DAMM® MultiTech Outdoor Base Station BS422

Unlock a new level of connectivity, efficiency, and cost savings. This compact, rugged, and versatile outdoor base station offers uninterrupted connectivity in challenging conditions, with multi-technology, multi-frequency, and multi-carrier capabilities all in one box.

Designed for reliability and simplicity

With its advanced features and robust design, the field-proven DAMM MultiTech outdoor base station BS422 offers steadfast connectivity all in one compact box. Keeping you connected with unrivalled availability, crystal clear audio quality, multi-layer backbone encryption, pre-emptive priority calling, emergency features, and swift setup times, the software-defined BS422 is transforming network design. Unleashing faster deployment, substantial cost savings, and superior coverage - without compromise!

Compact powerhouse

Whether using TETRA, DMR analogue, or any hybrid combination, the one-box solution extends capacity by supporting up to four carriers across technologies. The ideal solution for effortless migration, without interruption and at your pace.

Versatility beyond limits

The BS422 offers a cost-effective solution that scales to meet your coverage and capacity needs and can be set up as a stand-alone system or seamlessly integrated into any TETRA, DMR, or analogue network. With a plethora of installation options, choice of technologies, interoperability, self-configuring site expansion and support for both UHF and VHF, it adapts easily to your needs today and in the future.

Swift installation

The compact, lightweight, and robust plug-and-play system is quick and easy to deploy, manage, and maintain anywhere. Whether it's mounted on antenna masts, buildings, towers, tunnels, or the back of a truck, it significantly reduces feeder loss and installation costs.

Built to endure

The BS422 thrives in harsh environments without a need for dedicated shelters or expensive cooling. It has ability to run without interruption in wide operating temperatures, high shock and vibration, and even wet conditions, all thanks to its IP65 encapsulation.

Eco-friendly and cost efficient

Offering extremely low power consumption, the BS422 reduces operating expenses significantly. Its minimal heat generation eliminates the need for external power or cooling units, reducing system costs and simplifying maintenance. Additionally, the BS422 is solar power compatible, further lowering environmental impact and operational costs.

Frequency efficient

Thanks to its frequency-sharing option, the BS422 functions as both a base station and a repeater. Thereby making more efficient use of scarce frequencies and streamlining operations, repairs, and maintenance, making network design even more cost-efficient.

Ready for tomorrow's challenges

Built on a platform focused on scalability, open standards, software-defined architecture, and integrated MultiTech security, the BS422 ensures that your network adapts to the evolving needs of your operation, technology innovations and advances in security. Future-proofing your investment for years to come.

TETRA, DMR or Analog over LTE or Wi-Fi can be used with the DAMM PTT app.

Key specifications

The DAMM MultiTech Outdoor Base Station BS422 is the first product in DAMM's MultiTech System. It features multi-technology, multi-carriers, multi-frequency and frequency sharing and is core-connected, eliminating the need for any bridges or internal gateways.

- Compact, low-weight and rugged outdoor base station
- Powerful integrated controller
- Built-in or external GNSS receiver available
- Antenna setup: Minimum one antenna per box, two antennas for diversity. Optimized for a setup with two boxes and two antennas
- Two-way receive diversity for all technology modes
- Synchronization: PTP (IEEE1588), GNSS (GPS, Galileo, Glonass)

DAMM MultiTech solution

Supported frequency ranges
68-87.5MHz
146-174MHz
216-225MHz
350-370MHz
380-400MHz
406-430MHz
430-450MHz DMR
450-470MHz
805-870MHz

RX sensitivity	
Static sensitivity	-121dBm
Static sensitivity with diversity	-124dBm

- 230 VAC
- Ethernet
- Coax
- Power supply -48 VDC
- IP-INT/EXT

*SB422 optional

Service Box SB422*
- Max. distance SB422– BS422: 100m
- One SB422 controls up to two BS422s

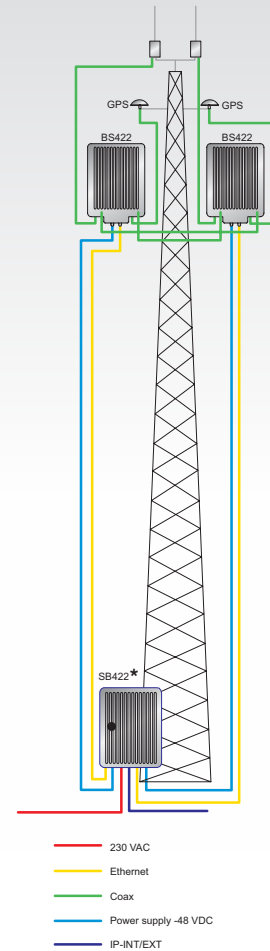| Power		BS422-S Base Station	SB422 Service Box
	Input voltage	-48VDC	110–240VAC or -48VDC
	Power consumption	95W at 10W TETRA	Max. 450W
		150W at 25W TETRA	
		200W at 50W DMR/Analog	

Note: It is possible to connect an external battery to extend operation time in case of a power failure.

Mechanical		BS422-S Base Station	SB422 Service Box
	Dimensions (HxWxD) (excl. mounting bracket)	340x250x205mm	380x280x210mm
	Weight	12kg	9kg
	Wind area	0.08m^2	0.1m^2
	Operating temperature	-25°C to +55°C	
	Storage temperature	-40°C to +85°C	
	Encapsulation	IP65	
	Lightning protection	Internal	

Standards and approvals
- TETRA Specification, EN 300 394-1 v. 3.1.1; please refer to DAMM TetraFlex feature list
- DMR specification, EN 300 113 v. 2.2.1
- Analog specification, EN 300 086 v. 2.1.2
- Multi-channel specification, EN 303 039 v. 2.1.2
- IOP Certification; for details please refer to: tcca.info, dmrassociation.org
- www.dammcellular.com
- DS/EN ISO 9001:2015,
- DS/EN ISO 14001:2015,
- DS/ISO 45001:2018,
- DS/EN 50121-4:2006.
- ISI certification

TETRA mode
- Frequency sharing
- Market-leading power efficiency
- Integrated duplexer and diversity receiver

DMR mode
- DMR outdoor base station with integrated duplexer and diversity receiver
- Supports wide range of DMR terminals
- Frequency sharing

Analog mode
- Easy migration from Analog to TETRA or DMR
- Frequency sharing option
- Supports conventional FM radio

Specifications subject to change without notice
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