

## ES600.2 Network Module



The ES600.2 Network Module is the heart of the modular, Ethernet-based ETAS measurement, calibration, diagnostics, and prototyping system.

The module makes it possible to interconnect a multitude of ETAS compact hardware modules and to bundle the data of the connected modules. At the same time, the connected measurement modules can be synchronized and provided with power by the ES600 module. For example, with the help of the ES600.2 module you can connect up to four ECUs with an XETK interface to the ES910 Prototyping and Interface Module with which, on the test bench, values can be modified in the ECU and measured data acquired in short cycles.

The ES600.2 module supersedes the successful ES600.1 Network Module. It has been redeveloped from scratch. In order to efficiently transfer the data upstream to a desktop / laptop PC or ES910 Prototyping and Interface Module, it has been equipped with a Gigabit Ethernet port.

### Fast and synchronous

ES600 modules help prevent the periodic divergence of different signals during a measurement: the linked modules act as a

single measuring instrument, the time-stamps of which fluctuate less than a microsecond from the specified cycle time. This guarantees temporal correlation of the data from different measuring channels at all times.

### Practical

Up to six ETAS compact hardware modules – including additional ES600 modules – can be connected to an ES600 Network Module each via its own cable and synchronized and provided with power by it. Quick and easy installation in a vehicle or test bench – even in extensive measuring setups – is made possible by the user-friendly cable concept.

A series of LEDs continuously display the module's operating and error status as well as the activity of the individual connections. To save electricity, the connected modules automatically switch to standby mode when no PC or drive recorder is hooked up. To avoid load peaks, the ES600 modules switch on the connected devices sequentially during startup.

### At a Glance

Data transfer between the host application on the desktop / laptop PC or ES910 Prototyping and Interface Module, and multiple measurement, Interface or prototyping modules, or XETK ECU interfaces via Gigabit Ethernet

Six Fast Ethernet device ports with integrated power supply

Multiple ES600.2 modules can be connected in series

Precise time synchronization of all connected measuring channels with a precision of at least 1  $\mu$ s

Standby function

Sequential switching-on of connected devices

Status display for all devices and data transfers

Stable, functional metal housing

## Technical Datas

Item	Characteristics	Features
Size and Weight	Dimensions (HxWxD)	36 mm x 127 mm x 160 mm 1.4 in x 5 in x 6.3 in
	Weight	640 g / 1.42 lbs
Environment	Temperature range	-40 °C to +85 °C / -40 °C to +185 °F (storage)
	Humidity (not condensing)	0 % - 85 % (operation) 0 % - 95 % (storage)
	Protection class	IP40
Power supply	Operating voltage	7 V to 29 V DC
	Current consumption (without power supply of connected devices)	Continuous operation < 300 mA at 14.4 V; standby < 60 mA at 14.4 V
	Energy management	„On/ off“ at start/ stop of the Ethernet communication (on/ off upstream module)
	Protection	Reverse-voltage protected up to 32 V, protected against load dump
Host interface	1 x Fast Ethernet connection	10/100 Base-T
	1 x Gigabit Ethernet connection	100/1000 Base-T
Downstream module Interface	6 x Ethernet connection	10/100 Base-T
	Power supply of connected modules	2 A per interface, with current limitation
	Synchronization	Resolution: 1 µs
Status indication	Module status	1 x Green/Red LED
	Ethernet connection	1 x Green/Red LED for each connection
Compatible hardware	PC / ETAS upstream modules	Desktop- or laptop-PC with Ethernet connector, ES51x, ES592, ES593-D, ES595, ES600, ES800 [1] Network and Interface Modules, Prototyping and Interface Module ES910 <sup>1</sup>
	ETAS downstream modules	ECU with XETK- or generic Ethernet interface, ES51x, ES590/ES591 <sup>[1]</sup> , ES592, ES593-D, ES595 Network and Interface Modules, ES4xx and ES6xx Measurement Modules, ES910 Prototyping and Interface Module, ES1120 System Controller Board <sup>[1]</sup> , ES1135 Simulation/System Controller Board <sup>[1]</sup> , BR_XETK with Media Converter Cable CBEB100

<sup>[1]</sup> not synchronized.

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[www.etas.com](http://www.etas.com)



[www.etas.com/es59x](http://www.etas.com/es59x)

For complete ordering information and accessories for the ES600 module, please refer to [www.etas.com/ES600](http://www.etas.com/ES600).

For more information, please contact your local ETAS representative.