

# TRANSIT ULTIMATE

| long-range vehicle and driver identification reader



## KEY FEATURES:

- Robust industrial design
- Read range of up to 10 meters [33 ft]
- Object speed up to 200 km/h [125 mph]
- Well defined adjustable read range
- Multi-channel selection
- Variety of integrated communication interfaces
- 3 color LED indication
- Tag authentication based on AES Encryption
- Bi-directional communication using two RFID channels
- Supports backward-compatibility mode with previous TRANSIT readers

The TRANSIT Ultimate is the robust long-range reader, based on semi active RFID technology, which enables automatic vehicle identification at distances of up to 10 m (33 ft) and speeds of 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. The TRANSIT Ultimate offers the highest level of security and convenience for both vehicles and drivers. The built-in antenna, an integrated read range adjustment board and a variety of communication interfaces to ensure seamless and flexible integration. The identification lobe of the reader is a directed beam, offering precise determination of the detection area. A second RFID communication channel is used for advanced bidirectional communication and secure tag authentication.

### 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 efficiently resolves typical multi-lane, entry and exit reader challenges. The read range of the TRANSIT Ultimate can be adjusted to offer secure and reliable identification in demanding applications

### Housing & mounting

The weatherproof TRANSIT Ultimate reader features an IP66 certified housing. The reader continues to operate reliable 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 to the host system are available such as RS232 (default), RS422, RS485, Profibus DP, HID Interface Board (HIB) and TCP/IP. Also open industry-standards protocols such as Wiegand are supported. Customer specific protocols can be implemented on request.

## Security Key Pack

The TRANSIT Ultimate can be supplied with the Security Key Pack. When using the Security Key the following features are available:

- Secure authentication of Ultimate tags to prevent cloning and replay-attacks.
- Advanced bi-directional communication between readers and tags.

## Tag authentication

The TRANSIT Ultimate enables advanced tag authentication for the Smartcard and LEGIC Boosters Ultimate and the Window Tag Ultimate. By using a second communication channel (both 433 MHz and 2,4 GHz) advanced security can be achieved.

## Data storage

Thanks to a bi-directional communication feature and in combination with Smartcard Booster Ultimate it will become possible to write information on the drivers' access control card when the car enters or leaves a perimeter. Credits, offline access rights or other information will be changed dynamically upon perimeter access.

# SPECIFICATIONS

Technical information	TRANSIT Ultimate
Part number	9215689 TRANSIT Ultimate
Dimensions	330x274x140 mm 13x10.8x5,5 inch
Weight	5 kg [11 pounds]
Housing	Cover ABS, Housing Die-casting ADC12
Protection	IP66
Detection range	Up to 10 meters [33 ft], message acceptance ratio > 80%
Operating temperature	-30... +60°C [-22... +140°F]
Object speed	Up to 200 km/h [124 mph] at appropriate distance*
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)
Operating frequency	2.438 – 2.457 GHz, 433.62 & 434.22 MHz (RX-Cat 3) Ton <5sec.
Frequency channels 2.45 GHz	32 channels, spacing 600 kHz to avoid interference, to be used when TRANSIT Ultimate readers are installed in close vicinity of each other
Air interface 2.45 GHz	Nedap proprietary encryption standard 1.875 kbps
Air interface 433 MHz	Encryption based upon diversified AES128; 300kbps/ GFSK 75 kHz; Duty cycle < 1%; LBT not applicable
Polarization	Circular (LHC) (2450 MHz) integrated antenna; Horizontal (433 MHz); dedicated antenna.
Relay output	1 relay output (NO, common, NC), 24 VDC 2A, 120 VAC 1A
Inputs	3 dry contacts or TTL
Audio	Range check beeper
Output	Barcode 39, Wiegand 26-bit, Wiegand 32-bit, Wiegand 37-bit, FF56 and Omron ISO 7811/2, USB
Antenna input	Optional 1 external inductive antenna connection 120 kHz
Antenna output	Nedap external reader antenna connection 120 kHz output
Interfaces	USB, Wiegand, Magstripe, Barcode. Available interface boards: RS232 (default), RS422, RS485, TCP/IP*, HID Interface Board (HIB)*, Profibus-DP*
Communication protocols	CR/LF, DC2/DC4 and various OEM protocols (for more information refer to the firmware manuals)
Mounting	Wall mounting set included Option Pole Mounting Kit (5626595) and is available
*Note:	(* ) not evaluated by UL
EMC	EMC directive EC: 2014/ 30/ EC; 2004/ 108/ EC; EN301489-1,-30,-17; EN6100-6-2; EN61000-6-3
Safety	EN 60950, UL 294 6th edition
Regulations	FCC part 15.245 - EN 300 440; FCC part 15.231 a, b - EN 300 220
Documentation	TRANSIT Ultimate Installation Guide TRANSIT Ultimate Quick Reference Guide
Accessories	5626595 Pole Mounting Kit 9216537 Security Key Pack
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