



## DAMM TetraFlex® Outdoor System

The DAMM TetraFlex® Outdoor 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 DAMM TetraFlex system is scalable and can handle from one site solutions with local coverage to large-scale multisite solutions, using any combination of outdoor and indoor DAMM TetraFlex base stations. Together with the intelligent DAMM 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.

### Easy to install - anywhere

Plug and play simplicity enables easy setup and fast deployment. With its IP65 protection the DAMM TetraFlex Outdoor Base Station is ideal for installation in harsh environments. A compact design enables direct mounting on antenna masts, buildings and towers, reducing feeder loss and installation costs considerably, while also providing an ideal solution for rapid, vehicle-based deployment.

### Secure and failure tolerant

Featuring full support for battery backup as well as redundant controllers, power supplies

and carriers, DAMM 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

DAMM 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 TetraFlex Base Stations are IOP certified 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 DAMM TetraFlex system is available with a wide range of application software such as Voice and Data Log System, Dispatcher, Group Bridge and a comprehensive Network Management tool including subscriber management and network performance statistics.

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# Key Specifications

The DAMM TetraFlex Outdoor System consists of the Base Station Transceiver (BS421) together with the Service Box (SB421) containing the base station controller and the power supply. The system is pre-installed with the DAMM TetraFlex Software package.

## DAMM TetraFlex System – Default settings

Function	No.	Function	No.
Organizations max.	1000	Application GW Connections max.	20
Profiles max.	10000	Application GW Streams max.	100
Subscribers max.	150000	Application GW Streams (Client) max.	32
Nodes max.	999	Log Servers max.	25
Voice GW Connection max.	32	Terminal GW Connections max.	10

Only default settings. Can be expanded on request.

## Base Station Transceiver BS421

### 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

For Russia available 412-417 / 422-427 Mhz band. Other frequencies on request.

### Transmitter and Receiver

- TX power at antenna connector: 0.5 W to 10 W TETRA remotely adjustable
- RX sensitivity with diversity, static: -121dBm
- RX sensitivity without diversity, static: -118dBm
- RX sensitivity with diversity, dynamic: -118dBm
- RX sensitivity without diversity, dynamic: -112dBm
- Receiver Diversity: Dual as standard
- Built-in duplexer: Combines TX and RX to one antenna
- Redundancy: Hot Standby
- Synchronization: Internal or external with GPS

### Antenna Connections

- Antenna set-up: One antenna per carrier, minimum two antennas for diversity
- GPS antenna: One GPS antenna per carrier. Active (+5 VDC) or passive

## Service Box SB421

### Base Station Controller

- Max. distance SB421 – BS421: 100 m.
- One SB421 controls four BS421 and power two BS421
- Redundancy: Hot Standby

	BS421	SB421
<b>Power</b>		
Input Voltage	-48 VDC (galvanic isolated)	100-240 VAC or -48 VDC
Power Consumption	75 W at 10 W TETRA	20 W
Optional internal battery		4 x 12 VDC 7Ah
Optional external battery		4 x 12 VDC

Note: An external Battery Pack BP421 is available as an option, to extend operation time on power failure. The BP421 is charged via SB421, and ready for outdoor installation.

	BS421	SB421
<b>Mechanical</b>		
Dimensions (HxWxD)	333 x 246 x 165 mm	375 x 283 x 215 mm
Weight	9 kg	9 kg*
Wind area	0.08 sqm	0.10 sqm
Operating temperature	-25°C to +55°C*	
Storage temperature	-40°C to +85°C	
Encapsulation	IP65	
Lightning protection	Internal	

\* Specification without internal battery

Specifications subject to change without notice

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