



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 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 – Mobitex BRU3

Physical			
Dimensions:			
Height (including handle)	13.4 inch/350 mm		
Width	16.9 inch/440 mm		
Depth	7.1 inch/180 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 220 – 240 VAC
Power consumption:			
Without heating unit operating	Maximum 100 W	Maximum 100 W	Maximum 100 W
With heating unit operating	Maximum 900 W	Maximum 500 W	Maximum 500 W
Battery operation (no heating function)	15 minutes (0 – 55° C, 6W output power)	15 minutes (0 – 55° C, 6W output power)	30 minutes (0 – 55° C, 3W output power)
Radio specifications			
	BRU34	BRU38	BRU39
Frequency ranges Rx/Tx	413.9 – 416.6/423.9 – 426.6 MHz 416.6 – 419.5/426.6 – 429.5 MHz 425.5 – 426.1/440.0 – 440.6 MHz 459.6 – 459.9/453.1 – 453.4 MHz 406.2 – 408.5/415.7 – 418.0 MHz 412.5 – 413.5/419.5 – 420.5 MHz 411.0 – 413.9/421.0 – 423.9 MHz	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 3 dB)	Max 6W ± 1.5 dB (adj. in steps of 3 dB)	Max 3W ± 1.5 dB (adj. in steps of 3 dB)
Radio sensitivity	-117 dBm (at ≤ 1%BER)	-117 dBm (at ≤ 1%BER)	-117 dBm (at ≤ 1%BER)
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		
Maximum number of subscribers (users)	2500		
Network communication			
Integrated modem (optional)	V.32/V.32 bis, leased/switched line (up to 14.4 kbps)		
External modem:			
Physical interfaces	RS 422 or RS 232 (up to 64 kbps)		
Link carrier protocol	X.25		
Alarms			
Alarm functions	<ul style="list-style-type: none"> • Temperature • Output RF power/VSWR • One external alarm 	<ul style="list-style-type: none"> • Input power failure • Transmitter/Receiver failure 	<ul style="list-style-type: none"> • Battery charger failure • Open cover alarm
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% non-condensing at 25° C	10% to 90% non-condensing at 25° C	10% to 90% 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	IEC 60 950 ETS 300 279	UL1950, UL listed CAN/CSA-C22.2 No. 950-95
* According to EU Directive 1999/5/EC	ETS 300 113 * CE marked	ETS 300 113 * CE marked	IEC 60 950 FCC part 68, FCC part 90