SPECIFICATIONS

Frequency bands	RX: 380–450 MHz / TX: 390–430 MHz; RX: 806–824 MHz / TX: 851–869 MHz
Output power	4 × 20 W or 2 × 40 W
Carrier capacity	1 unit = 4 carriers / 2 units = 8 carriers
Carrier spacing	≥ 50 kHz
Reception diversity	max. 4-way diversity

SENSITIVITY

- **Static**	Typical: .120dBm (BER 3 %)
- **Dynamic**	Typical: -114dBm (TU 50. (TCH 7.2, BER 4 %))

Power consumption	≤ 340 W
Protection class	IP66
Weight	< 17 kg
Dimensions	447 × 357 × 125 mm
Operating voltage	–48 V DC
Operating temperature	–40 °C to +60 °C
Connection to the transport network	2*ETH (100 Mbps or 1000 Mbps)+2*SFP
Synchronization	PTP; GPS / BeiDou / GLONASS
Lightning Protection	Power supply port: 20KA
MTBF	> 250,000 hours

info@hmf-germany.com

hmf-smart-solutions.de

+49 (0) 5042 998 0

HMF Smart Solutions GmbH
Fritz-Hahne-Str. 7, 31848 Bad Münder - Germany

DIB-R6 SMART

THE **NEW DIMENSION** OF TETRA

Experience the next generation of **TETRA infrastructure** with the **DIB-R6 SMART** — a compact, high-performance, and fully integrated base station engineered in Germany for outstanding reliability, efficiency, and flexibility. Designed to meet the toughest operational demands, the DIB-R6 SMART sets new standards for connectivity, combining advanced multi-carrier and SDR technologies in a lightweight, robust housing built for the future of mission-critical communications.

ENGINEERED IN GERMANY
Precision Meets Performance

Every **DIB-R6 SMART** TETRA base station is the result of German engineering excellence. Developed by HMF Smart Solutions in Germany, it represents a perfect balance between technical sophistication and user-oriented practicality. From design through manufacturing, every detail is optimized for reliability, durability, and seamless integration into modern TETRA networks.

ROBUST & RELIABLE
For Almost Every Environment

Built to perform wherever communication is critical:

- **Protection class IP66** safeguards against dust, water, and harsh weather.
- Operates reliably from **–40 °C to +60 °C**.
- Safeguarding flexibility thanks to **GPS-free operation** and **smart redundancy**
- **Fanless design** minimizes wear and enhances long-term stability (MTBF > 250,000 hours).

The DIB-R6 SMART ensures continuous service availability, even in extreme conditions, and is the ideal solution for field, industrial, and urban network environments alike.

EFFICIENCY
Low CAPEX, Low OPEX

The DIB-R6 SMART redefines cost efficiency across the entire lifecycle:

- **Compact, all-in-one design** reduces installation space and cabling needs.
- **Software-defined expansion** allows carrier upgrades without additional hardware.
- **Minimal power consumption** and maintenance-free operation drastically lower OPEX.
- **Fast deployment** and reduced equipment requirements minimize CAPEX.

The result: high-performance TETRA coverage with a smaller environmental and financial footprint.

EFFORTLESS DEPLOYMENT
Maximum Flexibility

Lightweight (< 17 kg) and compact (≈ 20 L volume), the DIB-R6 SMART offers unparalleled deployment freedom. It can be easily **mounted on walls, poles, vehicles, or masts**, and requires no dedicated equipment room. Remote configuration and intuitive software management simplify setup, expansion, and network optimization.

Whether for dense urban networks or remote outdoor sites — the DIB-R6 SMART adapts to your operational needs, ensuring **maximum flexibility and minimum effort**.

HIGH PERFORMANCE
Power and Intelligence Combined

Despite its compact size, the DIB-R6 SMART delivers **outstanding power and efficiency**.

- Up to **four carriers of 20 W each**, or **two carriers of 40 W** operation.
- Cascade configuration for up to **eight carriers** or **redundant 4-carrier setup**.
- **4-way diversity reception** ensures superior signal quality and system stability.

With less than **340 W total power consumption**, it achieves excellent energy efficiency, ideal for solar-powered or off-grid deployments — reducing operational costs and environmental impact.

STATE-OF-THE-ART CYBER SECURITY
Protecting What Matters Most

The DIB-R6 SMART is designed with a comprehensive, modern cyber security architecture that safeguards mission-critical communications at every layer. A **tamper-proof hardware security chip** enables secure boot processes and encrypted local storage, ensuring that only trusted software can run on the device. The **security-hardened 64-bit Linux operating system** provides a robust foundation to defend against contemporary cyber threats, while the **web-based network management suite** supports advanced security controls such as **single sign-on (SSO)** and **multi-factor authentication (MFA)** for secure access.

Considering the latest, future-proof encryption specifications of the European Telecommunications Standards Institute (ETSI) the DIB-R6 SMART supports for **TEA Set B, along with the established set A**.

End-to-end protection is reinforced with encryption across all communication links, guaranteeing confidentiality and integrity across the entire TETRA infrastructure. Regular, proactively distributed security updates ensure the DIB-R6 SMART keeping its paramount resilience against emerging threats, making it a trustworthy and future-proof choice for mission-critical operations.

SEAMLESS INTEGRATION
Future-Proofing Your Mission-Critical Network

The DIB-R6 SMART integrates seamlessly into existing ACCESSNET®-T IP infrastructures and is fully compatible with all DIB-R5 base stations, making it an ideal solution for expanding or modernising established TETRA networks. At the same time, it builds a technological bridge to broadband: the new base station forms a convergent link to HMF's 3GPP-standardised **ACCESSNET® MCX ecosystem**, enabling smooth interworking between mission-critical TETRA services and modern broadband applications.

This makes the DIB-R6 SMART not only a powerful coverage extension for today's TETRA systems, but also a future-proof network element that supports unified identities, harmonised workflows, and the evolution towards hybrid LTE/5G mission-critical communication.

POWERING THE FUTURE OF TETRA

DIB-R6 SMART