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Application Note No. 0014

EtherCAN/2 to EtherCAN/3-FD Migration Guide

www.esd.eu

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About

This document provides users of the EtherCAN/2 product assistance to migrate to its successor EtherCAN/3-FD.

Affected Products

Old Device	Lifecycle Status	Recommended Successor Device	Lifecycle Status
 **EtherCAN/2** (C.2051.02)	End of Life (EOL)[1]	 **EtherCAN/3-FD** (C.2055.62)	Available (VERF)[1]

Background and Information

The **EtherCAN/2 (C.2051.02)**, a CAN-to-Ethernet gateway, has reached its end of life and is no longer available. Its successor, the **EtherCAN/3-FD (C.2055.62)**, is designed as a *drop-in replacement* while offering extended functionality such as **CAN FD support**, **dual CAN ports**, and **encrypted communication**.

In most cases, the EtherCAN/3-FD can be used as a direct replacement without modifications. However, due to the additional features and the removal of some rarely used functions, minor adaptations in the application software or system configuration may be required.

Technical differences

The following table summarizes the main technical differences between the EtherCAN/2 and its successor, the EtherCAN/3-FD. These differences should be taken into account when migrating existing applications.

Device Property	EtherCAN/2	EtherCAN/3-FD	Migration Impact / Recommendation
Power consumption (typical)	2.4 W	1.25 W	Lower power consumption, usually no impact.

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Device Property	EtherCAN/2	EtherCAN/3-FD	Migration Impact / Recommendation
Ambient temperature range	0 °C to +70 °C	-20 °C to +70 °C	Wider range may improve suitability for harsh environments. No adaptation needed.
Weight	130 g	120 g	Slightly lighter. No impact.
CAN FD support	no	yes	Applications may remain on CAN CC, but CAN FD can be enabled if required.
Support for encrypted data stream in EtherCAN mode	no	yes	Migration optional. Enable encryption if secure communication is required.
Support for encrypted data stream in Bridge mode	no	yes	Same as above. Use encryption if demanded by system security requirements.
CAN ports	1	2	Second CAN port available. Existing 1-port setups remain compatible. Update configuration if dual-port is to be used.
UPnP support	yes	no	Legacy applications relying on automatic discovery via UPnP require adaptation. Use static configuration or alternative discovery.
SNMP support	yes	no	Monitoring solutions using SNMP must be replaced by alternative management/monitoring approaches.
SMTP support	yes	no	Automatic email notifications no longer supported. Replace by external monitoring/alerting.
Network Time Protocol	NTP	SNTP	Ensure SNTP is sufficient. If full NTP client functionality was used, verify timing requirements.
Self-hosted HTTP server (with WebSocket interface)	yes	no	The integrated web server for custom websites is no longer available. Existing browser-based applications must be adapted to connect directly via the extended WebSocket/ELLSI API.
DIP switch to enable or disable specific features or reset the module	no	yes	Additional hardware option. No adaptation required, but can simplify deployment.

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Necessary changes in application

When replacing an EtherCAN/2 with an EtherCAN/3-FD in an existing installation, most applications will continue to run without modification.

However, there are several differences that may require adjustments if certain functions of the EtherCAN/2 were used:

Web-based configuration

The integrated web interface of the EtherCAN/3-FD has been redesigned. Navigation, menus, and configuration workflows differ from the EtherCAN/2.

→ If your setup relies on documented configuration procedures of the EtherCAN/2, review the updated web interface (see chapter 5.2 of the EtherCAN/3-FD manual [2]).

Integrated HTTP server

The EtherCAN/2 provided a self-hosted HTTP server that could be used to deliver browser-based applications in combination with WebSockets.

This feature has been removed in the EtherCAN/3-FD. WebSockets are still supported via the ELLSI API, but applications that previously depended on an integrated web server must be adapted to connect externally.

→ If your application included a browser GUI hosted directly on the EtherCAN/2, you need to migrate it to an external server and adjust it to use the ELLSI API.

Removed services

Several network services available in the EtherCAN/2 are no longer supported on the EtherCAN/3-FD.

Applications that made use of these functions must be adapted accordingly:

- Universal Plug and Play (UPnP) – no automatic device discovery available; use static configuration.
- Network Time Protocol (NTP) – replaced by SNTP client; verify if accuracy is sufficient.
- Simple Network Management Protocol (SNMP) – monitoring solutions using SNMP need alternative approaches.
- Simple Mail Transfer Protocol (SMTP) – automated email notification is no longer supported.

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New Functions of the EtherCAN/3-FD

In addition to being a drop-in replacement for the EtherCAN/2, the EtherCAN/3-FD introduces several new functions that extend its capabilities and open up new application scenarios:

CAN FD support

Full support for CAN FD in EtherCAN mode, bridge mode, and CAN TCP client/server operation. This allows higher data rates and larger payloads compared to CAN CC.

Dual CAN ports

Two independent CAN channels are available and can be operated simultaneously over the same Ethernet connection. This enables gateway or logging applications across multiple CAN networks with a single device.

Encrypted communication

Optional encryption of data streams in both EtherCAN mode and bridge mode provides improved security and data integrity in networked environments.

Extended temperature range

Operating range expanded from –20 °C to +70 °C, enabling deployment in outdoor and industrial environments with harsher conditions.

Hardware DIP switches

DIP switches on the device allow enabling/disabling specific features and resetting the module without requiring software tools. This can simplify setup and troubleshooting in the field.

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Links

[1] esd Product Lifecycle Management: https://esd.eu/en/support/product-lifecycle-management

[2] EtherCAN/3-FD product page https://esd.eu/produkte/ethercan-3-fd

Legal Notes

Document History

Rev.	Changes	Date
1.0	Initial version of the application note	2025-08-26

Technical details are subject to change without further notice.

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