CHM8X Platform

Modular Crash Hardened Memory

CRASH PROTECTED MEMORY

DEUTA **AMERICA**

»CHM8X Platform –

Modular Crash Hardened Memory!«

Deuta America Modular Crash Hardened Memory

Deuta America Corporation is an international leading supplier in rail crash hardened memory (CHM) with almost ten different CHM products in service around the world.

Our new CHM8X product line is the cutting edge of innovation for crash protected memory solutions across markets and applications, allowing for the simple addition of crash memory to any system. The CHM8X is small, light, and can be either 19" rack mounted or bracket mounted.

Scalable, cost-efficient protected memory for data and video across multiple standards in a compact footprint.

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CHM8X Platform

| Feature/Specification	
Basic Standards	EN62625 and EN50155, IEEE1482.1:1999 & 2013, FRA 49 CRF Part 229, §229.135 Appendix D Table 1 Option A
Other Utilized Standards (where deemed applicable)	NFPA130, IEEE16, IEEE1478, AARS9401, AARS9101, EN 45545-2:2023 with Hazard Level 3, EN 61373 category 1, class B:2010, EN 50121-3-2:2017
Power Supply	via USB/PoE
Temperature range	-40°C to +85°C (operation) -40°C to +85°C (storage)
Storage Medium	internal flash
FTA Buy America Compliance	Yes

Variant	Standard	Capacity	Interface	Usage
CHM82	EN62625-1/IEEE1482.1:1999	256 GB - 1.5 TB	USB 2.0	Video
CHM84	IEEE1482.1:2013/FRA CFR49	16 GB - 128 GB	USB 2.0	Data
CHM86	IEEE1482.1:2013/FRA CFR49	256 GB - 1 TB	Ethernet	Video

Bracket Mounting
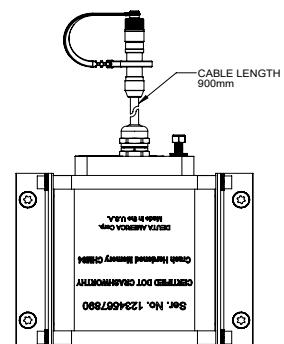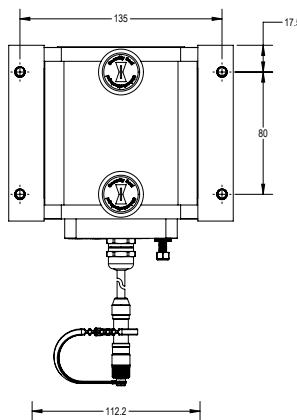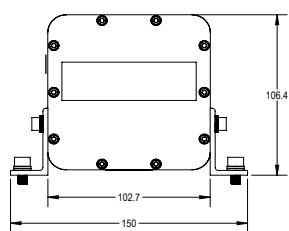
Rack Mounting
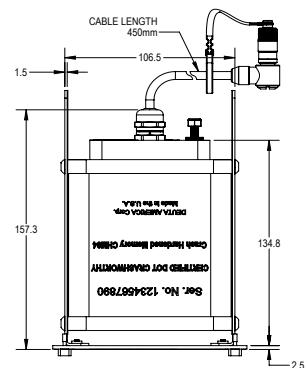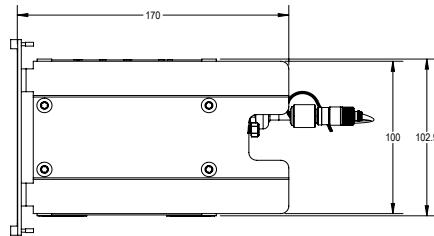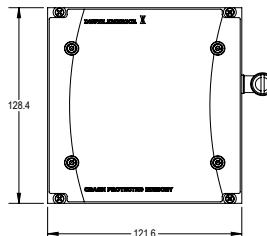
All units in mm

»CHM82 – According to IEEE1482.1:1999 –

Modular Crash Hardened Memory!«

Add high capacity Crash Hardened Memory to a IEEE1482.1:1999 system
This flexible CHM unit provides up to 1.5TB memory capacity in a small package supporting both 19" rack mounting or bracket mounting options. Default connection is a 90cm USB cable with a M8 4 pole connector.

The memory can be expanded from 16GB up to 1.5TB. Through the small size, the unit can be mounted separately, integrated in a 19" rack or even mounted inside an event recorder or a network video recorder.

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CHM82 – According to IEEE1482.1:1999

Feature/Specification	
Crash Standard	EN62625-1/IEEE1482.1:1999
Basic Standards	EN50155, IEEE1482.1:1999
Other Utilized Standards (where deemed applicable)	NFPA130, IEEE16, IEEE1478, AARS9401, AARS9101, EN 45545-2:2023 with Hazard Level 3, EN 61373 category 1, class B:2010, EN 50121-3-2:2017
Power Supply	via USB
Temperature range	-40°C to +85°C (-40°F to +185°F) (operation) -40°C to +85°C (-40°F to +185°F) (storage)
Storage Medium	internal flash
Capacity	16 GB - 1.5 TB
Interface	M8 USB 2.0, 4 pole
Usage	Data
FTA Buy America Compliance	Yes

Housing Dimensions	
Width	102,7 mm (4,0")
Height	102,7 mm (4,0")
Depth	170 mm (6,7")
Weight	3,4 kg (7,5 lbs)

Mounting Options

19˝ rack mounting:	
Width	121,6 mm or 152,1 mm (4,8" or 6,0")
Height	128,4 mm (5,1")
Depth	170 mm (6,7")
Weight	with mounting 3,9 kg (8,9 lbs)

large brackets:	
Width	192 mm (7,6")
Height	106,4 mm (4,2")
Depth	200 mm (7,9")
Weight	with mounting 4,7 kg (10,4 lbs)

small brackets:	
Width	150 mm (5,9")
Height	106,4 mm (4,2")
Depth	170 mm (6,7")
Weight	with mounting brackets: 4,2 kg (9,2 lbs)

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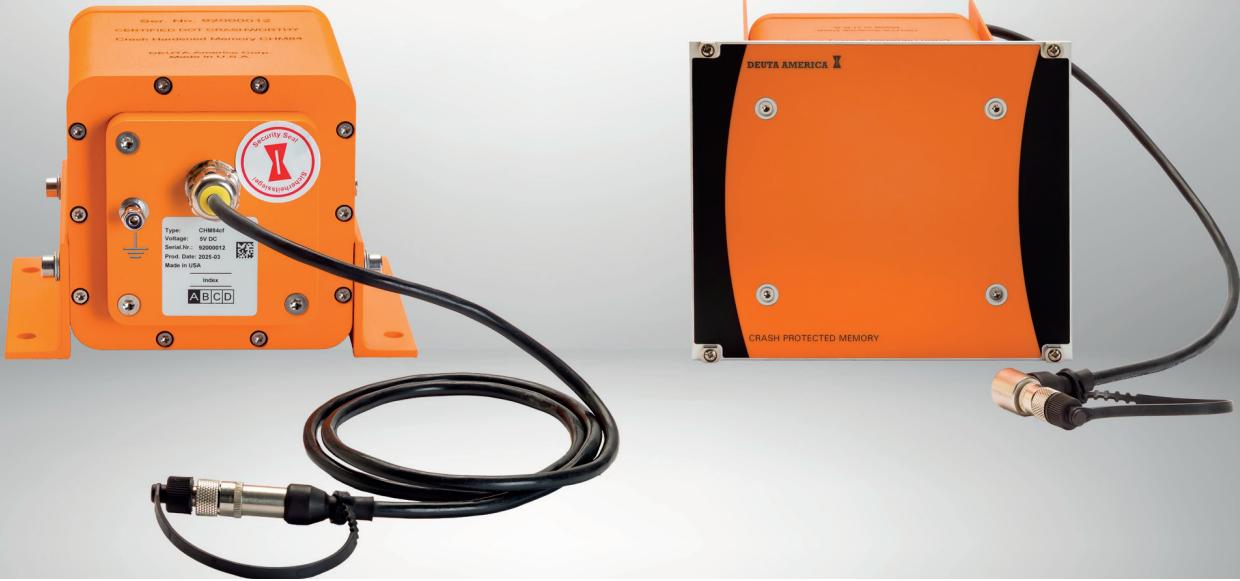
»CHM84 –
According IEEE2013/FRA 49CFR data –

Modular Crash Hardened Memory!«

A small size and low weight Crash Hardened Memory still meets all the existing crash protection standards for the railway industry and provides memory capacity up to 128GB.

The design is flexible and modular and can be delivered with multiple bracket mounted designs and 19" rack mounted designs. The unit can be used as a standalone protected memory or integrated into a recorder. The unit provides a USB connected interface with multiple connectors and cable length.

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CHM84 - According IEEE2013/FRA 49CFR data

Feature/Specification	
Crash Standard	IEEE1482.1:2013, EN 62625 and FRA 49 Part 229
Basic Standards	EN50155
Other Utilized Standards (where deemed applicable)	OK
Power Supply	via USB
Temperature range	-40°C to +85°C (-40°F to +185°F) (operation) -40°C to +85°C (-40°F to +185°F) (storage)
Storage Medium	internal flash
Capacity	16 GB - 128 TB
Interface	M8 USB 2.0, 4 pole
Usage	Data
FTA Buy America Compliance	Yes

Housing Dimensions (including bracket)	
Width	102,7 mm (4,0")
Height	102,7 mm (4,0")
Depth	170 mm (6,7")
Weight	3,3 kg (7,3 lbs)

Mounting Options

19´rack mounting:	
Width	121,6 mm or 152,1 mm (4,8" or 6,0")
Height	128,4 mm (5,1")
Depth	170 mm (6,7")
Weight	with mounting 3,8 kg (8.4 lbs)

large brackets:	
Width	192 mm (7,6")
Height	106,4 mm (4,2")
Depth	200 mm (7,9")
Weight	with mounting 4,6 kg (10 lbs)

small brackets:	
Width	150 mm (5,9")
Height	106,4 mm (4,2")
Depth	170 mm (6,7")
Weight	with mounting brackets: 4,1 kg (9 lbs)

DRAFT
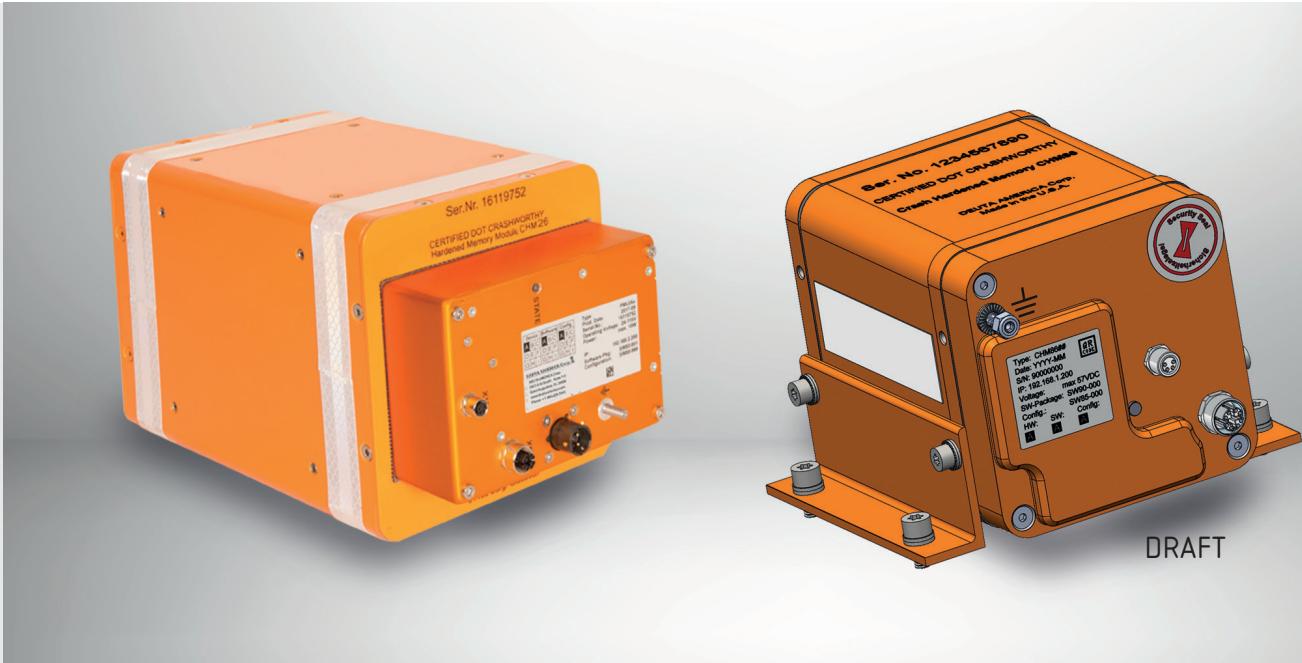
»CHM26 & CHM86 –
According IEEE2013/FRA 49 CFR video –
Modular Crash Hardened Memory!«

Easily Add IEEE/FRA Crash Hardened Memory to Existing Systems!
Applied to IEEE1482.1: 2013 and FRA 49 CFR 229 standards, both CHM26 and CHM86 Crash Hardened Memory Unit allows for effortless integration to new or existing systems. The CHM26 is today offered with 256 GB, 512 GB or 1 TB capacity and 1.5 TB future capacity while the much smaller CHM86 will be offered up to 1 TB capacity. Both units utilize an on-board ethernet network interface, adding Crash Hardened Memory is simple and straightforward requiring minimal modifications to existing systems.

CHM26 Highlights:
- 256 GB, 512 GB or 1 TB memory capacity, 1.5 TB to be released
- Ethernet communication
- Web-based service PC interface
- 24 – 110 V DC wide-range power supply
- FRA 49 CFR Part 229, § 229.135 Appendix D
- IEEE Std. 1482.1-2013, Part 4.6
- Optimized for video data protection
- On-board processing capabilities

CHM86 Highlights:
- Up to 1 TB memory capacity
- Ethernet communication
- Web-based service PC interface
- Power over Ethernet power supply
- FRA 49 CFR Part 229, § 229.135 Appendix D
- IEEE Std. 1482.1-2013, Part 4.6
- Optimized for video data protection
- On-board processing capabilities
- S.M.A.R.T.-like memory diagnostic interface

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CHM26 & CHM86 – According IEEE2013/FRA 49 CFR video

Feature/Specification	CHM26aj	CHM86aj*
Crash Standard	CFR 49 229 App. D, IEEE1482.1:2103	CFR 49 229 App. D, IEEE1482.1:2103
Other Standards	EN50155, EN45545, etc	EN50155, EN45545, etc
Power	24-110V DC	PoE
Power (super capacitor)	None	> 5 seconds
Temperature range	-40ºC to +70ºC (operation) -40ºC to +85ºC (storage)	-40ºC to +70ºC (operation) -55ºC to +85ºC (storage)
Capacity	1 TB	1 TB
Nominal TBW	512 TB	3,072 TB
Interface	10/100 Mbps Ethernet	10/100/1000 Mbps Ethernet
Network Storage	SAMBA	SAMBA, NFT
Mounting	Brackets	Brackets (optionally 19" rack)
MTBF	800,000 hours	800,000 hours
Dimensions (approx.)		(standard brackets)
Width	160 mm (6.3")	102 mm (4")
Height	160 mm (6.3")	102 mm (4")
Depth	282 mm (11.1")	165 mm (6.5")
With brackets		(standard brackets)
Width	221 mm (8.7")	190 mm (7.5")
Height	165 mm (6.5")	107 mm (4.2")
Depth	305 mm (12")	165 mm (6.5")
Optional brackets		(small brackets)
Width		150 mm (5,9")
Height		107 mm (4.2")
Depth		165 mm (6.5")
Weight (w/o brackets)	13,6 kg (30 lbs)	4,1 kg (9 lbs)

* Forecasted values. To be validated during 2025.

The easy-to-add CHM to existing systems:
- Video and voice recording
- Train data recording with DEUTA REDBOX®
- Monitoring and diagnostic system or other peripheral system

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