



TB-M

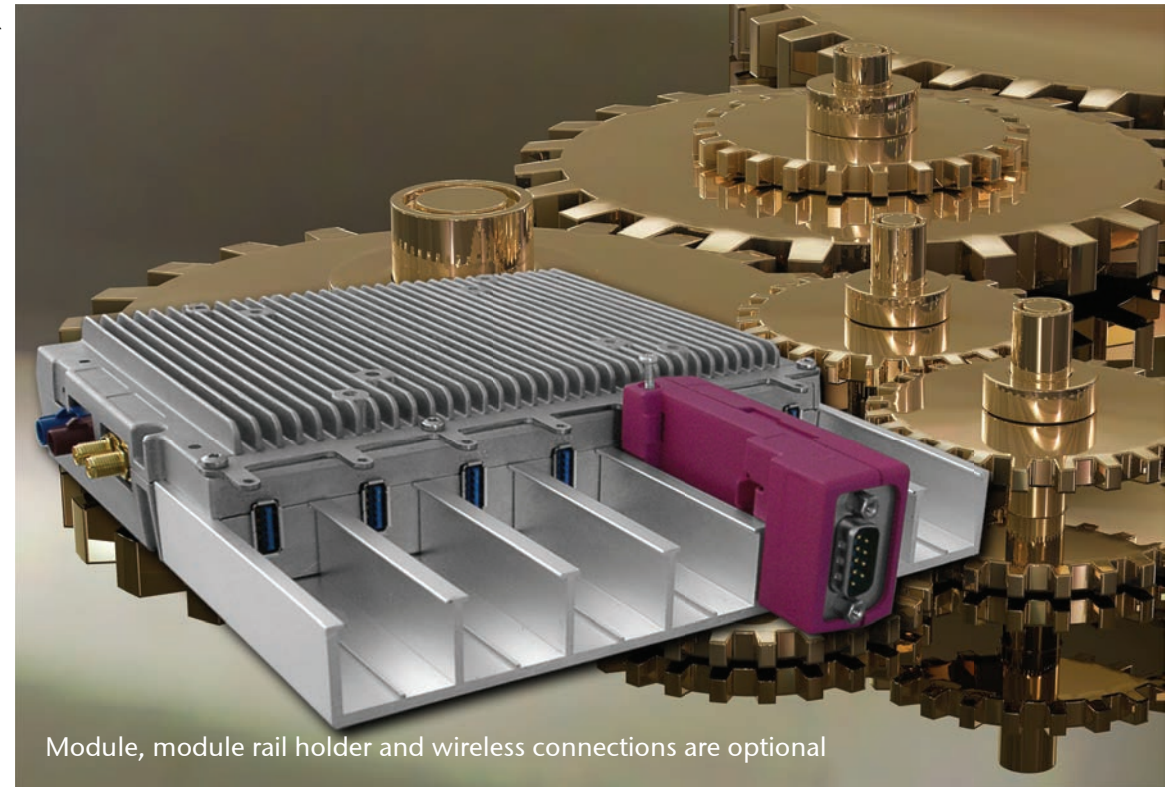
EM TRUST
systems you can trust

MODULAR

APPLICATIONS

The **modular EM ToughBox** is the perfect Plug&Play system solution, especially designed for low-power and noiseless applications since no fans or other rotating devices are used. It is a german engineered and high quality industrial computer system, offering the highest performance in tough environments.

- _ Rugged Industrial Systems
- _ Medical Solutions
- _ Automatic Control Panels
- _ Information Systems
- _ Measurement & Quality Control
- _ Public Terminal



Module, module rail holder and wireless connections are optional



Use the TB-M in harsh and tough environments. An optional extended temperature version is available.



Configure your system for different purposes. It works with a wide range of USB components.



The TB-M system is designed for hat rail mounting and can be expanded with an optional modular USB mounting carrier.



Expand your system with various USB adapter options.



Seven control LEDs allow to display various operating states.



Operate and control your processes.



E.E.P.D. 
...just embedded!

SPECIFICATIONS

CPU	AMD G-Series eKabini ¹
Max. memory	8 GB DDR3L 1600 MHz
Gigabit Ethernet	Up to 3 Intel® I210 with IEEE1588
LTE / 4G (OPTIONAL)	300 MBps max. / EMEA, APAC / Diversity / GNSS
WiFi / BT (OPTIONAL)	802.11 AC with diversity / Bluetooth Version 5
SSD (OPTIONAL)	mSATA / 64 GB - 512 GB
SD-Card	1 MicroSD-Card socket
USB ports	Up to 6 USB 3.1 Gen 1 4 USB 2.0
DVI-I connector	1 DVI-I with VGA support
Sound	3,5mm MIC In / headphone Out / line in
Health management	Hardware monitoring and Watchdog
Other	1 Power and 6 status LEDs
Power supply	Min. 8 V / Max. 32 V (DC)
Fanless	Designed for fanless operation
Max. operating temperature	0 °C to +60 °C ambient commercial grade -40 °C to +85 °C ambient industrial grade version
Max. storage temperature	-20 °C to +85 °C commercial grade -40 °C to +85 °C industrial grade
Max. rel. humidity	95 % @ 40 °C, non-condensing
Housing	Aluminum case
Mounting	Stand alone or hat rail
Dimension approx.	194 x 127,3 x 41,7 mm
Weight approx.	900 grams + options
Conformity	CE, ROHS, REACH
OS support	Microsoft® Windows® 7; Microsoft® Windows® 10; Microsoft® Windows® 10 IoT Enterprise; Linux Ubuntu 18.04 LTS

¹ 10 years availability according to CPU manufacturers specification

MODULAR DESIGN ABUNDANT USB CONNECTIVITY



Ordering Code System	Description	Type
TBMA	Modular	GX-415GA / 4C / 4T / 1.5 GHz / 15 W
TBML	Modular	GX-210HA / 2C / 2T / 1.0 GHz / 9 W 2x Eth / 3x USB
TBML (industrial temp.)	Modular	GE-209HA / 2C / 2T / 1.0 GHz / 9 W
2GB-GS1X	Main Memory	2 GB
4GB-GS1X	Main Memory	4 G
8GB-GS1X	Main Memory	8 GB
KITBMMH1	Expansion	Module holder rail option

OVERVIEW

The modular EM Tough-Box is powered by proven technology, including AMD G-series processors. The system is ready for multiple USB 3.0 devices. Our optional modular USB mounting carrier can safely connect up to seven modules with the system.

SUMMARY

- ▶ Fanless operation
- ▶ Three GBit Ethernet ports
- ▶ Ready for multiple USB 3.0 devices
- ▶ Extended temperature option

OPTION	Description	
SSA	SATA SSD 64 - 512 GB	
LTE	LTE/4G Modem	
WBT	WiFi/BT card	
W10	Microsoft® Windows® 10	
WIE	Microsoft® Windows® 10 IoT Enterprise	
LNX	Linux Ubuntu 18.04 LTS	
SSA	LTE	WBT
X	X	-
X	-	X
-	X	X

SSA, LTE, WBT combination matrix

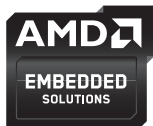
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