

# CHM8X Platform

## Modular Crash Hardened Memory





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)<br>-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 |



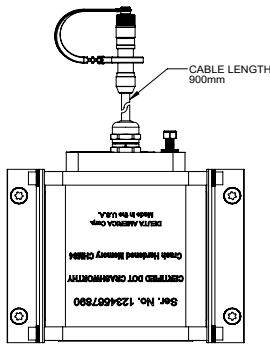
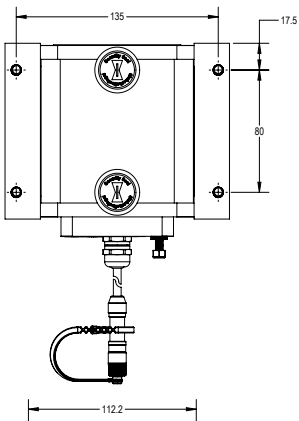
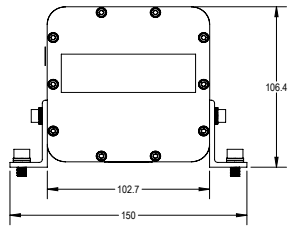
»CHM8X Platform –  
Modular Crash Hardened Memory!«

**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.

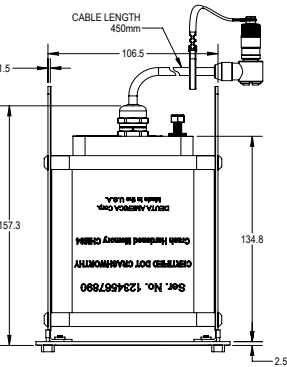
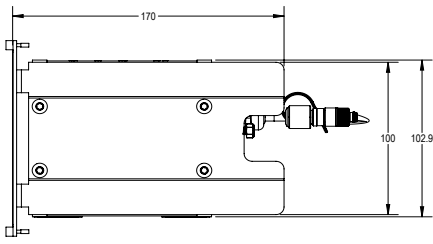
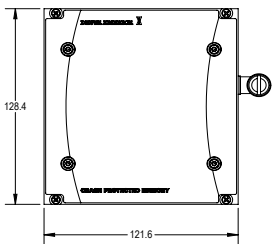
Our new CHM8X product line is the cutting edge of innovation for crash protected memory solutions across markets and applications, allowing for the simple addition of crash memory to any system. The CHM8X is small, light, and can be either 19” rack mounted or bracket mounted.

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

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.

## 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)<br>-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) |





# »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.

## 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)<br>-40°C to +85°C (-40°F to +185°F) (storage) |
| Storage Medium                                     | internal flash                                                                             |
| Capacity                                           | 16 GB - 128 GB                                                                             |
| 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) |





# »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, the CHM86 Crash Hardened Memory Unit allows for effortless integration to new or existing systems. The CHM86 is offered up to 1 TB capacity. The unit utilizes an on-board ethernet network interface, adding Crash Hardened Memory is simple and straightforward requiring minimal modifications to existing systems.

### CHM86 Highlights:

- Up to 1 TB memory capacity
- Gigabit 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 (API)

## CHM86 – According IEEE2013/FRA 49 CFR video

| Feature/Specification   | CHM86aj                                                |
|-------------------------|--------------------------------------------------------|
| Crash Standard          | CFR 49 229 App. D, IEEE1482.1:2103                     |
| Other Standards         | EN50155, EN45545, etc                                  |
| Power                   | PoE                                                    |
| Power (super capacitor) | > 5 seconds                                            |
| Temperature range       | -40°C to +70°C (operation)<br>-55°C to +85°C (storage) |
| Capacity                | 1 TB                                                   |
| Nominal TBW             | 3,072 TB                                               |
| Interface               | 10/100/1000 Mbps Ethernet                              |
| Network Storage         | SAMBA, NFS                                             |
| Mounting                | Brackets (optionally 19" rack)                         |
| MTBF                    | 500,000 hours                                          |

| Dimensions (approx.)  | (standard brackets) |
|-----------------------|---------------------|
| Width                 | 102 mm (4")         |
| Height                | 102 mm (4")         |
| Depth                 | 165 mm (6.5")       |
| With brackets         | (standard brackets) |
| Width                 | 190 mm (7.5")       |
| Height                | 107 mm (4.2")       |
| Depth                 | 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) | 4,1 kg (9 lbs)      |

### 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

## **DEUTA AMERICA**

### **DEUTA AMERICA Corp.**

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