



MB3

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MOUNTAINBRIK™ 3 WIDEBAND RECORDER

Wideband RF RECORDER (THIRD GENERATION)

- The MountainBrik 3 (MB3) comes in three packages: a portable plastic case, a metal caddy, and a 1U rack mount to meet your mission needs
- Wideband RF can be recorded to and played back from removable storage

BASE HARDWARE

- AMD Zync Ultrascale+ MPSoC processor
- Choice analog FPGA mezzanine card
- 4x SFP28 ports, supporting 10 GbE or 25 GbE
- GPSDO: GPS disciplined timing signals for time tags
- 1PPS and 10 MHz reference
- 1 GbE command and control interface
- USB serial maintenance port
- Removable media for OS storage
 - Redundant boot options (micro SD cards)
 - Removable without tools to facilitate updates
 - Security sealed

RECORDER SPECIFICATIONS

MB3-PRT-REC-WBD-02 — PORTABLE PLASTIC CASE

- Watertight, airtight, and dustproof
- Size: 12.0" x 14.0" x 6.9"
- Input power: AC 110/220 V, 50/60 Hz
- LCD display

MB3-MPK-REC-WBD-02 — METAL CADDY

- Size: 3.25" x 6.75" x 10"
- Input power: 9–30 VDC

MB3-1U — METAL RACK MOUNT

- Size: Standard 19"-1U rack mount
- Input power: AC 110/220 V, 50/60 Hz
- LCD display



ALL MB3 RECORDERS

- Recording bandwidth: > 4.8 GBytes/s
- Command and control: 1 GbE, USB UART via the BrikVision web application
- USB UART serial port for troubleshooting

MB3 VERSIONS

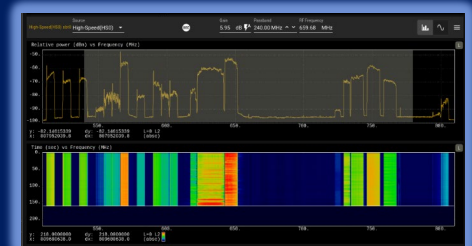
CHASSIS	MB3-PRT			MB3-MPK	MB3-1U
	"02"	"03"	"05"	"02"	"01"
Variant					
RECORDING					
Baseband 2.4-GHz* IBW 8b Real	1	—	1	1	1
Baseband 1.2-GHz* IBW 8/16b Real	2/1	—	2/1	2/1	2/1
10-MHz to 2.4-GHz SBT up to 480-MHz* IBW 8/16b Complex	2	—	4	2	4
10-MHz to 1.2-GHz SBT up to 480-MHz* IBW 8/16b Complex	4	—	4	4	4
10-MHz to 6-GHz SBT up to 45.00-MHz** IBW 8/16b Complex	—	4	—	—	—
Dynamic ADC Clock	2.0–5.0 GHz	—	2.0–5.0 GHz	2.0–5.0 GHz	2.0–5.0 GHz
PLAYBACK					
Baseband 2.4-GHz* IBW 8b Real	1	—	1	1	1
600-MHz to 2.4-GHz Tunable 1.2-GHz* IBW 8/16b Real	2/1	—	2/1	2/1	2/1
10-MHz to 2.4-GHz SBT up to 480-MHz* IBW 8/16b Complex	2	—	4	2	4
10-MHz to 6-GHz SBT up to 450-MHz** IBW 8/16b Complex	—	4	—	—	—
Dynamic DAC Clock	4.0–5.0 GHz	—	4.0–12.0 GHz	4.0–5.0 GHz	4.0–12.0 GHz
Storage***	4 x U.2, 7 mm	4 x U.2, 7 mm	4 x U.2, 15 mm	3 x M.2	4 x U.2, 15 mm
Analog FPGA Mezzanine Card (FMC)****	DS (01943-01)	Epiq Sidekiq™ X4	BW (02871-01)	DS (01943-01)	BW (02871-01)

- * All shown bandwidths assume the default 2.4-GHz or 4.8-GHz ADC/DAC clock configuration for DS or BW systems
 - Adjusting the ADC or DAC clock adjusts all available IBW (For more information, see the BrikVision manual Sample Rate section)
- ** The MB3-PRT-03 uses the Epiq Sidekiq X4 card to support discrete sample rates ranging from 50 MHz to 500 MHz
 - The highest available passband is 450 MHz, which is limited to two channels for both recording and playback
- *** The only drives qualified for use in an MB3 system are the following:
 - PM983 (EOL U.2 up to 7.68 TB)—Drive endurance: 10,000 TB total data written for the 7.68-TB drives
 - PM9A3 (U.2 up to 15.3 TB)—Drive endurance: 14,000 TB total data written for the 7.68-TB drives
 - 970 PRO (M.2 up to 1 TB)—Drive endurance: 1200 TB total data written for the 1-TB drives
- **** Three distinct FMC cards are used: Rincon Deathstalker (DS), Rincon Blackwidow (BW), Epiq Sidekiq X4

FEATURES

- Web-based control application (BrikVision) runs record and playback applications and allows downloading of recording files directly from the web browser as RAW or BLUE files
- Recordings are timestamped with GPS time when available or system time
 - Time-aligned recordings play back coherently
- Network transfer data offload application allows moving data from MB3 to a server at 800 MB/s by running a containerized application on the server
- Mountain Transfer application allows uploading or downloading of RAW or BLUE data files
- Mountain View application presents a spectral view of the entire recording and allows annotating in time and frequency
 - Each annotation can be downloaded as an individual RAW or BLUE file

MB3 BRIKVISION DISPLAY



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