



eCONVERTER GMSL-to-Gigabit Ethernet Converter

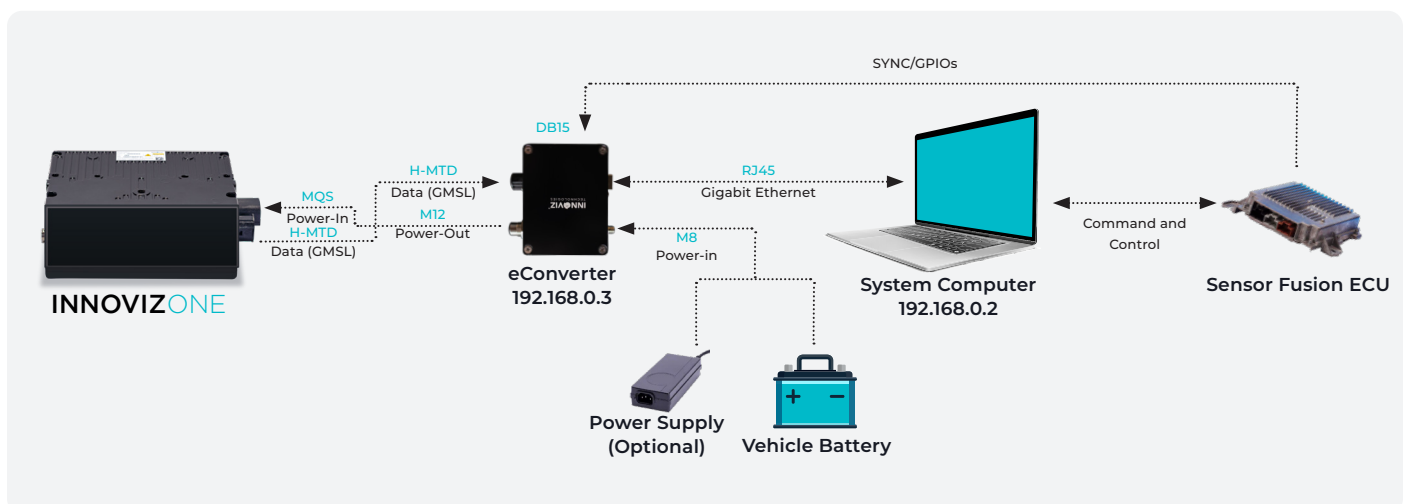
eConverter is a device designed to power and enable evaluation of the InnovizOne LiDAR with the vehicle's sensor fusion Electronic Control Unit (ECU). The LiDAR's point cloud output can be displayed on the PC with the InnovizPlayer utility or another 3D viewer. eConverter firmware includes a bundled web server for configuring its parameters and some LiDAR parameters. eConverter is not intended for series production.

The eConverter's GMSL interface aggregates the following interfaces:

- MIPI interface consisting of up to four CSI-2 channels to send the ECU point cloud and other data over UDP
- SPI command and control interface over TCP (ECU is the Master)
- GPIOs for synchronization and controlling LiDAR functions

KEY FEATURES

Converts InnovizOne data packets from GMSL to Gigabit Ethernet	Enables viewing InnovizOne point cloud on the system PC	Enables configuring and monitoring of InnovizOne from the system PC
Includes Innoviz API drivers to integrate with the customer's application	ECU provides time and frame synchronization for InnovizOne	Powered by optional power supply or vehicle battery
Includes embedded web server	Upgradable eConverter and LiDAR firmware and web client software	Provides power to InnovizOne



SPECIFICATIONS

INTERFACES		
Data		Sends and receives packets converted between GMSL and Ethernet protocols
Command and control		Uses TCP to communicate with ECU over Gigabit Ethernet connection
Time synchronization		Uses SPI interface and GPIO signals to send PPS and time message inputs from ECU to LiDAR
PERFORMANCE		
Boot time		<10 seconds
Latency		<10msec
Bandwidth		<1000Mbps. Exact bandwidth depends on InnovizOne configuration. Refer to the <i>InnovizOne Software Reference Manual (NDA)</i> .
MECHANICAL		
Dimensions (WxHxD)	With Connectors	110.5 x 32 x 106.5mm
	Without Connectors	106.5 x 32 x 82mm
Connectors	Data	Rosenberger H-MTD® E6S147-40MT5-A
	Power-in	Norcomp 885-004-103R004 (M8 male)
	Power-out	TE Connectivity T4131012051 (M12 female)
	Ethernet	RJ45 with green and yellow LEDs
	GPIOs	DB15
Weight		~305g
Temperature (Operating/Storage)		-40°~75°C/-45°~105°C
Enclosure material		AL 6061-T651 aluminum with conductive paint
Screws		4x M4
ELECTRICAL		
Power consumption		<3.5W over operating conditions
Connector input voltage	Power-in (M8)	4.5 to 32VDC
	Data (H-MTD)	3.6v max.
	Ethernet (RJ45)	3.6v max.
	Sync (DB15)	13.2v max.
Input power		60W max.
Input current		7A max.
Output		6A max.
Network interface		1 Gbps Ethernet – 1000BASE-T1 (IEEE 802.3ab)
STANDARDS		
Approvals		EN 55032:2015 Class A; EN 55035:2017; FCC 47 CFR Part 15, Subpart B, Class A; IEC 61000-4-2:2008 Part 4, Section 2 (ESD); IEC 61000-4-3:2006+A1:2007; A2:2010 Part 4, Section 3; IEC 61000-4-5:2005 Part 4, Section 5; IEC 61000-4-8:2009 Part 4, Section 8; CAN/UL/IEC/EN 62368-1 (LV Directive) – Indoor only; VCCI/CISPR 32:2005, Class A; CISPR 32:2015, Class A; KN32:2015, Class A; KN35:2015; KN61000-4-1:2013; KN61000-4-3:2011; KN61000-4-8:2013