller. For this feature the TRANSIT OSDP Interface Board is required.

Security Key Pack

A Security Key Pack is optionally available for the TRANSIT Ultimate. With this key, advanced bi-directional communication between readers and tags becomes available. Additionally, secure authentication of Ultimate tags becomes available to prevent cloning and replay-attacks. This function is available for the Smartcard and LEGIC Booster Ultimate and the Window Tag Ultimate.

Optional feature: editing card content

Since full bi-directional communication is available, the Smartcard Booster Ultimate potentially can write information on the drivers' access control card when the car enters or leaves a perimeter. Credits, offline access rights or other information could be changed dynamically upon perimeter access. This will require additional engineering effort. Please consult your Nedap representative when this optional feature is relevant to your installation.

| Technical specifications | TRANSIT Ultimate |
|--------------------------|--|
| Part number | 9215689 TRANSIT Ultimate |
| Dimensions | 330 x 274 x 140 mm (13 x 10.8 x 5.5 in) |
| Color | RAL 7016 (cover), RAL 7035 (housing) |
| Weight | 4 kg (8.82 lbs) |
| Protection class | IP66 |
| Material | Cover ABS, Housing Die-casting ADC12 |
| Operating temperature | -30... +60°C (-22... +140°F) |
| Storage temperature | -30... +60°C (-22... +140°F) |
| Relative humidity | 10% ... 93% relative humidity, non-condensing |
| Power supply | Input: 100-240 VAC, 0.3-0.6A (50 - 60 Hz) or 24 VDC, 0.7A; Output 24Vdc, 0.1A |
| Power consumption | <25VA (on AC), <20 Watt (on DC) |
| Read range | Up to 10 meters (33 feet), message acceptance ratio > 80% |
| Object speed | Up to 200 km/h (124 mph) at appropriate distance* |
| Operating frequency | 2.438 – 2.457 GHz, 433.62 & 434.22 MHz (RX-Cat 3) Ton <5sec. |
| Antenna polarization | Circular (LHC) (2450 MHz) integrated antenna; Horizontal (433 MHz); dedicated antenna. |
| Air interface | 2.45 GHz: Nedap proprietary encoding standard 433 MHz: Encryption based upon diversified AES128; 300kbps/ GFSK 75 kHz; Duty cycle < 1%; LBT not applicable |
| Communication interfaces | USB, Wiegand, OSDP V.1.2.7, Magstripe (clock & data), Barcode (Code39). Default interface board: RS232 (default) Available interface boards: RS422/485, TCP/IP and HID Interface Board (HIB) |
| Communication protocols | CR/LF, DC2/DC4 and various OEM protocols. Depending upon installed firmware. See firmware manual for more details. |
| Input | TTL read disable; 3x TTL general purpose inputs |
| Output | 1 relay output (NO, common, NC), 24 VDC 2A, 120 V AC 1A |
| Antenna input | Optional 1 external inductive antenna connection 120 kHz |
| Antenna output | Nedap external reader antenna connection 120 kHz output |
| Connectors | PCB screw connectors |
| Tamper switch | Magnetic switch, normally closed |
| Standards | CE, FCC, IC, ACMA, R-NZ, China_CMIIT, UL294 |
| Included accessories | 9984364 Wall Mounting Set |
| Optional accessories | 5626595 Pole Mounting Kit 9218327 Weather Protection Hood 9216537 Security Key Pack |
| Document version number | 2.3 |