

TetraFlex® Outdoor System

The 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, even in the harshest environments.



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 or indoor TetraFlex® base stations. Together with the intelligent TetraFlex® software, simple and smooth site expansion is possible, even while in operation. 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 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 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® 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 TetraFlex® Software package.

TetraFlex® System – Default settings

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

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

Other frequencies on request.

Transmitter and Receiver

- 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: -118 dBm/-113 dBm
- 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

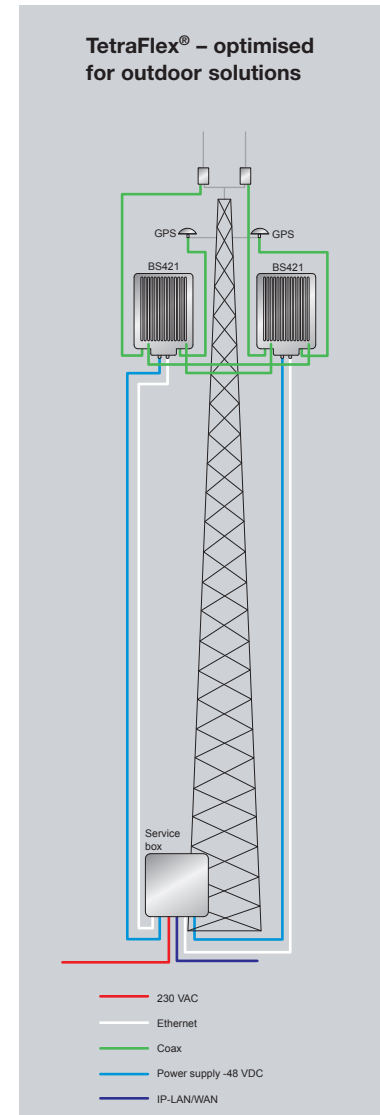
Base Station Controller

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

	BS421	SB421
Power	Input Voltage	-48 VDC (galvanic isolated)
	Power Consumption	75 W at 10 W TETRA
	Optional internal battery	4 x 12 VDC 7Ah
	Optional external battery	4 x 12 VDC

	BS421	SB421
Mechanical	Dimensions (HxWxD)	333 x 246 x 165 mm
	Weight	9 kg
	Wind area	0.08 sqm
	Storage temperature	-40°C to +55°C
	Operating temperature	-25°C to +55°C (-20°C to +55°C w. internal battery)
	Encapsulation	IP65
	Lightning protection	Internal

Mounting accessories included



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.

DAMM
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