OBU1010 DSRC TRANSPONDER

CEN DSRC OBU WITH IMPROVED RELIABILITY, SUSTAINABILITY, AND LOGISTICS



OVERVIEW

Q-Free's OBU1010 is a low-power, robust OBU with enhanced RF resilience and a sleek, compact design engineered for the evolving needs of:

- Electronic tolling
- Congestion charging
- Automatic vehicle identification (AVI)
- Electronic registration identification (ERI)
- Access control and parking

Small and lightweight, the OBU1010 installs discreetly in the vehicle cabin without impacting driver visibility. Its optimized form factor enables low-cost, highly efficient distribution — both in bulk and by mail directly to end users.

Built on a state-of-the-art microcontroller platform, the OBU1010 sets a new benchmark for ultra-low power DSRC performance and RF resilience, ensuring stable, high-reliability operation in increasingly dense radio environments.

The smaller size and highly integrated electronics design reduces the product's carbon footprint significantly compared to previous OBU models. A well-documented Product Carbon Footprint (PCF) enables easy and accurate sustainability reporting.

BENEFITS

- Purpose-made RF filter ensures reliable performance in coexistence with new WiFi and 5G/6G frequency bands
- Customizable exterior surface for customer branding on both top and bottom
- Simple slide-in mount with optional bracket-activation and removal detection



Low-power, high performance DSRC for fast and reliable processing



Conscious engineering for lower footprint and long product life



Compact, discreet design that easily installs without affecting driver visibility

INTEROPERABILITY & MULTI-SCHEME SUPPORT

Designed for seamless deployment across regions and tolling domains.

- Supports all 5.8 GHz CEN DSRC protocols
- Stores and manages multiple tolling applications simultaneously
- Enables secure personalization and key distribution
- Compatible with existing OBU615 personalization workflows

STANDARDS

CEN TC278:	EN13372 DSRC profiles
	EN 12253 Physical layer
	EN 12795 Datalink layer
	EN 12834 Application layer
Radio:	EN 300 674-2-2
Safety:	EN 62368-1
Environmental:	IEC 60721-3-5:1997 Class: 5K3 / 5K4H / 5B1 / 5C1 / 5S1 / 5F1 / 5M3
	IEC 60721-3-5:2026 Class: 5K9 / 5K11 / 5B1 / 5C1 / 5S1 / 5F1 / 5M6
	IEC 60529 (IP4X)
Applications*:	ISO 14906/EN15509 EFC
	ISO 17264/EN16312 ERI
	AS 4962-2005 ETC
EU directives:	RED 2014/53/EC
	RoHS 2011/65/EU
	WEEE 2012/19/EU

**OBU1010 can support compliance with certain legacy applications or earlier versions of these standards, e.g. PISTA/GSS/A1/ST-1 Chile/TIS. Please contact Q-Free for additional information.*

TECHNICAL SPECIFICATIONS

Operating frequency:	5.8 GHz
Downlink bit rate:	500 kbps
Uplink bit rate:	250 kbps
Sub-carrier frequencies:	1.5 MHz (profile 0)
	2.0 MHz (profile 1)
RTTT profiles:	EN 13372 sets A and B
Maximum radiated power:	-21 dBm (EIRP)
Power supply:	Single battery coin cell
Battery lifetime (typical):	> 7 years
Transaction capacity:	Class A2 ref. ISO 14815
Environmental conditions:	Class H1 ref. ISO 14815
IP grade:	IP40
Buzzer sound level:	> 55 dBA @ 1 m
Operating temperature:	-40°C to +85°C
Storage temperature:	-40°C to +40°C
Dimensions (HWD):	With bracket: 64 x 39 x 15 mm
	Without bracket: 64 x 39 x 10 mm
Weight:	24 g



Example OBU1010 unit

Product specifications may change at any time without notice and may not be available in all markets.
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