BRU3 Mobitex Radio 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 1,500 terminals on a single channel, making it the most cost-effective wireless data technology that delivers the best value for users.

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Technical specification – Mobitex BRU3

Physical		
Dimensions: Height (including handle) Width Depth Weight	13.4 inch/350 mm 16.9 inch/440 mm 7.1 inch/180 mm 40 lbs/18 kg	
Power	BRU34	BRU39
Input voltage: Power consumption: Without heating unit operating With heating unit operating Battery operation (no heating function)	220 – 240 VAC Maximum 100 W Maximum 900 W 15 minutes (0 – 55° C, 6W output power) 30 minutes (0 – 55° C, 3W output power)	110 – 130 VAC or 220 – 240 VAC Maximum 100 W Maximum 500 W 30 minutes (0 – 55° C, 3W output power)
Radio specifications	BRU34	BRU39
Channel spacing Modulation Modulation bit rate Transmitter output power Radio sensitivity	413.9 – 416.6/423.9 – 426.6 416.9 – 419.5/426.6 – 429.5 425.5 – 426.1/440.0 – 440.6 459.6 – 459.9/453.1 – 453.4 406.2 – 408.5/415.7 – 418.0 412.5 – 413.5/419.5 – 420.5 411.0 – 413.9/421.0 – 423.9 12.5 kHz Modified GMSK 8 kbps Max 6W ± 1.5 dB (adj. in steps of 3 dB) -117 dBm (at ≤ 1%BER)	896 – 902/935 – 941 MHz 12.5 kHz Modified GMSK 8 kbps Max $3W \pm 1.5$ dB (adj. in steps of 3 dB) -117 dBm (at \leq 1%BER)
Radio data transmission		
Power saving mode Roaming Traffic mode Media access control Mode of operation	Enables battery/power saving mode of mobiles and portables Enables mobiles to automatically roam to the best base station Duplex Modified non-persistent CSMA Continuous of frame	
Capacity		
Number of channels Maximum number of subscribers (users)	1 system channel 1500	
Network communication		
Integrated modem (optional) External modem: Physical interfaces Link carrier protocol	V.32/V.32 bis, leased/switched line (up to 14.4 kbps) RS 422 or RS 232 (up to 64 kbps) X.25	
Alarms		
Alarm functions	 Temperature Output RF power/VSWR One external alarm Input power failure Battery charger failure Open cover alarm 	
Environmental	BRU34	BRU39
Temperature range Humidity Cooling	-33° C to +55° C 10% to 90% non-condensing at 25° C Conductive via chassis	-25° C to +55° C
Major agency compliancies	BRU34	BRU39
Safety / Emission / Radio	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