



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.



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 16 TETRA carriers giving in total 64 time slots 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. The TetraFlex® Indoor Base Station can optionally be delivered as a high output power version.

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 Log System, Dispatcher and a comprehensive Network Management tool including subscriber management and network performance statistics.

Damm Cellular Systems A/S

Møllegade 68
6400 Sønderborg
Denmark
Phone: +45 7442 3500
Fax: +45 7442 3230

www.damm.dk



Key Specifications

The TetraFlex® Indoor System consists of either BS414 Base Station for 4 carriers or BS411 Base Station for up to 16 carriers, in high power or normal power version, 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	10000	Application GW Streams max.	100
Subscribers max.	150000	Application GW Streams/Application max.	32
Nodes max.	999	Log Servers max.	100
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 transceiver (high power version) : Max 62.5 W TETRA
- TX power at antenna connector: 0.5 W to 10 W TETRA remotely adjustable
- TX power at antenna connector: 0.5 W to 25 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 BSC. Active (+5 VDC) or passive.

Combiner

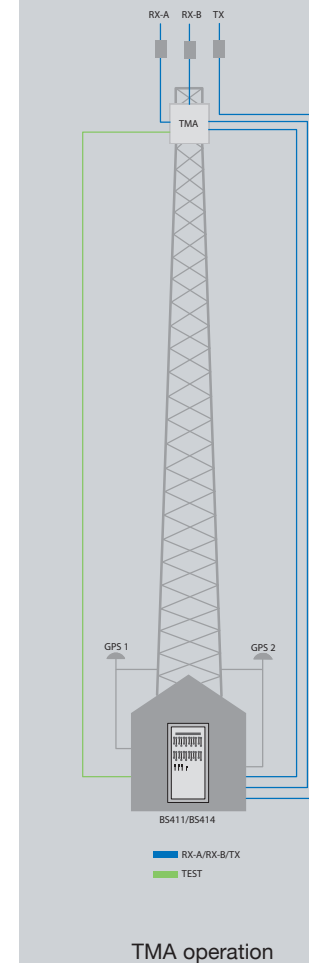
- Cavity combiner system: Motor tuned with support for up to 16 carriers per antenna
- Hybrid combiner system: Available as option for max. 4 carriers

		BS414	BS411	BS411 High Power
Power	Input Voltage	100-240 VAC or -48 VDC		
	Power Consumption*	450 W, DC input	850 W, DC input	1700 W, DC input.
	Optional external battery	Supported		

Mechanical	Dimensions (HxWxD)	1054x542x520 mm	1721x542x520 mm
	Rack	19 inch.	
	Weight*	97 kg	143 kg
	Storage temperature	-40°C to +85°C	
	Operating temperature	-20°C to +55°C	
	Encapsulation	IP20	

* Fully equipped

TetraFlex® – high capacity indoor solutions



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 for details
- DS/EN ISO 9001:2008

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

