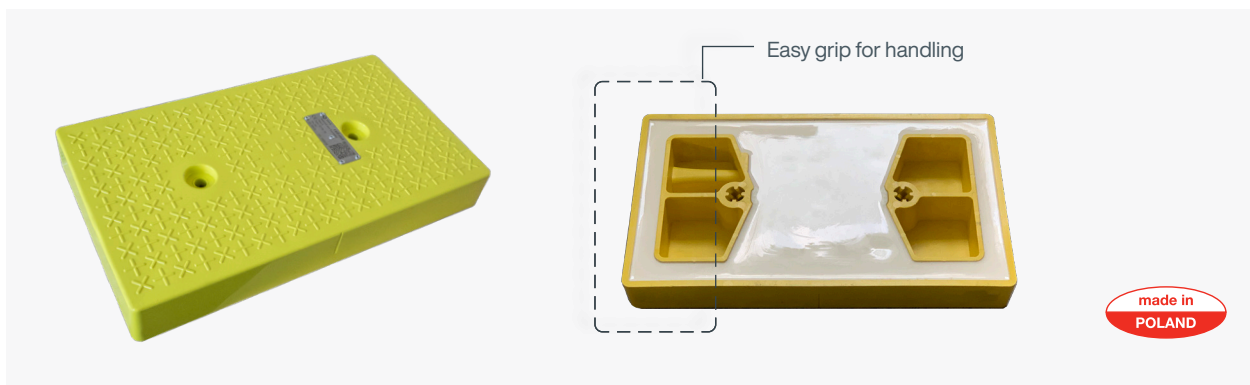Rail-Mil

rmRailProtector4.0®

Q7 Rail-Mil Q7 product family designed to meet the requirements of the ERTMS | ETCS.

Balise products
Programming tools
LEU Coders
Software
Diagnostic tools

Technology customized to client's needs.

Table of Contents

Easy grip for handling

made in
POLAND

Q7-BL-FX – Fixed Eurobalise

SUBSET-036 compliant	
Balise type	Reduced size Eurobalise
Debris	Class A
Programming	Via the air gap
Addition features	Electronically switching ON/OFF by the programming tool
	not needed metal cover to deactivate the balise
Mounting	Two holes at 200mm distance, screws M12 (steel A4 or A2) recommended
Size	440 x 250 x 55mm
Color	Balise can be painted to any color (in the picture RAL 1016)
Eurobalise 5 key elements	Q7-BL-ALL - the Eurobalise electronic with antenna
	Q7-BL-ANT - programming tele-powering
	Q7-BL-ENC - enclosure of the Eurobalise
	Filling and bonding resin
	Information label

Easy grip for handling

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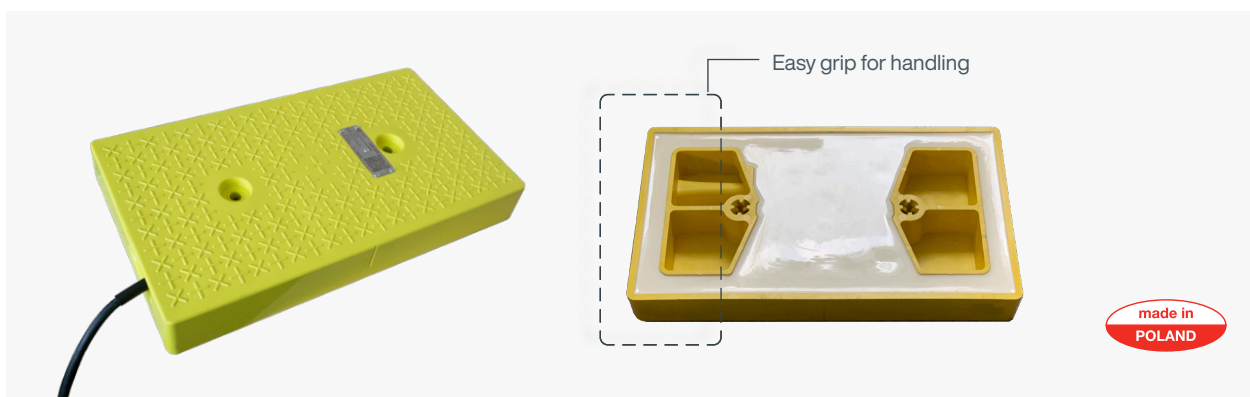
Q7-BL-TR – Controlled Eurobalise

SUBSET-036 compliant	
Balise type	Reduced size Eurobalise
Debris	Class A
Programming	Via the air gap
Addition features	Electronically switching ON/OFF by the programming tool
	not needed metal cover to deactivate the balise
Mounting	Two holes at 200mm distance, screws M12 (steel A4 or A2) recommended
Size	440 x 250 x 55mm, 5 or 9m fixed cable (no connector)
Color	Balise can be painted to any color (in the picture RAL 1016)
Interface	C1, C6, no interface C4
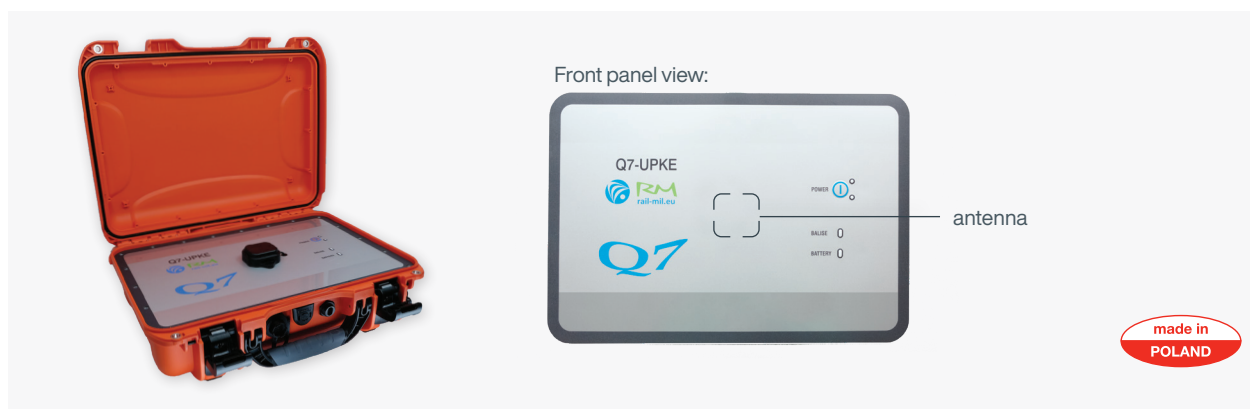
Q7-UPKE – Programming Tool

Basic parameters	Interface A, for Eurobalise reading
	Programming via the air gap
	Cable free
	Fully hand-held
	With rechargeable batteries
	Minimum 20h working battery time
	IP65 enclosure
	Mono board inside
	Wi-Fi host for PC programming
	Silted ethernet connector for cable programming (option)
	GPS, for data collection and time synchronization
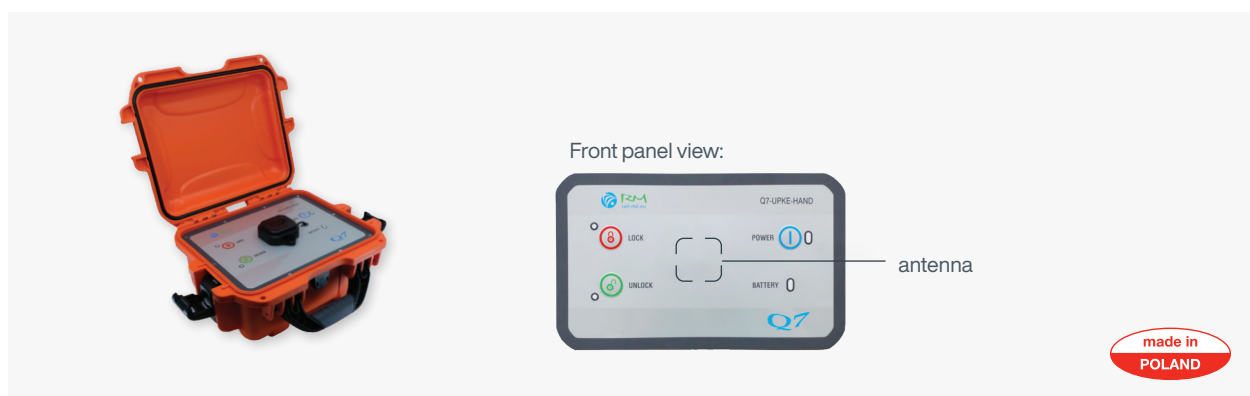
Q7-UPKE-HAND – Simple Programming Tool

Basic parameters	Unique feature to LOCK and UNLOCK the Eurobalise
	Programming via the air gap
	Cable free
	Fully hand-held
	With rechargeable batteries
	Minimum 20h working battery time
	IP65 enclosure
	Mono board inside
	Wi-Fi host for PC diagnostic and data reading
	Silted ethernet connector for cable programming (option)
	GPS, for data collection and time synchronization

Q7-LU1-BOX-7U – LEU Encoder LU1

Interface	C1, C4, C6
LEU Coders	1 LEU Coder
Telegram to Eurobalise	Based on uploaded decision table
Distance to Eurobalise	Up to 2000m
LEU box size	6U 24TE
Whole LEU size	210x310mm (7U height)
Mounting	Four holes in square 185x280mm. screws M6
Light inputs	Up to 16 (read in both wires)
Input Voltage	24V DC

Q7-LU2-BOX-7U – LEU Encoder LU2

| Interface	C1, C4, C6
LEU Coders	2 LEU Coders
Telegram to Eurobalise	Based on uploaded decision table
Distance to Eurobalise	Up to 2000m
LEU box size	6U 24TE
Whole LEU size	210x310mm (7U height)
Mounting	Four holes in square 185x280mm. screws M6
Light inputs	Up to 8 (read in both wires)
Input Voltage	24V DC

Q7-PROG – Programming PC Software

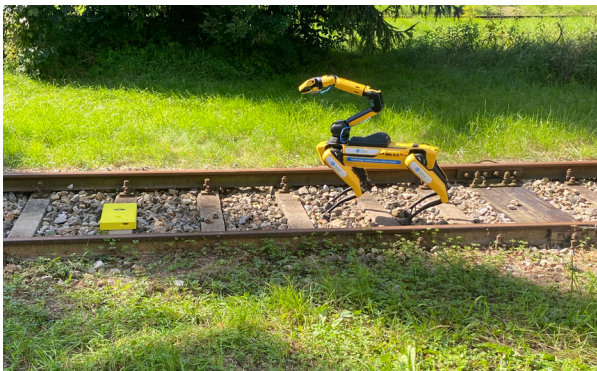| Basic parameters	Compatibile with Q7-UPKE
	Eurobalise programming
	Eurobalise reading via air gap and by interface A
	Telegram decoding to ETCS language
	Final telegram generation for the Eurobalise from customer data
	Telegram creation utilizing the ETCS language
Unique features	Simple telegram copy from one Eurobalise to the other
	Lock and unlock the Eurobalise via Q7-UPKE
	Reading and storing diagnostic data

Q7-TEL-ED – Telegram Editor

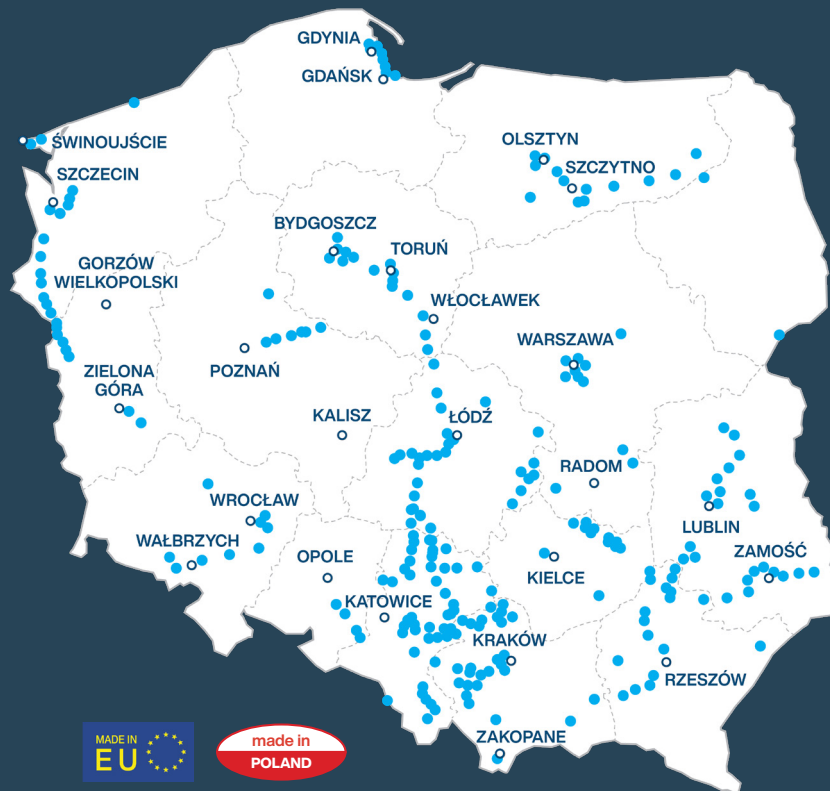| Basic parameters	Large portion of the headline is generated automatically
	Telegram configuration is performed by providing a numerical value or descriptively as defined by Subset-26
	Avaliable choice of telegram lenght format (LONG/SHORT)
	Selection of packets is adopted for a choosen version of the baseline
	Allows to control telegram file size
	Generates telegrams to the database
	Generates configuration files for LEU
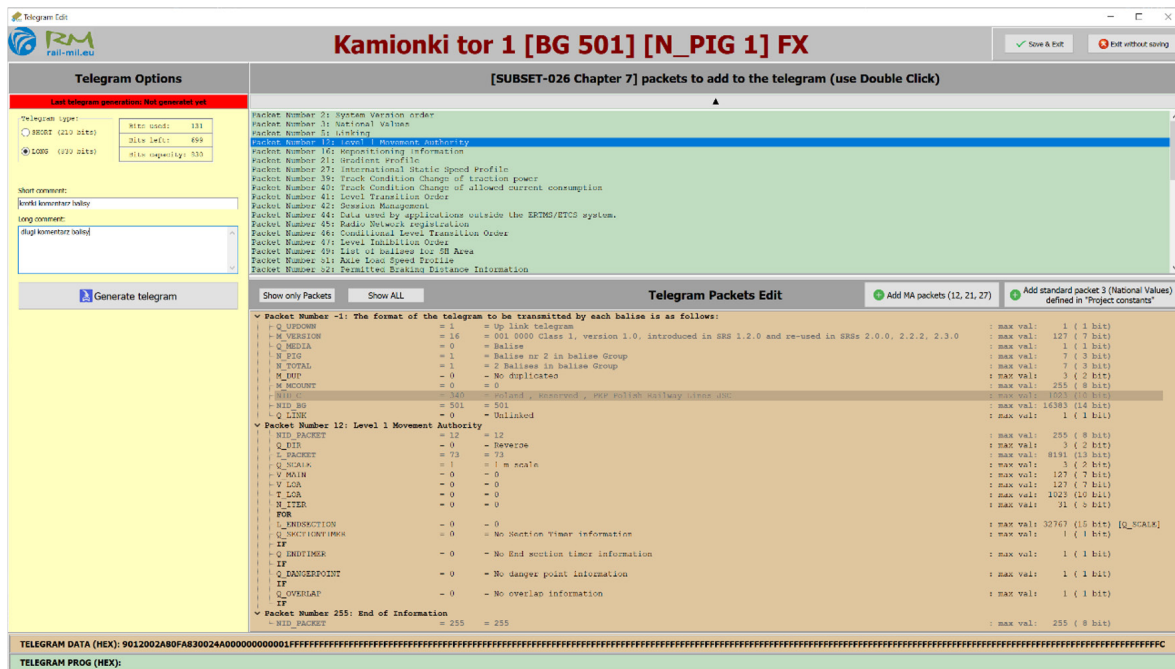
rmDIAGdog – Diagnostic robot

Spot®, a robot manufactured by Boston Dynamics, can be used for automated Eurobalise maintenance, diagnostics, and programming. This capability is enabled once the Q7-UPKE Programming Tool has been mounted on the robot's „head". Moreover, Spot's® ability to learn allows it to recognize Eurobalise in a track, approach it and place its „head" accordingly so the Q7-UPKE can make a proper connection. As all our Eurobalises (Q7-BL-FX/Q7-BL-TR) have a GPS module buit inside them, Spot® can detect them and navigate from one Eurobalise to another without operator's help. If the situation requires it, multiple Spot® robots can be dispached in order to collect the data from longer sections of the railway faster.

Installed systems utilizing components produced by Rail-Mil:

Map of Poland with installation locations marked. Cities labeled: GDYNIA, GDAŃSK, ŚWINOUJŚCIE, SZCZECIN, OLSZTYN, SZCZYTNO, GORZÓW WIELKOPOLSKI, BYDGOSZCZ, TORUŃ, WŁOCŁAWEK, WARSZAWA, ZIELONA GÓRA, POZNAŃ, KALISZ, ŁÓDŹ, RADOM, WROCŁAW, LUBLIN, ZAMOŚĆ, WAŁBRZYCH, OPOLE, KIELCE, KATOWICE, KRAKÓW, RZESZÓW, ZAKOPANE.

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Selected case studies of systems utilizing Rail-Mil components:

KSP-7M
Level Crossing Protection System

rmSDO
System for Object Detection in the Danger Zone

rm110
Integrated Control System for the Rail Devices and Fire Protection System

CBL2010
Digital Line Block System

rmDSIP
Dynamic Passanger Information System

*rm110-CS
Power Supply and Control Unit for the use of Fire Protection Devices

RM rail-mil.eu

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