



Mobitex BRU3 Base Station

BRU3

Rugged outdoor base station

The BRU3 is a mini base station for Mobitex networks that advances radio technology to a new level and offers exceptional functionality for wireless data networks. The self-contained unit is extremely compact and designed to deliver unparalleled performance over a wide range of operating conditions. Suitable for both outdoor and indoor applications, the BRU3 is simple to install and maintain. AC power, battery back-up and a line modem are integrated into the unit. Software can be installed and upgraded remotely over the network or on site from a portable PC. Built-in functions support automatic supervision and remote configuration of the radio base station. When planning coverage in a Mobitex network that must support low-power (portable) modems and indoor coverage, the BRU3 is a natural choice. The BRU3 provides a single full duplex channel with extremely high radio sensitivity. The BRU3 features a radio protocol that improves coverage and maximizes data pay loads and power-saving functions,



such as sleep mode, that greatly extend battery life for the radio modems. For operators, the BRU3 offers compelling advantages that include cost-effective indoor coverage within dedicated areas, as well as low-cost coverage when extending the network to new service areas. Extremely efficient use of radio spectrum allows the BRU3 to support as many as 2,500 terminals on a single channel, making it the most cost-effective wireless data technology that delivers the best value for users.

Technical specification BRU3

Dimensions

Height (excluding antenna)	13.4 inch / 350 mm	Depth	7.1 inch / 180 mm
Width	16.9 inch / 440 mm	Weight	40 lbs / 18 kg

Power

	BRU34	BRU38	BRU39
Input voltage	220 - 240 VAC	110 - 130 VAC or 220 - 240 VAC	110 - 130 VAC or or 220 - 240 VAC
Power consumption:			
without heating unit operating	Maximum 100W	Maximum 100W	Maximum 100W
with heating unit operating	Maximum 900W	Maximum 500W	Maximum 500W
Battery operation (no heating)	15 minutes (0-55°C 6W output power)	15 minutes (0-55°C 6W output power)	15 minutes (0-55°C 6W output power)

Radio Specifications

	BRU34	BRU38	BRU39
Frequency ranges Rx/Tx	413.9-416.6/423.9-426.6MHz 416.6-419.5/426.6-429.5MHz 425.5-426.1/440.0-440.6MHz 428.2-428.7/421.2-421.7MHz 406.2-408.5/415.7-418.0MHz 412.5-413.5/419.5-420.5MHz 411.0-413.9/421.0-423.9MHz	819-825,864-870 MHz	896-902/935-941 MHz
Channel spacing	12.5 kHz	12.5 kHz	12.5 kHz
Modulation	Modified GMSK	Modified GMSK	Modified GMSK
Modulation bit rate	8 kbps	8 kbps	8 kbps
Transmitter output power	Max 6W (± 1.5 dB) (Adj in steps of 3dB)	Max 6W (± 1.5 dB) (Adj in steps of 3dB)	Max 6W (± 1.5 dB) (Adj in steps of 3dB)
Radio Sensitivity	-117 dBm (at 1% BER)	-117 dBm (at 1% BER)	-117 dBm (at 1% BER)
Antenna Connector	TNC female	TNC female	TNC female

Radio data transmission

Power saving mode	Enables battery/power saving mode of mobiles and portables
Roaming	Enables mobiles to automatically roam to the best base station
Traffic mode	Duplex
Media access control	Modified non-persistent CSMA

Capacity

Number of channels	1 system channel
Max number of subscribers	2500

Network communication

Integrated modem /(optional)	V.32/V.32 bis, leased/switched line (up to 14.4 kbps)
External modem:	
Physical interfaces	RS-22 or RS232 (up to 34 kbps)
Link carrier protocol	X.25

Alarms

Alarm functions	Temperature, Input power failure, Battery charger failure, Output FR power /VSWR, Transmitter/Receiver failure, Open cover alarm, Transmitter/Receiver failure, One external alarm
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Environmental

	BRU34	BRU38	BRU39
Temperature range	-33° C to +55°C	-25° C to +55°C	-25° C to +55°C
Humidity	10% to 90%	10% to 90%	10% to 90%
	non condensing at 25°C	non condensing at 25°C	non condensing at 25°C
Cooling	Conductive via chassis	Conductive via chassis	Conductive via chassis

Major agency compliances

	BRU34	BRU38	BRU39
Safety / Emission / Radio	IEC 60 950 ETS 300 279 ETS 300 113* CE marked	IEC 60 950 ETS 300 279 ETS 300 113* CE marked	UL1950, UL listed CAN/CSA-C22.2 No.950-95 IEC 60 950 FCC part 68, FCC part 90

*According to EU Directive 1999/5/EC