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Modem Carrier Module DMX801



Vaisala Modem Carrier Module DMX801 is an interface module for connecting a mPCIe card modem or external modem through USB to Vaisala Data Management Unit DMU801.

Support for modems

DMX801 modem carrier module provides an interface for connecting a cellular modem to DMU801 data management unit. DMX801 supports standard mini Peripheral Component Interconnect express (mPCIe) card modems and low-power LTE Cat 4 modem modules. DMX801 can be used as a SIM card carrier for any compatible 2FF (mini) card. It can also act as an interface for external modem using USB connection.

Ordering options

You can order DMX801 with an integrated modem module or connect an external modem to it with USB. It is also possible to order DMX801 without integrated or external modem and provide your own integrated modem module instead, if that serves your purpose. Integrated modem modules provided with DMX801 by Vaisala have the required approvals in place and they are also tested to be compatible with DMU801 specifications. For your own integrated modem module, verify the compatibility before use.

Easy expansion when needed

DMX801 is easy to install during initial system setup but it can also be plugged in later. DMX801 can be configured with the intuitive, node-based Vaisala Kaiku Designer.

Features

- Supports standard mPCIe card modems
- Provides interface for external modem through USB connection
- Supports low-power LTE Cat 4 modem modules
- Includes SIM card holder for a mini-size (2FF) card
- Modem included as an option

Technical data

Operating environment

Operating temperature [1]	−40 … +80 °C (−40 … +176 °F)
Storage temperature	−60 … +85 °C (−76 … +185 °F)
Operating humidity	0–100 %RH, non-condensing

1) According to modem module specifications.

Inputs and outputs

Main antenna	SMA female connector
Antenna diversity	SMA female connector
GPS antenna	SMA female connector
USB connection	
Supported standard	2.0
Connector	USB-A

mPCIe card specifications

Type	Full-Mini Card
Dimensions (L × D × W)	56 × 30 × 5 mm (2.20 × 1.18 × 0.20 in)
Max. (peak) current consumption	2.75 A
Supported voltage	+3.3 V

Supported modem modules

Model	Quectel EG25-G LTE Cat4 Mini PCIe [1]

1) For more information, see the manufacturer documentation.

Mechanical specifications

Dimensions (H × D)	123 × 79 mm (4.84 × 3.11 in)
Distance between 2 plug-in module slots in DMU801 frame	18 mm (0.71 in)
Weight, no modem included	64 g (2.26 oz)
Weight with EG25-G mPCIe modem, 3 × antenna connectors, and SIM card	86 g (3.03 oz)
Materials	UL-rated fire-resistive FR4
Handles	Stainless steel
Coating	Conformally coated against humidity

Compliance

EU directives and regulations	EMC, RoHS	
EMC immunity	EN 61326-1, industrial environment	
EMC emissions	CISPR 32 / EN 55032, Class B FCC part 15 B, Class B ICES-3 / NMB-3 (Class B)	
Cybersecurity	Developed in accordance with ISO/IEC 27001 and IEC 62443-4-1 for secure product development practices	
Compliance marks	CE, FCC, ICES, RCM, UKCA	
Test	**Applied standard**	**Description/Value**
Maritime	IEC 60945	–
Vibration (sinusoidal)	IEC 60068-2-6	5–13.2 Hz, 1 mm (0.04 in) amplitude 13.2–200 Hz, 0.7 g
Rough handling	IEC 60068-2-31	Drop height 100 cm (39.37 in)
Shock	IEC 60068-2-27	15 g, 11 ms, saw-tooth
Dry heat	IEC 60068-2-2	+85 °C (+185 °F)
Damp heat	IEC 60068-2-78	+40 °C (+104 °F), 95 %RH
Cold	IEC 60068-2-1	−60 °C (−76 °F)

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