

## TetraFlex® Indoor System

The high capacity TetraFlex® Indoor System is the most user-friendly, flexible and cost-effective TETRA infrastructure system available. With its high reliability and unique design it is the ideal solution for mission critical communications.

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### Full network flexibility

The TetraFlex® system is scalable and can handle from small single site solutions with local coverage to large-scale multisite solutions, using any combination of outdoor and indoor TetraFlex® base stations. Together with the intelligent TetraFlex® software, simple and smooth site expansion is possible, even while in operation. The 100% IP-based technology provides full architectural network flexibility with all network components connected in a single state-of-the-art infrastructure without the need of a central switch.

### High Capacity. High Efficiency

The TetraFlex® Indoor Base Stations can be configured with up to 8 TETRA carriers giving in total 32 logical channels with access to all functions and terminals from the front. Excellent receiver sensitivity is achieved with the Tower Mounted Amplifier/Duplexer by eliminating receiver cable loss. Used as TMD it further gives the possibility to operate with dual diversity, using only two antennas. The TetraFlex® Indoor Base Stations are characterised by extremely low power consumption.

### Secure and failure tolerant

Featuring full support for battery backup as well as redundant controllers, power supplies and carriers, TetraFlex® meets your highest requirements on reliability. The intelligent distributed architecture replicates information to all sites in the network, avoiding any single point of failure.

### Unlimited application integration

TetraFlex® is supplied with Application Gateways for easy access to the Application Programming Interface (API), Packet Data Gateways and Voice Gateways, allowing you straight forward development of customer-designed applications or integration to existing telephone systems and control room equipment. As an independent TETRA infrastructure provider DAMM has developed TetraFlex® for full compatibility with all TETRA terminals, providing you with the option freely to choose your favourite terminal brand.

### Wide range of advanced software tools

The TetraFlex® system is available with a wide range of software such as Voice and Data Management, Dispatcher and a comprehensive Network Management tool including subscriber management and network performance statistics.

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# Key Specifications

The TetraFlex® Indoor System consists of either BS414 Base Station for 4 carriers or BS411 Base Station for 8 carriers, and comes with a Tower Mounted Amplifier/Duplexer. The system is pre-installed with the TetraFlex® Software package.

## TetraFlex® System – Default settings

Function	No.	Function	No.
Organizations	1000	Application GW Connections max.	20
Profiles	2000	Application GW Streams max.	100
Subscribers max.	20000	Application GW Streams/Application max.	32
Nodes max.	254	Log Servers max.	25
Voice GW Connection max.	32		

Only default settings. Can be expanded on request.

## Base Station

### Frequency Bands

	300 MHz Band			400 MHz Band		800 MHz Band
RX	300-310 MHz	350-360 MHz	380-390 MHz	410-420 MHz	450-460 MHz	805-825 MHz
TX	336-346 MHz	360-370 MHz	390-400 MHz	420-430 MHz	460-470 MHz	850-870 MHz
BW	10 MHz	5 MHz	5 MHz	5 MHz	5 MHz	14 MHz

Other frequencies on request.

### Transmitter and Receiver

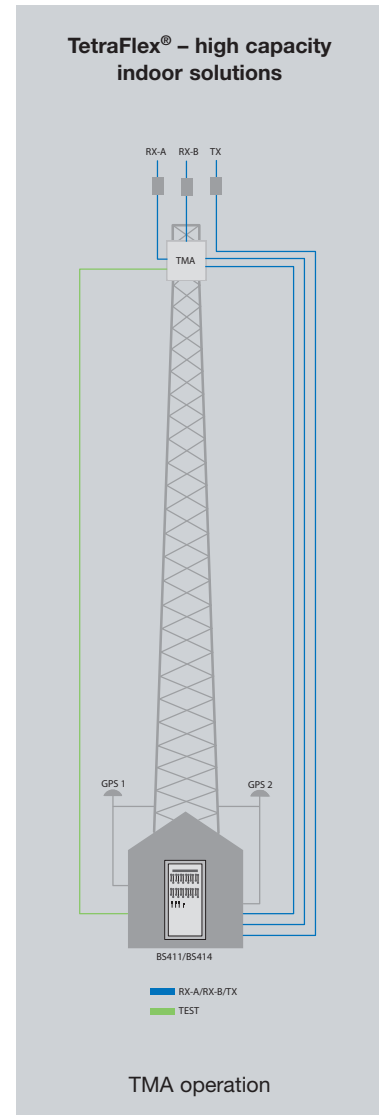
- TX power Transceiver: Max 25 W TETRA
- TX power at antenna connector: 0.5 W to 10 W TETRA remotely adjustable
- RX sensitivity: -121 dBm with diversity (-118 dBm without diversity)
- RX sensitivity static/dynamic: -117 dBm/-112 dBm
- Receiver Diversity: Dual as standard
- Tower Mounted Amplifier/Duplexer: Combines TX and RX to one antenna and (TMD412) amplifies the RX signals
- Redundancy BSC and Power Supply: Hot Standby
- Synchronisation: Internal or external with GPS

### Antenna Connections

- TMD operation: One TX/RX-A and one RX-B antenna
- TMA operation: One TX and two RX antennas
- GPS antenna: One GPS antenna per carrier. Active (+5 VDC) or passive.

### Combiner

- Cavity combiner system: Motor tuned with support for up to 8 carriers per antenna
- Hybrid combiner system: Available as option for max. 4 carriers



		BS414	BS411
Power	Input Voltage	100-240 VAC or -48 VDC	
	Power Consumption*	512 W, DC input	975 W, DC input
	Optional external battery	Supported	Supported

Mechanical	Dimensions (HxWxD)	1054x542x520 mm	1721x542x520 mm
	Rack	19 inch.	
	Weight*	97 kg	143 kg
	Storage temperature	-40°C to +55°C	
	Operating temperature	-20°C to +55°C	
	Encapsulation	IP20	

\* Fully equipped

## Standards and Approvals

- TETRA Specification, EN 300 394-1, v.3.1.1; please refer to TetraFlex® feature list
- IOP Certification; please refer to [www.tetramou.com](http://www.tetramou.com) for details
- DS/EN ISO 9001:2008

Note: Compatibility tests with TETRA terminals are maintained by DAMM for newest SW updates.

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