

## LTE Voice Radio

# CRLT.20



The future Cab Radio generations can be based on a packet oriented data transmission system, using commercial networks and its derivatives.

Based on its long years of experience, Funkwerk has developed a LTE based Cab Radio system.

## ANDROID-BASED SYSTEM

The CRLT.20 Cab Radio is fitted into a standard double DIN housing and 2G/3G/4G providing telephony and data services. It operates on an Android based system. Due to the implementation of this market leading operating system, the usage of this device is nearly self-explanatory. The CRLT.20 is designed for use in Rail vehicles. It provides regular 2G/3G/4G telephony services incl. VoLTE<sup>1</sup> and IP-based data-services. It can be operated using public available SIM cards and is an all-in-one unit for fixed installation in vehicles. Besides the interfaces for the 2G/3G/4G networks, further interfaces such as Gigabit Ethernet, WIFI, Bluetooth<sup>2</sup> as well as a handset,

loudspeaker and a generic I/O connection are available. The installation of 3rd party applications is possible and therefore it can be smoothly integrated into an existing or new infrastructure of systems, based on Android applications. A Funkwerk

MCX (mission critical) application is available. Customer specific applications or adjustments can be provided by Funkwerk or by 3rd parties too. The system is designed for the support of upcoming LTE releases and will be adapted to future services like group communication services.

<sup>1</sup> network dependent; <sup>2</sup> optional

## HIGHLIGHTS

- » Very small packaging
- » All-in-one unit
- » User interface reflects proven procedures
- » Alternative GUI's possible
- » Hardkeys for critical functions
- » Connection of handset and loudspeaker in cabin required
- » Installation of 3rd party applications possible

## TECHNICAL DATA

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### DIMENSIONS / WEIGHT

Construction	compact closed housing
Width	180 mm
Height	100 mm
Depth	72,3 mm
Weight	max. 3 kg

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### POWER SUPPLY

Nominal voltage	12 V / 24 V / 36 V
Input nominal voltage	8.4 to 41 VDC
Interruption of voltage supply	S1 (no interruption) according to EN 50155
max. power consumption	25 W

## TECHNICAL DATA

### ENVIRONMENTAL CONDITIONS

Degree of protection	Front side IP54 / housing IP20 acc. to EN 50155
Vibration and shock	according to 50155 and EN 60068-2-6
EMC	according to EN 50121-3-2 and EN 50155

### CLIMATIC CONDITIONS

Operating temperature	-20 °C to +70 °C
Storage temperature	-30 °C to +70 °C
Relative humidity	according to EN 50155
Altitude and pressure fluctuation	-100 m to 1.800 m above sea level
Vibration / shock	according to DIN EN 61373
Device security	according to DIN EN 60950-1

### INTERFACES

Power supply	Multi-purpose digital I/O
Handset, loudspeaker	4 x antenna (2G/3G/4G + GPS+WIFI/BT)
WLAN 802.11 a/b/g/n	Gigabit Ethernet (Standard IEEE 802.3ab 1000BASE-Tx)
Bluetooth 4.1	GPS, GLONASS, BeiDou, Galileo and QZSS
SIM card	SD Extended Capacity (SDXC™)
USB 2.0	

### PROCESSOR

i.MX Quad Core with Cortex®-A9 cores
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## TECHNICAL DATA

### FREQUENCY BANDS

LTE FDD	B1/B3/B5/B7/B8/B20
LTE TDD	B38/B40/B41
WCDMA	B1/B5/B8
GSM	B3/B8

### OPERATING UNIT

Type	capacitive touch
Nominal size	5"
Display resolution	800 x 480

### OPERATING SYSTEM

Android / Linux available as OS	Android 8 based
Funkwerk software	

### APPROVAL NUMBER

E1*10R05/01*8803*00 (Kraftfahrt-Bundesamt)
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