



# MT6E-V GSM-R RADIO MODULE

## HIGHLIGHTS AND TECHNICAL INFORMATION

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The MT6E-V is a GSM Phase 2+ radio module with GSM-R and ASCII features for advanced voice functions. The module operates within the DCS1800 frequency range with a maximum transmit power of 4W (GSM Power Class 3).

The MT6E-V supports GPRS with operating modes of classes B and C. The protocol software complies with the R97/R99 GSM specification and is approved in accordance with GCF3.14.

The module operates in the 1800 MHz frequency band with a filter solution based on ETSI TS 102 933 V2.1.1 and is therefore suitable for areas using the DCS1800 frequency range.

## HIGHLIGHTS

- ▶ The performance specifications are more stringent than those required by the GSM standard
- ▶ High reliability and availability
- ▶ Compact, robust housing, specially designed for the harsh environmental conditions of railway operations
- ▶ Basic **GSM and GPRS software** enhanced with railway-specific functions (such as USS1 and USSD)
- ▶ Filter solution for the 1800 MHz frequency range based on ETSI TS 102 933 V2.1.1
- ▶ **Excellent RF characteristics against interference signals**
- ▶ The module is controlled via AT commands in accordance with the MORANE and GSM specifications 3G 27.005, 3G 27.007

# TECHNICAL DATA

## DIMENSIONS & WEIGHT

HEIGHT	110 mm
WIDTH	36.6 mm
DEPTH	169.9 mm
WEIGHT	0.8 kg
FRONT PANEL	10 HP / 3U

## PRODUCT VARIANTS

MT6E-V	without front panel
MT6E-V/FPL	with front panel

## GSM SERVICES

GSM PHASE 2+ TELESERVICES	TS11: Telephony
	TS12: Emergency calls
	TS21: Short message service MT/PP
	TS22: Short message service MO/PP
	TS23: Short message service cell broadcast CBM
	TS91: Group call
	TS92: Group call
GSM PHASE 2+ BEARER SERVICES	BS24: 2.4 kbits T/NT, UID, 3.1 kHz, V110
	BS25: 4.8 kbits T/NT, UID, 3.1 kHz, V110
	BS26: 9.6 kbits T/NT, UDI, 3.1 kHz, V110
	BS70: GPRS transmission service

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## EIRENE SPECIFIC FEATURES

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CALL PREFIX AND PRIORITY (EMLPP)

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RAILWAY EMERGENCY CALL (REC)

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## HF CHARACTERISTICS

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**GSM-R OPERATING FREQUENCIES** 1710 to 1785 MHz / 1805 to 1880 MHz

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**FILTERED LTE-FREQUENCIES <sup>1</sup>** 1769.9 to 1784.9 MHz / 1864.9 to 1879.9 MHz

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ARFCN: 811 to 885

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**TRANSMISSION POWER** 4 W (DCS Power Class 3)

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**SENSITIVITY** -102 dBm

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**HF-FILTERING /  
BLOCKING CHARACTERISTICS** Meets the railway-specific receiver requirements based on  
ETSI TS 102 933 V 2.1.1

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<sup>1</sup> frequency/channel protected by a SAW filter bank

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## ENVIRONMENTAL CONDITIONS

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PROTECTION CLASS	IP20 according to EN 60529
VIBRATION AND SHOCKS	according to EN 50155
EMC	according to EN 50121-3-2 and EN 50155

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## CLIMATIC CONDITIONS

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OPERATING TEMPERATURE	-25 °C to 70 °C
STORAGE TEMPERATURE	-40 °C to 85 °C
MAXIMAL GRADIENT <sup>2</sup>	± 1 °C/min
RELATIVE HUMIDITY	according to EN 50155

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## ELECTRICAL DATA

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INPUT POWER	12 VDC (11.7 to 12.9 V)	5 VDC (4.8 to 5.25 V)
AVERAGE POWER CONSUMPTION	6 W at 12 VDC	5 W at 5 VDC
MAXIMUM CURRENT DRAW	0.5 A at 12 VDC	1 A at 5 VDC
CURRENT DRAW IN STANDBY MODE (IDLE MODE)	0.070 A at 12 VDC	0.175 A at 5 VDC
POWER CONSUMPTION (TOTAL)	1.75 W (standby)	

<sup>2</sup> of the ambient temperature

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MT6E-V



SIMCARD

ANT 2





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