

## DATA SYSTEMS



ACQUIRE & PROCESS RECORD TELEMETER & STREAM REPLAY

# MODULES

**Data Acquisition, Recording & Playback Modules for MDR, GMDR and MDR-GT**



FLIGHT TEST INSTRUMENTATION



**Heim**

The MDR system allows collecting data in **complex and harsh airborne flight test environments**. Thanks to its wide range of modules, the system will adapt from the lightest to the most extensive daily test requirements in terms of variety of signals to be recorded. The **wide range of signal interface modules** ensure that today's and tomorrow's requirements will be met.

The **innovative hybrid module concept** allows to combine interfaces for up to 4 different data types in one module. A hybrid module consists of a general module frame and basic board and up to 4 signal boards. Each signal board is the interface for one data type. With these innovative hybrid modules, nearly each customer data type combination can be recorded with an MDR system.



Flight Test Applications



In-Service Recording & Telemetry



Certification Tests

### FULL SPECTRUM OF INTERFACES

PCM, Ethernet, ARINC 429, MIL 1553, CAN, analog, video, serial, discrete...

### EASY SETUP & RE-CONFIGURATION

Easy module change by user

### HYBRID SIGNAL INTERFACE MODULES

Up to 4 different data types within one module

### VIDEO INTERFACE MODULES

Extended range of video modules for nearly all formats incl. H265/4K

## FLIGHT TEST INSTRUMENTATION

# MODULES

### ► MODULES

#### Analog

MANA4	4 channel voltage and ICP input
MANA6	6 channel voltage and ICP input (2 channels RPM capable) 2 channel excitation output
MANA8/MANA8 50V	8 channel voltage and ICP input
MANA12	12 channel voltage and ICP input
MANA16 IEPE	16 channel voltage and ICP input
MANA16 AC/MANA16 DC	16 channel voltage input
MANH	2 High speed analog input/ 2 High speed analog output
MFHB6V	6 channel strain gauge analog input

#### Arinc 429

MARR16	16 channel ARINC 429 input
--------	----------------------------

#### Arinc 664

MAFDX1	Dual redundant AFDX (ARINC 664) bus input
--------	---

#### Asynchronous Serial

MUSM16	16 channel asynchronous serial input
--------	--------------------------------------

#### Can-Bus

MCAN4	4 channel CAN bus input
-------	-------------------------

#### DCRsi

MDCRI	1 DCRsi input
-------	---------------

#### Discrete

MDSC32	32 discrete inputs
--------	--------------------

#### Ethernet Bus

METH2/METH2A	2 channel Ethernet input
METH2-R/P, METH2A-R/P	2 channel Ethernet input/ 2 channel Ethernet output

#### Fibre Channel

MFCR4-1	4 fibre channels input
---------	------------------------

#### MIL-STD 1553

MUAR6D/MUAR6T/MUAR6TA	6 channel MIL-STD-1553 input
-----------------------	------------------------------

#### Parallel Data

MPAR	8 channel parallel data input
------	-------------------------------

#### PCM

MMRG8	8 PCM merger inputs
-------	---------------------

#### Stanag 3910

MSTG2	2 channel STANAG 3910 input
-------	-----------------------------

#### Telemetry Downlink

MC10T/MC10TA	Data converter and input for telemetry downlink and more
--------------	--

#### Video

MVCR1A	2 channel analog input
MVCR2	1 channel DVI input with scaler
MVCR3	2 channel SDI input
MVCR4/MVCR4A	1 channel analog input with scaler
MVCR5	2 channel DVI input
MVCR6	2 channel SDI input with Picture in Picture functionality
MVCRE	8 IP stream input
MVCP-DVI2	2 digital DVI output
MVCR-SDI4	4 channel SDI input (H.265)

### ► HYBRID MODULES (SOME EXAMPLES)

MAAAA-PPPP-BBBB ..... 4 ARINC 429 output signal boards (28 outputs)

MAAEE-BBBB-AAAA ..... 2 ARINC 429 signal boards (28 data channels) and 2 Ethernet signal boards (4 data channels)

MCVSE-7MBB-ABBA ..... 1 Telemetry Transmit signal board (1 data channel), 1 Voice input/output signal board (4 data channels), 1 Serial data input signal board (6 serial inputs) and 1 Ethernet signal board (2 data channels)

MDUAS-BTBB-BBBB ..... 1 Discrete input signal board (6 discrete inputs), 1 MIL-STD-1553 signal board (4 data channels on 2 Physical inputs), 1 ARINC 429 signal board (7 data channels on 7 Physical inputs) and 1 Serial data signal board (12 data channels on 12 Physical inputs)

MHHHH-3333-BBBB ..... High Speed Data Link Control input signal boards (12 HDLC data channels)

MHHHH-33PP-BBBB ..... High Speed Data Link Control input/playback signal boards (6 HDLC input data channels, 6 HDLC output data channels)

MMMEE-7EBB-ABAA ..... 2 PCM signal boards (6 data channels on 3 Physical inputs; 3 E to E Loopback outputs) and 2 Ethernet signal boards (4 data channels on 2 Physical inputs)

MMMMM-7E7E-ABAB ..... 4 PCM signal boards (12 data channels on 6 Physical inputs, 6 PCM E to E Loopback outputs)

MMMMM-77PP-AABB ..... 2 PCM input signal boards and 2 PCM output signal boards

MMSSS-77BB-AABB ..... 2 PCM signal boards (12 data channels on 6 Physical inputs) and 2 Serial signal boards (12 data channels on 12 Physical inputs)

MMUAE-7TBB-AAAA ..... 1 PCM signal board (6 data channels on 3 Physical inputs), 1 MIL-STD-1553 signal board (4 data channels on 2 Physical inputs), 1 ARINC 429 signal board (14 data channels on 7 Physical inputs) and 1 Ethernet signal board (2 data channels on 1 Physical input)

MMUUS-7TTB-AAAB ..... 1 PCM signal board (6 data channels on 3 Physical inputs), 2 MIL-STD-1553 signal boards (4 data channels on 2 Physical inputs) and 1 Serial data signal board (12 data channels on 12 Physical inputs)

MSAEE-BBBB-BBAA ..... 1 Serial signal board (6 data channels on 6 Physical inputs), 1 ARINC 429 signal board (7 data channels on 7 Physical inputs) and 2 Ethernet signal boards (4 data channels on 2 Physical inputs)

MTVMD-TM7B-BBAB ..... 1 Telemetry Transmit signal board (3 data channels on 3 Physical outputs), 1 Voice input/output signal board (4 data channels on 4 Physical outputs), 1 PCM input signal board (6 data channels on 3 Physical inputs) and 1 Discrete input signal board (1 data channel on 12 Physical inputs)

MTVME-RGGG-ABBA ..... 1 Telemetry Receive signal board, 1 Voice gateway output signal board, 1 PCM gateway output board and 1 Ethernet (10T/100T/GigE) signal board, configurable for Ethernet Gateway output or UDP Streaming input

MTVME-TM7B-BBAA ..... 1 Telemetry Transmit signal board (3 data channels on 3 Physical outputs), 1 Voice input/output signal board (4 data channels on 4 Physical outputs), 1 PCM input signal board (6 data channels on 3 Physical inputs) and 1 Ethernet signal board (data channels on 1 Physical input)