

DRM Data Modulator DRM DMOD3

TECHNICAL DATA



Elsyscom GmbH

Oderstraße 67

D-14513 Teltow

Germany

Tel.: +4933283398521

Fax.: +4933283398525

mail: wittling@elsyscom.de

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9. TECHNICAL DATA

9.1 SUPPORTED DRM MODES

The DRM modes listed in the following table are supported by the DRM data modulator. The selection of modes is done in the ContentServer.

	Mode A	Mode B	Mode C	Mode D
Nominal Bandwidth (9/10 kHz)	✓	✓	✓	✓
Half Bandwidth (4.5/5 kHz)	✓	✓	✓	✓
Double Bandwidth (18/20 kHz)	✓	✓	✓	✓
64QAM MSC, all Code Rates	✓	✓	✓	✓
16QAM MSC, all Code Rates	✓	✓	✓	✓
16QAM SDC	✓	✓	✓	✓
4QAM SDC	✓	✓	✓	✓
Standard Modulation	✓	✓	✓	✓
Hierarchical Modulation	✓	✓	✓	✓
Equal Error Protection	✓	✓	✓	✓
Unequal Error Protection	✓	✓	✓	✓
Long/Short Interleaving	✓	✓	✓	✓

✓ = supported

9.2 GENERAL INFORMATION

Operating System	Linux OS
User interface	Graphical Interface for basic information and control functions directly on the front panel of the device
Display	8.4" TFT Display (Touch screen), 800 x 600 pixel
Remote control	<ul style="list-style-type: none"> - V.24/RS232 interface with BITBUS syntax - 10/100/1000 Mbit Ethernet interface for operation via a web interface (Graphical user interface over IP)

9.3 MODULATION INPUTS

Inputs for DRM Modulation data (with MDI protocol)	<ul style="list-style-type: none"> - V.24/RS232 interface (asynchronous) for data transfer using ETSI TS 102 820 or DRM cm220 protocol - 10/100/1000 Mbit Ethernet interface for UDP data transfer using ETSI TS 102 820 or DRM cm220 protocol
Inputs for audio signals for AM, DRM or simulcast transmission	<ul style="list-style-type: none"> - analogue input with normal line level (+2 dBV max. at 10 kΩ) - digital input for AES/EBU and ADAT optical

v1.7.2

9.4 SIGNAL OUTPUTS

RF output signal	Direct Digital Synthesis signal generation
Frequency stability	unlocked 1.5×10^{-9} (24 h measuring) GPS locked 5×10^{-12} (24 h measuring)
RF frequency range	Tuneable within the LW, MW and SW frequency bands (9 kHz ... 26.1 MHz)
RF output level	max. 6 V _{pp} at 50 Ω (unbalanced) and TTL at 50 Ω (unbalanced) 1.2 V _{pp} at 50 Ω (unbalanced) on the front side for test purposes
Envelope output	Sampling rate of 192 kHz
Envelope frequency range	0 ... 80 kHz
Envelope output level	4.8 V _{pp} at 600 Ω (balanced) 1.0 V _{pp} at 50 Ω (unbalanced) on the front side for test purposes

9.5 FURTHER CONNECTIONS

Reference Clock Input/Output	10 MHz, TTL level at 50 Ω (unbalanced)
Word Clock Input/Output	48 kHz, TTL level at 50 Ω (unbalanced)
1PPS Input/Output	TTL level at 50 Ω (unbalanced)
RF inputs (RF return)	1 V _{pp} at 50 Ω (for measurements and equalizer functions)
GPS Antenna Input	50 Ω, providing DC supply for Antenna

9.6 POWER SUPPLY

Mains voltage	1/N/PE, 100 ... 240 VAC (±10 %)
Mains frequency	47 ... 63 Hz
Power consumption	120 W (typical)

9.7 ENVIRONMENTAL CONDITIONS

Temperature	- 10° ... +50° C
Humidity	up to 80 %, non condensing

9.8 DIMENSIONS

Slide-in unit	19", 4U height (rack mountable)
Width	483 mm (incl. fixing angle for rack mounting) 449 mm (in table-top housing)
Height	177 mm (without table-top housing base)
Depth	496 mm (without mating connectors)
Weight	16.2 kg

v1.7.2